DEPARTMENT OF THE ENVIRONMENT MEETING

PHASE II WIP INFORMATIONAL MEETING

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The above meeting was held on Tuesday, July 31, 2012 at Baltimore County Agricultural Center, 1114 Shawan Road, Cockeysville, Maryland 21030, commencing at 1:36 p.m., and was reported by Janet **A. Brown, R.P.R., a Notary Public.**

EVANS REPORTING SERVICE

7 North Calvert Street, Suite 705

Baltimore, Maryland 21202

800.256.8410

ATTENDEES:

PAUL EMMART, ESQUIRE
Maryland Department
of the Environment

BRIGID KENNEY
Maryland Department
of the Environment
Office of the Secretary

PANEL MEMBERS:

JOHN RHODERICK
Maryland Department
of Agriculture

JOE TASSONE
Maryland Department
of Planning

JAY SAKAI
Maryland Department
of the Environment

ALSO PRESENT:

NANCY K. NUNN
SARAH J. TAYLOR-ROGERS

P R O C E E D I N G S

MR. EMMART: Hello. Hello, everyone. Good afternoon. It's just -- we're scheduled to start at 1:30. We're just going to wait a couple more minutes, only because of the construction out front, letting people come in is quite a, a line.

(Brief recess.)

(At 1:42 p.m., the hearing commenced.)

MR. EMMART: All right. I think we'll begin. It's just a little bit after the start time.

My name's Paul Emmart. I'm from the Maryland Department of the Environment and the Science Services Administration, and I'm here today to give a presentation on the Accounting for Growth Policy. This is a new policy, and it's not fully developed. We're in the process of developing it and, so, we just want to give you an idea of where we are at this stage.

But before I begin, I just wanted to take a minute to thank, first of all, the Town

Creek Foundation, which has been instrumental in funding these public outreach campaigns, and also the Harry Hughes Center for Agro-Ecology, which has helped us organize and present this information to you. They've been essential in getting these regional outreach meetings in place. This meeting is one of about 10 meetings we're holding around the State to try to bring information to the public, and to elected officials, and government, local staff to explain what the proposal's about, and, and what we're hoping to achieve with it.

I'd also like to thank my colleagues. These are members of other State agencies who will form the panel here. The way we've set this up is, we will try to give the presentation, and then leave plenty of time for questions and discussion so that we can go over the policy.

This is just a slide to show you what we will cover in the PowerPoint. Essentially, I'd like to go into a little bit of the history of how we got to this stage because of -- and, then, next

because the policy concerns offsetting growth, that is, loads, meaning pollution, quantified pollution amounts from land sources and air sources -- we'll look at how to calculate those loads, then we'll discuss some of the economic implications of policy. We'll compare and, and see if it -- how does this new policy integrate with existing policies, namely, the trading policy that was put out there in 2008, and then nullified in 2010, and we'll look at what the policy does to protect water quality. What are the trading geographies of the policy, and then how will it be implemented, and what is the remaining schedule before the implementation actually occurs.

So, just to look at the history a little bit, as everyone is probably very familiar with, but I, I do want to make sure that everybody understands this fully, you know, what the context is for this policy, essentially, there was a voluntary agreement in 1983. The Federal Government, the States recognized the basis to some

degree, that there it was necessary to, necessary to act. And, in 1987, 40 percent was identified as a reduction goal. The C2K, the Chesapeake 2000 Agreement, was formed with the signatory states, as well as the cover states, with a goal of cleaning up the Bay by 2010. That 40 percent reduction was called for in nitrogen and in phosphorous nutrients; however, sediment wasn't part of it as far as I know.

In 2006, the progress was such that it involved a voluntary framework that it was generally acknowledged by policy, and science people, and EPA that the C2K agreement goals could not be met.

In 2007, there was an interesting report that came from the EPA Inspector General's Office, and one of the salient points of that report was that -- I won't read it to you -- but it was essentially that the cost would increase if the, the pollution that comes from new development was not recognized and somehow dealt with. And

this is an important point because, although the Clean Water Act doesn't generally look at costs, it looks at the goal of, you know, remedying the pollution. Cost is, is evermore a problem and an issue, and this is one report that said, listen, if you do not address developed and new growth -- developed lands -- I beg your pardon -- then it will eventually become more difficult to reach the goals, and also more costly to do so.

The next slide. So, in 2009, as the result of litigation between EPA, and the Chesapeake Bay Foundation, and others, EPA was forced to act more vigorously. And the game changed to an extent, because what happened was it became a, a regulatory -- a nonvoluntary framework. There was the Presidential Executive Order that was issued in 20 -- in 2009, and then settlement of the lawsuit in 2010. EPA, as a result of the litigation, did offer a Federal strategy to say what the Feds would do -- which is all online, all that information's available and probably very

familiar to you -- and then the result for the states, plus D.C., the six states was that they were to develop watershed implementation plans and submit those to EPA.

Maryland submitted its Phase I, WIP, as we're calling it, in 2010, and then there was a draft of Phase II that was published in 2011, and then, finally -- the Phase II, finally, was just submitted to EPA in March -- March 30th of this year -- with additional contributions from local governments due very recently, just July 16th. And I'm happy to say that we've had great partnership with many of the counties, and especially with Baltimore County, in terms of getting refinements for, not only the State WIP, but also the local WIP, so it's really been very lucky. This is -- we've met several times, as a part of the WIP Team here in this building, to discuss how the WIP could be formed and refined in a better manner, and I think very successfully.

So, in 2010, the basic TMDL was issued

in the very end of December. In 2012, the end of Phase I, essentially, has, has begun, and that means the information and the implementation will start. Maryland's WIP focused on two main prongs. One is to restore the Bay addressing all sectors to reduce the loads and, then, also to maintain that level of quality by Accounting for Growth to maintain the Bay's health.

I just want to pause for a moment on that thought. One of the things that the Accounting for Growth policy is looking at is the new growth, a new load, not the existing load that is, for instance, within the allocation of the Bay TMDL. So the targets that are required to be met on a basic level, that is, the major EPA basing level, are that they address the existing, existing load. But this policy is to address a new load that will come beyond this point.

So, in terms of addressing the new load, we have two main strategies. The first is incorporated in the WIP, not as grows out of the

tributary strategies from the late '80's all the way through the '90's, essentially, that there are caps and allocated growth capacity for the larger wastewater treatment plants -- the significance, that is, over the 500 MGD limit -- and those, those are still there. That's part of the strategy within the State's WIP, to retain that excess capacity.

But there's also a strategy for the new development which would cover wastewater that, for instance, may be added to a wastewater treatment plant that is over its cap, that does not have the capacity. Stormwater loads and septic loads will also need to be offset. So that's the general direction of the policy.

There are two related efforts that bring this to, to our attention at this point. And the first is that -- although it is in the WIP, in the State WIP -- and you can see it in Phase I on Chapter Three; you can see it in Phase II, final WIP, in Section 1.8, both of which are on the

1 web -- there's also a bill that was just passed in
2 the most recent General Assembly, the SB236, which
3 requires offset provisions. That was called the,
4 the Septics Bill for short, but it requires the
5 offset provisions for Tier III areas are proposed
6 by the end of 2012. Tier III areas are those areas
7 that are, basically, large lock development rural
8 areas that are on septic. And there's, there's
9 quite a definition within the actual bill, but it
10 is interesting that it does note that it includes
11 areas that are mapped locally designated growth
12 areas, and also areas that are zoned and planned
13 for the large lots. So that, that bill is asked
14 that those Tier III areas -- and the Tier III areas
15 are those that are designated in the bill -- but a
16 policy be developed by the end of 2012 for those
17 areas. So the WIP, basically, stated that the
18 offsetting policy for growth would be developed by
19 2013. And we were thinking, you know, end of 2013,
20 that was before this bill came out. So these two
21 efforts could proceed separately, or they could

proceed together. We're trying to handle them concurrently, so we're trying to get a policy proposed by December.

All right. The objective of the policy to meet both the requirements of the bill, and also the WIP are to permanently offset loads from residential and nonresidential development so that we do not lose ground by adding loads to the, to the Bay, and also to the local waters.

We want to further support bay restoration and preservation by minimizing the pollution load from new growth so that fewer offsets are required. We want to allow public resources, which are constantly under pressure, funding, staffing, all, all kinds of resources, we want those resources to be used wisely and to be directed toward reducing the existing load and not having to address the new load significantly.

So one of the things that ties in very well with that SB236 is that the locally designated mapped areas for growth could be those areas where

new development will occur and wherein we're trying to encourage the counties to optimize the use of their growth capacity and the available offsets.

All right. Now -- so some of the concepts in the Phase II WIP that were introduced were that new development would meet all applicable regulations. Essentially, for stormwater it would meet the Stormwater Management Act of 2007 and, therefore, it would incorporate and use environmental site design to the maximum extent practical.

We -- the WIP also envisioned that the offset would affect post-development non point source load, so stormwater. Redevelopment would not be required to offset post-development non point source loads. This is a special favoritism to redevelopment, to try to encourage redevelopment and discourage development in green fields.

New site-on-site -- I beg your pardon -- new on-site disposal systems, so septic systems, would have to meet all applicable

regulations, but they would also have to offset the post-development wastewater load. So, that is to say, even if it were a best available technology system and producing a minimized amount of nitrogen wastewater that, even after the development that portion, would also have to be offset. So this policy is really aiming toward a zero discharge, a net zero discharge of nitrogen.

And for point sources, again, covering things we've just mentioned, that new loads would be, would be incorporated within their caps, but that increased load where there isn't enough capacity would have to be offset for point sources.

Okay. One of the significant things to know about this policy that we're trying to develop is that it does differ from what is stated in the WIP to some extent. The first thing we've already covered is that nitrogen loads have to be offset, not phosphorous loads. So in the WIP it was described that nutrient load would be offset for new development. What we've been thinking and

trying to, you know, consider is where to begin, and the beginning point appears to be first tackling nitrogen.

The second major difference from the WIP is that we're, as I mentioned, looking for zero net discharge. We're trying to offset 100 percent of the new development or post-development load. Not the difference, for instance, between a development that would still take advantage of the, of the normal regulations and abide by the regulations, which would nonetheless produce a load, just like the septic system.

All right. Next slide. So, these next slides are trying to address how you calculate what type of offset you might need if you were to develop and this policy were implemented. The types of load that we're talking about are, as we mentioned, the wastewater, which is point source discharge, and also any discharge which would come from septics, from -- even from a BAT system, any discharge that would come from wastewater treatment

1 plants not, that did not have capacity, stormwater
2 and, in that case, would be using, again, trying to
3 make the policy implementable and, and fairly
4 understandable in general. We'd be using the Bay
5 model loading rates which would be the standard
6 loading rate across the State. That is what we're
7 calling the direct load.
8 There's also a component, which is
9 trying to capture, which is what we're calling
10 indirect load, and that comes from mobile
11 emissions, meaning vehicle miles traveled from
12 commuters, and where that extra traffic and extra
13 emission would, in fact, be deposited from the
14 atmosphere.
15 So these -- there's three slides coming
16 off. They're both, basically, just the numbers so
17 that you know what we're using in order to
18 calculate the loads. For septic systems and
19 conventional system we estimate puts out about
20 almost 10 pounds per year per household -- that's
21 an annual number -- and, with the BAT system, about

50 percent of that.

Next. For wastewater treatment plants, the typical discharges of nitrogen in milligrams per liter -- the effluent is for secondary treatment, 18; for the BNR, eight, and the ENR, four. Of course, the plants do better than that seasonally, but this is a number that we're using as a benchmark.

For stormwater, these loads -- these numbers are from the Bay model for impervious and and pervious land use types. They are lbs/acre/year of nitrogen, and they are just for the -- to be very clear about what the source of this information is, this is from the model, the most recent version, 532. It, it is a no action BMP. There's no BMP on the land. That's what increases this load. So we did, in fact, put BMP's on the development to take care of stormwater. These loads were first impervious would be reduced by upward to 50 percent if the environmental site designs would be the maximum set were practical

were used. So, of course, you could do better than this. The question is, you know, what is -- there are -- there suggestions that BMP and the BAT may be capturing more stormwater than 50 percent, but just simply to make the basic calculation, we're going with 50 for forest rebounds.

Now, for the air deposition, this is, really -- it's an estimation based on population density. And, essentially, to make it -- again, this is, this is the first cut policy. We want to be able to rule it out and get people's feedback on it. We want the policy to be very simple to understand to some extent. So it just makes a direct cut in population density of less than or greater than 10,000 people per square mile and, so, that's what these two rows indicate. If you are in an area where the persons per square mile was less than 10,000, that would be more like a suburban or a rural area, the offset for the NOx emission would be one pound of nitrogen per year, and that's per household. This applies only to residential.

We're not trying to apply this to commercial development.

And if you were in a greater than 10,000 Census Tract, you would be able to get a discount. It would be half a pound you'd have to offset per household.

This is -- the next two slides are going to be some examples of, essentially, how you'd go about calculating. And, these examples -- I just want to say before we get into it, it's a very busy slide, I know -- but these examples are on the MDE website. This PowerPoint that you're -- that you have in your hands, the packet, is also on the website. And there are, there a couple of things we posted under a title called Accounting for Growth. The first is a discussion draft. It's basically a 10-paged paper that's tried to explain what I'm explaining to you now. It goes into more detail, of course.

The next thing is the PowerPoint that's posted up there, then there is a spreadsheet which

is a calculator tool that you can download to your own computer and use. So you can enter into that calculator either these numbers, or numbers for scenarios that you'd like to develop.

And what is the fourth thing on the --

MS. KENNEY: The meeting.

MR. EMMART: Oh, yeah. Just when you go to this, there's a link to a schedule of the meetings. That's the four things. So you'll see that all under Accounting for Growth on the MDE website.

So, just to go over this briefly, this slide presents three scenarios involving residential development: One which is low, next is medium, and the third is high. For each component, for wastewater, for stormwater, and air, that need to be offset these three components need to be totalled up in order to find out what the total offset is, what would be required for a development. And you can see, just at a glance, the Low Density Residential has the highest offset

requirement, the Medium has an intermediary one, and the High Density, which would be greater than 10,000, has a very small offset ratio that's required. So, basically, for each component -- for wastewater, stormwater, air -- the thing to note in this slide is that the size of the lots varies -- two acre, half an acre, and, then, a tenth of an acre -- and also the degree to which it's impervious. The impervious cover does affect the amount that needs to be offset for stormwater.

And, perhaps, a third thing to note is, in a high density situation where there's smaller lots and there they are, actually, hooked up to an ENR wastewater treatment plant with capacity below its cap, for the wastewater component there is no offset required. That is, if you are developing a residential development and hooking up to a wastewater treatment plant with capacity, you don't have to offset anything for that. And, for the stormwater, it would be very low as well. And, then, because of the fact that this component in a

high dense area would be, let's say, greater than 10,000 in a Census Tract that was highly dense, it's also very small. It's the half pound, which is the minimal.

Next slide. This is an example of commercial and mixed development. Remember that the, the air of the NOx offset does not apply to commercial. So, for instance, this is set up very, very similar to the prior slide. There's a warehouse, which is on undeveloped acres of green fields essentially. So you can immediately sense from that that it would be less than 10,000 square -- people per, per square mile. But because it's commercial, it's warehouse, there is no air offset in this case. That's why it's a zero.

In the second example, it's redevelopment of, for instance, a suburban strip mall which is to be converted to a mixed use office, retail and residential. The residential portion would incur the air offset; however, because it's redevelopment, there is not a

stormwater offset required. And, also, as you'll note here in the notes, it's served by the wastewater treatment plant with capacity and, therefore, there's no wastewater component to be added to this.

So these are, these are essentially scenarios where, you know, the variables can change. You get some sort of quantified offset which is required in the end. Obviously, this one is the most preferable. There is no offset at all required. This would be a scenario under which it would be redevelopment of an urban site as commercial and served by wastewater treatment plant so, therefore, it would not need a wastewater treatment plant -- I mean, beg your pardon -- it wouldn't need a, an offset for the wastewater, for the stormwater, or for the air, so that's optimal. Please?

UNIDENTIFIED MAN: Excuse me. I don't quite understand the air offset. Not to belabor it too much, but just explain why it's zero for the

first one and 25 --

MR. EMMART: Yeah. And I, I apologize. These slides are a little busy, and all this is on the website. At your leisure you can look at it more thoroughly. But in the first case, up at the top, at the very top, it says commercial. And the air offset doesn't apply to commercial, it only applies to residential, so that's why this is a zero. There's no requirement there.

And, similarly, in the bottom row, this is, again, going to be a commercial office building, so there's no residential component, therefore, the offset for air is a zero there. The reason this one is different is because this one is going to have 50 residential units. And because it's in a very densely packed area, it's only a half a pound offset so, really, it's just 50 times the .5 offset, which gives it 25 to offset.

UNIDENTIFIED MAN: Makes sense.

MR. EMMART: All right. Next one. Okay. So one of the things that we were trying to

1 look about is, what are the implications of this
2 new policy in terms of economic impact? What if,
3 for instance, the offsets that we hope to generate
4 are simply scarce, in which case we would expect
5 their price to become higher? In that case it
6 becomes much more important that the policy is
7 going to work. And if builders are going to be
8 able to obtain their offsets, it becomes far more
9 important for a county or for, you know, a building
10 entity to, to use the, the fewest available offsets
11 as possible, i.e., at a fair price were high, you
12 wouldn't want to buy a lot, you would want to buy
13 fewer if you could.
14 Also, we're hoping that if the, if the
15 building becomes efficient, to some extent, and if
16 the market takes off and uses these, these offset
17 credits, well, then there would be a limited use of
18 them, to some extent. That is, there would --
19 there may be fewer, they would be used more wisely,
20 and they would be consumed in a more efficient
21 manner. And we think that using fewer offsets for

development, will populations grow? But, at the same time, we'll maintain that control over the new load, the developed load that is coming. So we're really hoping that this will stimulate economic growth, but it will focus the growth in a, in a way that will be efficient in its management. I know that sounds awfully vague, but I, I want to try to give an example in some sense.

Here -- you can go on to the next slide. This is a slide which MDP was able to develop in order to show how, if the offsets were used efficiently, the scenarios might vary. For instance, this is a correlation of per capita for the amount of nitrogen in relation to jobs, and to numbers of residents. And, again, it can be seen just on an intuitive level. If you look at the scenarios on the left column, High Densities, Mix of Non-ENR Septics and Large Lots on Septics, the amount of nitrogen that is generated in each one of those scenarios per capita increases from range of 2.5 to 3.0 all the way down to 22-25 as the

development becomes dispersed, as it be -- as it's less centralized. And one way to, one way to look at that is to say, you know, okay, how much nitrogen do you actually get per capita if you're in a very dense area versus a, a less dense area. And, then, the third column, which is sort of the reverse of that, is, okay, if you had to buy 100 pounds of nitrogen credits, what would you get for that 100 pounds? Where would the best use of that 100 pounds be? And based on the information that MDE was able to put together, on a high density ENR system, you would be able to use that 100 pounds of nitrogen credit and generate this per capita range of 38 to 48 jobs and residents.

And going on down in, in more dispersed areas, 12 to 13, if you are in a Mix of Non-ENR, let's say, secondary treatment, wastewater treatment plant, or even on septics, and then, finally, four to five on Large Lots. So, obviously, what it looks like is that, if you wanted to really use the credits efficiently, and

1 especially if they might be costly, then you'd want
2 to direct the development to a place that can use
3 them in the wisest manner.
4 So another question has come up because
5 the trading policies were issued in 2008, and they
6 are out already on the web and, and being used.
7 And, for instance, there's a point to point trading
8 policy, and there's a point to non point through
9 nutrient add policy which is out there.
10 I just wanted to go over, very briefly,
11 what are some of the general -- what -- how well
12 this is structured. I'm not going to try to
13 summarize the trading policy, but it is important
14 to notice that the unit of trade is a credit, and
15 it's equal to a pound of nitrogen or phosphorous.
16 And, so, that's a big difference between policy
17 that we're talk -- discussing right now, Accounting
18 for Growth, and existing trading policy is that
19 fosters -- incorporated in the trading policies,
20 but not yet in the offsets.
21 All nutrient trades and offsets have to

comply with TMDL-based allocations and must not cause or contribute to further impair the local water quality. That's a very central tenet of, of the policy. There are delivery factors which are applied in the trading policy. I don't know how many are familiar with the NutrientNet tool, but it does actually calculate what the delivery factors are for it. And, and the monetary value or credits set by the market, that's also to be consistent with the policy that we're trying to put into place.

We've had a lot of questions in prior meetings from people asking, okay, well, how does this affect local water quality? It's very clear that the Bay water quality would improve if the quantity from, from new post-development load were offset. Obviously, the effect of excessive nitrogen, phosphorous, and sediment felt from the Bay is felt from the central maintenance of the Bay. And to reduce that, or to at least make sure that new growth would not be added to that is

simply to protect the Bay.

Next, please. For non-tidal water, this is traditionally what's thought of as -- well, it's -- generally, non-tidal water is different from the, let's say, the critical area in some sense in the way that the effect of the pollution, the effect of the nutrient pollution, is addressed. Generally, in non-tidal waters, we talk about phosphorous being a limiting factor -- limiting meaning you need the nitrogen and phosphorous to produce the outlook growth -- and then consequent decay and deprivation of oxygen. But, normally, in local water quality in non-tidal streams, if phosphorous is not added to it, then it will remain -- I being your pardon -- if nitrogen is, is added, there is a minimal impact, is what we assume. One of the important reasons why we've decided to pick nitrogen as the tradeable parameter is that where a stream a limited, by phosphorous by adding, adding more phosphorus, it will become more impaired. But if you add a little more nitrogen,

the impact, we believe, is not as severe, that is, it's a minimal impact. And many of the BMP's, many of the management practices that are put on the ground that address nitrogen often have lowest efficiency for nitrogen compared to phosphorus. So if you're nitrogen's highly soluble in water, if you can capture nitrogen, we are -- we're thinking at this stage we will also capture phosphorus. So that's why we believe it's a good parameter to use in this program just at the initiation of program.

Generally, if the, if developments use -- and, of course, it's a regulation, they have to use it -- but if they use the environmental site designs, BMP, that has benefits that also protect local water quality. Generally, the benefits will be both to the pollution that's discharged in the sense that it's reduced, but also there'll be habitat integrity to the treatment.

And then, finally, in terms of protecting local water quality, we feel that requiring sellers to meet the Bay WIP baseline,

that is, sellers of credits, people who want to generate credits, they have to be able to meet their baseline in order to begin generating that, is there -- they have current load, they have to go down to the TMDL limit in order to satisfy that, and then any other reduction below that would be a generation of the credit and that would be sellable.

Next. There are significant differences between the trading policies as they exist now, and what we imagine the Accounting for Growth Policy would require. For -- and it may, it may end up that the trading policy gets modified to some extent. One of the glaring differences, other than phosphorus, is that the trading geographies for the trading program are very different. Right now, the trading program uses the Potomac basin, the Patuxent, and then everywhere else in the state. The way that the WIP addresses the State of Maryland, and then the geographies, is that we follow what EPA has designated as the five major

basins. So that's very different.

Also, another factor is that it might be in the, the benefit policy in the long run to have Interstate trades. It might be a value to Marylanders to be able to trade with Virginia or Pennsylvania to do interstate trades. And that's not in the trading policy at the current time, so there will need to be modifications.

There's one also quite large, quite important distinction that we're thinking about that isn't in the trading policy that will be in the Accounting for Growth Policy, and that is, in, in general, the Accounting for Growth Policy will try to track and will be consistent with trading. But one place where it will diverge is that there's a concept of the target growth and revitalization areas that come from Maryland. These are smaller areas that are within the required funding of this. And what we would like to see is that new development which occurs in these targeted growth areas is favored, that it gets, it gets a break.

1 And one of the breaks it would get would be the
2 developer would be able to purchase credits from
3 anywhere within the State, or even if they're
4 interstate trading, perhaps, from other states. If
5 the development does not occur in those targeted
6 growth areas, however, then the purchase of the
7 credit would be limited, it would be constrained to
8 within the county boundary where the development is
9 occurring. And, of course, we've had quite a lot
10 of comment about -- already about what that might
11 mean. It was suggested, you know, that that could
12 be a good thing because, then, that restriction
13 might drive local restoration if the purchase of
14 the credit had to be in the county where the
15 development was. It was seen by other eyes as, as,
16 perhaps, too limiting, that the economic viability
17 of the program might be threatened because the
18 geography may be too small; it might be better to
19 open that up. So those are, those are issues that
20 are not yet settled, but they have been raised.
21 This is, essentially, how we plan to

1 implement the policy, you know, presuming that we
2 come up with a proposal by December. We would
3 hope, MDE would hope to have this policy
4 implemented through a regulatory mechanism. It
5 wouldn't require additional statutory authority.
6 It would probably be in a regulation, like, working
7 through a general permit for offsets. We would ask
8 that the developer would calculate the load using
9 the tool and the framework of, of loading factors
10 that we've identified, and that developer would be
11 responsible in some manner for obtaining personal
12 credits -- personal, meaning if the new development
13 comes along, and there's a post-development load,
14 that post-development load is just going to go on
15 through time. So the credit should also go along
16 in time. It should be equal in time to that
17 development. And that's what we're thinking of as
18 a permit. We would have to develop and ask for the
19 developers to submit information, certify that the
20 credits were there, and that those credits would
21 have to be on the ground and available before the

permit was issued. So it would be a threshold issue. You'd definitely have to provide verified credits to show there was an offset before the development actually came to be in order to get the permit.

So these are some questions, the next two slides are questions that we hope that you all help us with. This is a -- the purpose of this meeting is, really, to solicit your thoughts, your insights, your comments, criticisms to find out how we can better shape this policy.

How can we develop it so that it works in Maryland and doesn't particularly bias one sector or another sector, doesn't -- you know, it has enough flexibility that it can be worthy of the market, it can actually fly, but it's not overly burdensome.

So some of the questions here, for instance, should policy use nitrogen loads, that's, that's a serious fundamental question. In other states, I think Virginia, they use phosphorus as

the basis for trading. You know, should we do that, that's the question.

Is there a better way to calculate the post-development load? What we've tried to show is one series of examples. And, again, if you look at the calculator on the web, you can see there are, I think, about 15 different scenarios. But the calculator will allow you to play around with the scenarios. But is there a better way to calculate the load? Are we using the right metrics? Should annual practices be approved? For instance, normally when we think of credits, it would be installed -- I mean, purchased. Let's say, if we installed a wet pond over there. We would get a certain amount of reduction, and we would use that credit and maybe develop somewhere else. But that's a structural ENP. And you could easily verify it, run around and take a picture of it, and, you know, maintain and monitor it in the course of 10, 20, 30 years.

But what if cover crops were used; how

would we go about guaranteeing that there was a surplus, let's say, held by an aggregator or broker of available credits that would guarantee that, yes, there is a verifiable credit that's offsetting a load from the developers through time? This is a similar question. How should non-agricultural offsets be verified and maintenance of those practices be assured? You know, presumably if we look at -- on, maybe, the 2030 horizon, we're talking about a lot of development if the economy picks up, we hope. How are we going to know that those offsets are really happening? We need a fairly robust system of tracking, verifying, and maintenance.

And then the question is, who should do that, you know, should the states be doing it, should the local governments be doing it, should the brokers and the aggregators? Let's say, the middle men who are between the developer and sellers, generally, of the credit, are they responsible somehow for guaranteeing? Normally one

1 would, I mean, intuitively, thinks, okay, if a
2 developer builds the development, make sure that
3 the credits are available. And once the
4 development is done, to some extent you would
5 expect the developer to move on to do something
6 different. But who is it and how is it that these
7 things are verified? We don't want to give the
8 impression that this is a very slack system. We
9 want it to be robust and working well.
10 Next. Further questions. You know, in
11 the wetness program, of course, it's a fees-in-lieu
12 system. Should that, should that be used as a
13 model? Should we have a fees-in-lieu system for
14 the offset program? If we structured it such that
15 the fees were used solely for offset purposes --
16 I mean, what I'm talking about is maybe they get
17 put in a fund, and that fund somehow gets
18 dissipated or used for other unanticipated reasons.
19 We would want to make sure that that fund was
20 available, and we would want to set the price that
21 would be, you know, again, marketworthy, be

reasonable, and it would give some measure of assurance that the program is, is sufficient.

The thing that came up with the stormwater management about grand -- grandfathering in 2010, that could also be a major issue for the offset policy. We want to be sure how to address that before we go full-fledged with the regulation.

What should the role, again, of the local jurisdiction be? Can the jurisdictions assume the responsibility for meaning -- maintaining the non-agricultural credits, such as conversion of the dry stormwater management pond to a wet pond? You know, that is something that local and county governments do. At the moment they inventory their BMP's, and they maintain their BMP's, and maybe that's a way we should proceed with this policy. That, again, is an area that we really need some guidance from you on.

And then back to the question of geography, you know, what would be the best geography for the trading, and buying, and

generating of credits. You know, is a very limited geography a good thing, or in order to, you know, help this program develop, help the market get off the ground, should it be broader? So this is the schedule you'll find on the web. This is sort of an abbreviated version. We're planning, I believe, at least five more outreach meetings around the State. But, essentially, those meetings are occurring between now and the end of September. We're having the regional meetings, in addition, we hope, to a webinar just to get the word out. We've put some documents, as I mentioned, online -- the discussion draft, the spreadsheet. We are going to prepare regulations for this, and they'll be promulgated as regulations with the normal process. And we hope to put those up on the web, we were thinking, sometime in August --

MS. KENNEY: August or September.

MR. EMMART: -- but that's still -- still in development. In October -- this, this is really the idealized schedule -- in October we hope

to go to the Attorney General to review, have the Secretary of the Department sign off on it before we take the proposal to the Environmental Matters Committee and the Legislature, which is required by the SB236. So it just has to be a proposal, and then presented to them. And, then, if -- the review in early December, if, if we make it that far, we submit it to AELR, which is a technical group that reviews legislation, and the DLS, again, in the Legislature. Then, if all goes well and we do have a regulation which is grounded and fairly well worked out, we would submit it in mid-December and put it in the Register, the Maryland Register.

This is about the last slide almost, and essentially what it is is to say that we do want your comments, if you could. You know, we're going to leave a lot of time now to discuss with the panel any questions you might have, but we would prefer to have written comments. We've established a specific e-mail called afg -- that stands for Accounting for Growth -- @mde, and you

can just send your comments by e-mail to that site or, if you want to send a hard copy, you can send them directly to me at the Department of the Environment. When we receive the comments, we'll review them thoroughly and incorporate, as appropriate, what we can into the regulation. There isn't a time at this stage to produce a comment response document, which we normally do, for instance, with the Phase I and Phase II WIP documents. When public comments were brought in, we responded to each one of them and then published that document. We don't anticipate doing that with this regulation. However, when the regulation is, is announced, there will be a second public process as part of the normal promulgation process. And that's it.

If I, if I might, I'd like to introduce the members of the panel and ask them to come up to the front of the room, and encourage you, if you have questions, to please ask them of the members of the panel. Maybe you should each introduce

yourselves.

MR. SAKAI: That would be good.

MR. EMMART: Microphone needs to be turned on.

MR. RHODERICK: Hi. Good afternoon. Are we on?

MR. EMMART: Yeah, hold on.

MR. RHODERICK: Afternoon. My name's John Rhoderick for the Maryland Department of Agriculture, and I'm here to represent the Nutrient Trading Program as it currently exists in regards to the agricultural component.

MR. TASSONE: Hello. I'm Joe Tassone from the Maryland Department of Planning.

MR. SAKAI: And I'm Jay Sakai with the Maryland Department of the Environment.

MR. EMMART: Questions, please? Or, Nancy, you have something, any rules?

MS. NUNN: Oh.

MR. EMMART: There are refreshments in the back, hopefully.

MS. NUNN: Refreshments in the back. But the only rule is if, when you do ask a question --

MR. EMMART: Oh, yes.

MS. NUNN: -- if you will stand and you will provide your name, that would be really helpful.

MR. EMMART: And, and it would also be helpful if you had an affiliation, if you just state what your affiliation is, please. Thank you. So questions, comments? Yes.

MR. ROBINSON: Hi. I'm Rob Robinson, the City of Gaithersburg. I'm sort of confused with one of the things you're saying, especially -- I -- I'm sorry -- especially as it relates to the Septics Bill.

When you mentioned Tier III is applicable, but you talk about priority funding areas, we were directed to the guidance that all priority funding areas are automatically Tier I. So even if you have new growth, is that exempt?

I'm just wondering. It just seems that when you say, you know, redevelopment is exempt, but then in the one slide you showed that residentials were required for air, you know, that's not very clear either. So, you know, what the plan Maryland has in smaller jurisdictions, such as Gaithersburg going through developing their tiering, and doing all this stuff, are we to now tell the development community, we'll you're off the hook, but you're on the hook based upon air? Even though we're Tier I and we're priority funding area, or a targeted growth area under, you know, the plan of Maryland where we're a regional area, too, you said, under ecology, et cetera, et cetera.

MR. EMMART: Gentlemen, would you like to address that?

MR. TASSONE: Try. I, I think that you -- I mean, you covered a bunch of things there, so if I don't get everything --

MR. ROBINSON: Sure.

MR. TASSONE: -- remind me. But you

1 were referring to the -- you started off with
2 reference to the Tier III provision from SB236.
3 And the only reason for mentioning that was that
4 it, it required and had asked the Department of the
5 Environment to, to propose regulations for
6 offsetting new loads in Tier III areas by the end
7 of the year. And since this offset policy that
8 we're here talking about is a broader thing
9 applying to everywhere, the idea is to just address
10 them together so that there's not redundant
11 processes, and one happening one after the other.
12 With respect to the air requirement
13 that you were talking about, the nitrogen emissions
14 deposition, that's as described in the policy by
15 Paul, it is intended to apply to all residential
16 development, whatever area it's in; whereas, the
17 other offset requirements related to stormwater and
18 wastewater loads vary for different situations.
19 So --
20 MR. ROBINSON: Just, it's just in the,
21 in the draft document we looked at, that's just not

made clear, because the statement that redevelopment is exempt from loads, it doesn't specify, well, it's only these, but not this.

MR. TASSONE: So it doesn't -- it's not clear that it's -- redevelopment is exempt from the stormwater offset, for example. Okay. We got it.

MR. ROBINSON: Well, the air emissions for residential, that -- I mean, you're reading the first page, it says redevelopment in these areas is exempt. I mean, obviously, with a jurisdiction like Gaithersburg, or Rockville, or any of these smaller cities in priority funding areas everybody's looking for an excuse, so there's going to be a residential component.

MR. TASSONE: Yes.

MR. ROBINSON: And when they comment, then they seem to say that, you know, because the development's new, you're off the hook.

MR. EMMART: So that's very good. Thank you. If you can -- and, again, if you could send that in to us, just to make sure we have that,

that would be very helpful. Dr. Cheng?

DR. CHENG: Thank you. I'm Mow-Soung Cheng, Prince Georges County. I have two questions.

Can you give us a rough idea -- okay. I know that offsetting is trying to take care of deposition between the posted load and that stormwater management load. So, can you give us a rough idea -- stormwater management only take there how many percent of the load reduction, and how many percent, really, is needed for offset, is Question No. 1.

Question No. 2. That by looking at your slide presentation, comparing that the offset requirement between different density of residential area, you have -- low density has a much higher nutrient offset load than high density. And that's a little bit confusing because, you know, that high density, really, you don't have a higher load impact compared to the low density, so I'm a little confused about this.

MR. SAKAI: I'll take a shot at that. Under the --

UNIDENTIFIED MAN: Can you repeat that question?

MR. SAKAI: Yeah. So the, the -- the, the question is -- well, the second question was related to why, on the example, is the high density development showing such a high -- the low density development showing such a high load. And the first question was related to what kind of a reduction are we assuming, because you're doing development in Maryland using environmental site design to the maximum extent practical. So on the slide, if you recall, and I don't know --

MR. TASSONE: It's there.

MR. SAKAI: Okay. So there's another slide where we show a footnote that says, our, our, our current understanding with the Bay Program, in terms of what they represent in the model, is that if you build a new development in the State of Maryland today, and you account for stormwater per

our regulations in your local ordinance, you will, on the nitrogen side, get 50 percent, on average --

DR. CHENG: Fifty.

MR. SAKAI: -- for all limitations. So we were assuming that in the TMD, they could be getting 50 percent of the nitrogen. That is, arguably an oversimplification on what is, on a site-by-site basis, a very complicated calculation. And I do want to say that the, the examples that you see, and the numbers that, that are represented are generalized assumptions. These are the best -- these are the general numbers that the Bay Program model is using for loading for pervious and impervious. In other words, we know it's much more complicated than that depending on geographies, and, and land use, and, and soil types, et cetera, et cetera.

But the point of this, though, is that we're trying to make this as simple as possible. And I know that some of this -- some of the examples are not so straightforward, but we are

trying to come up with a very simple mode of determining what the loading rate is for pervious and impervious, so that it's 50 percent.

And, then, your second question was --

DR. CHENG: Why is the loading rate --

MR. SAKAI: So the loading rate is, we're using the same assumption irregardless of the type of development. For what the, the, the base loading rate is for pervious and impervious service, it's the same. The, the, the reason why it's a bigger number is because we're making an assumption that it's a much bigger footprint for that development where you -- so you're comparing a quarter of an acre lot to a half -- a two-acre lot. You know, it's eight times bigger. So it's -- we're assuming that low density is a much bigger footprint, it's not an acre-by-acre --

DR. CHENG: I see.

MR. SAKAI: -- comparison.

UNIDENTIFIED MAN: It's by household.

MR. SAKAI: It's by household.

DR. CHENG: By house.

MR. SAKAI: Mm-hmm.

MR. EMMART: Next question. Sir?

MR. YODER: My, my name's Chris Yoder. I'm just curious on the example that you gave for warehouse, for instance, we're going to have zero for the air.

MR. TASSONE: Yeah.

MR. YODER: For instance, wouldn't there be an awful lot of trucks coming and going from a warehouse? Don't those trucks generate nitrogen dioxide oil?

MR. EMMART: Sure. Yeah. No, I think you're right.

MR. YODER: I mean, how, how are you allowing for the, the actual use of, of the thing? Why, why did they get a zero when they're going to generate pollution?

MR. EMMART: That's a fair question. I think you're quite right, that trucks would generate air emissions. But that's simply an

assumption we've made, that the NOx component would apply to residential. And we've, basically, not been able to incorporate the commercial traffic, you know.

Is there any other additional reason here, Joe? I'd like to introduce Brigid Kenney from the Office of the Secretary.

MS. KENNEY: We didn't want to double-count. Essentially, we're trying to capture the air load that would be generated by the additional vehicle traffic from residences being located far from shopping, and work, and not able to use transit. But if we assessed it also against commercial and office, we'd be assessing the same counts twice.

MR. YODER: I -- I'm going to follow up, just to comment following up.

MR. EMMART: Sure.

MR. YODER: I mean, it's --

MR. EMMART: Yes.

MR. YODER: -- said its sources of

generation. But going to that same point, mixed use does get air. And, you know, for instance, if, if a warehouse were mixed use if, ideally, there were apartments there for the workers so that they are -- their community consisted of going down the stairs and walking across the, the ground, then there would be zero. So, so I would think you would want to encourage this mixed use development that would allow people to live where they work. And, with that, I'll shut up, having asked two questions.

MR. EMMART: No, that's a good suggestion. I guess you're suggesting that, in mixed use, we would then exempt the noxious emissions entirely, if there's residential there, so --

MR. YODER: I think you have to 1000 for that.

MR. EMMART: Okay.

MR. TASSONE: And your, your points are good. We, we definitely didn't cover the trucks,

and, and we didn't address --

MR. YODER: And that would be new development. I mean, that would be a new source of pollution.

MR. EMMART: That's right.

MR. TASSONE: And your second point is also good.

MR. EMMART: Any questions? Excuse me.

MS. COLLINS: Hi. I'm Betsy Collins from Harford County. How is, is the inventory of offsets going to be developed?

(Off-record discussion.)

MR. RHODERICK: Well, actually, Maryland Planning just passed this off, is in the process of developing across all the sectors kind of an inventory of potential offsets. It's something that the counties would like to see.

At this point, what I did want to share with you was one sector, which is ag. So this is not looking at stormwater, septics, or other entities, but looking at ag based on this -- and

it's very busy -- but based on the fact that we have been out assessing farms, looking at potentials, how many farms can meet baseline, what's the potential to generate credits off of those additional farms.

So, again, a couple of salient points, and this'll be part, again, of the overall assessment from all sectors. But, for those farms that we have able to get on and inventory, which represents about two percent of the total acres out there in the State of Maryland, we're finding, on an average, that better than -- again, gross average -- better than 65 percent of them can already hit baseline, which means they're available for trade at this time.

Now, depending on specific entities, it could be anywhere from 100 percent to, to, to less. But, again, based on what we know at this time, again, this is a very small subset and very biased when we look at this because, in some counties, we're only basing it on one farm. So I probably

1 look at some of the other areas, like, Washington
2 County and Howard County, where we've done more
3 extensive inventory, as being more reliable data.
4 So the second question we asked based
5 on this information was trying to get a gauge on,
6 if they met baseline, how many credits could they
7 generate, what type of credits.
8 So, the next slide. Next slide.
9 Sorry.
10 UNIDENTIFIED WOMAN: One more.
11 MR. RHODERICK: One more. So, again,
12 basically, based on a very small subset, what we're
13 seeing is, for those farms that can hit the
14 baseline, they seem to be able to generate about
15 200 nitrogen credits per farm as far as additional
16 things would be available, and phosphorus about 20.
17 Again, we did it for nitrogen and phosphorus, even
18 though we're mostly talking nitrogen.
19 Location by farm makes a big
20 difference. Obviously, larger acre farms occur on
21 the Eastern Shore. So as you see up here, you're

able to generate larger credits on larger farms as far as management practices and the acres there represent.

And if you go to next slide. Looking at the types of the credits that can generate. Basically, what we're seeing -- because a lot of these farms already have done sufficient conservation management practices that meet the TMDL -- they have a lot of the, what we call existing practices out there above and beyond that are available right now. So what we're seeing is about almost 75 percent of what is there is current practices which could be available versus new practices that they would agree to do additional things above and beyond at this time.

When you look at the two types, again, existing versus new -- well, sorry.

UNIDENTIFIED WOMAN: Sorry.

MR. RHODERICK: -- the existing practices, as you say, what you see is a lot more of our annual practices. So farmers are doing a

lot of things that they're doing on an annual basis, decisions they're making on annual basis that they see as opportunities going forward to put on the trade market. And, again, that carries over for new practices as well.

So when we talk in a traditional sense about, as you're talking about this permanency issue, you can see that structural practices and land conversion practices, which we traditionally think of as permanent things like we talked about -- stormwater management monitoring, go out and monitor, it's there every -- every day, and whatever -- there's a relatively small pool within the Ag Center. Most of them would be in this annual practice component.

So in other words, very briefly, it's just to give you a sense. And, again, this is all unverified information. Do not assume that I could walk you to this farm and say, here it is. We have a lot of people that are doing the assessments. This information is not been verified through our

program, but it's information we pulled together to get a sense for these type of meetings, and what the practice and what the credits potentially look like. Okay? Joe?

MR. TASSONE: Now, I -- so John was talking here about information that's specific to the agricultural sector that's built on examination of individual farms. So the issue, then, is, well, if you take this, if you extrapolate this more broadly to all farmland, what do you get? And, so, we're trying to work with this data and some data that comes from the other end of the spectrum, from the big picture, using both information from the Chesapeake Bay watershed model and what it tells us about this issue, and matching it up with this, this more on-the-ground in-the-weeds data, and, and bring the two together and get an idea of what, really, might be the case about the availability and the potential offset opportunities both in the agricultural sector, the septic system sector, the stormwater stream stabilization stream channel

restoration sector, and, then, of course, the simplest sector is the point source sector, and the minor wastewater treatment plants which we have the best handle on, because we have pretty good information on that. But all of those sectors are relevant and potential offset credit generators.

So we're hoping to put the rest of this information together shortly, and, and have it available, and with supplemental information, to go with John's.

MR. EMMART: Next?

MR. RUSS: Abel Russ, Environmental Integrity Project. I have a question about the slide you showed us. I'm confused about giving credit to existing practices, and I'm wondering how that would -- how could that result in that reduction of loads?

MR. RHODERICK: What we've done is we've taken the TMDL, we've broken it down to farms on a per acre basis. So what we're doing is doing an assessment based on the load to potentially

coming off those farms, have they met that level?

Now, when you look at actual practices, those are decisions farms are making on an annual basis. So if you can demonstrate to us, based on the permanent practices he already has in place that he's met his TDML obligation, those random decisions he makes -- whether I plant cover crops, whether I do conservation tillage -- so, in that vein, he could do them at anytime or not. What you would be doing, in essence, is saying, we're paying for you to do that here, and we know that your farm's already met a baseline. Okay?

MR. RUSS: And one follow-up question. These annual practices wouldn't be available as offset credits, right, because they're not permanent? Are you --

MR. RHODERICK: Well, that's what we're talking about, one of the big questions. If, if this is the type of, of credits that are available, how do we assure permanency? So that's part of this discussion. Our annual practices, are they a

component of this? Because, clearly, they seem to be the type of credits that are out there. And, if they are going to be proposed, how do we insure permanency?

The accountability we do -- we get out there and see them -- but when you're talking to a farmer, we're talking 50 to 100 years, you know. He doesn't know where his management, or if he even going to be around to manage that farm in that kind of time frame, so --

MR. EMMART: One example that's been given is if, for instance, there were an aggregator, and that aggregator had a pool of verifiable credits out there, they could be annual practices. No matter where they were, they may have changed a few times, but they would still be -- sum up to enough credits to offset whatever the development was they were used for. Pat?

MS. PUDELKEWICZ: I'm Pat Pudelkewicz with Harford County. With regard to the offset credits, in reading the policy it stated that you,

basically, a county, has to meet whatever their baseline is, that you needed to meet your Phase II WIP market loads, and then over and above that would be your offset credit.

Now, as an example, the State came up, for Harford County, came up for us with the MAST. But we had to do our -- we didn't do our own MAST scenarios, so we -- MDE came up, and we had something like 19,000 BAT units that needed to be installed in order meet our septic load. So no BAT units could be used as an offset until we reached that 19,000 number; is that right? Because, I mean, 19,000 just almost seems not likely to happen, really.

So -- and all -- also, looking at some of the stormwater numbers that came up for the county for -- with the MAST scenario, too, some of those numbers were just extremely high, and I, I can't even see us being able to use either septic BAT units or stormwater as an offset. If we have to meet those very high numbers and MAST is

first -- so am I reading that correctly?

MR. EMMART: Jay?

MR. SAKAI: I think the, the short answer is, you are reading that correctly. I think the, the, the problem that you pose is one of accounting more than it is about whether the credits are saleable or not. So the county is, is generally provided Phase II watershed implementation plans. Some did provide a MAST input that another did not. For those that did not, the Department made certain assumptions about implementation.

The facial impression watershed implementation plan is part of the overall State submittal where we provide reasonable -- a surety that the TMDL will be met, okay? So that's the big picture stuff.

The -- I mean, to use Harford County and stormwater as an example, if storm -- if Harford County -- if you make the assumption that storm -- that Harford County, as a Government

1 entity, has an obligation under their proposal that
2 is for permit to do 20 percent retrofit, then how
3 could, how could they possibly sell a retrofit of
4 stormwater as a credit if they have to meet that 20
5 percent? I, I -- we've had these discussions as an
6 internal department. I think I'd be interested in
7 hearing what the broader community has to say about
8 it. But, from my perspective, this is really an
9 accounting question. And if the county would
10 provide some assurance that it was fulfilling its
11 regulatory obligation on the forefront, then
12 there's really no reason why there could not be
13 separate programs to provide offsets for
14 development separate and above that. You, you
15 would just have to make sure that we're not double-
16 counting the same implementation the wrong way. Is
17 that -- I mean, I think there's, there's practical
18 channels associated with capacity -- financial
19 capability and all of that -- but, for instance, if
20 a county implemented a separate above and beyond
21 the fee-in-lieu of, above and beyond the, the new

stormwater utility fee that the Legislature mandated, and the programs were kept separate, and you tracked the implementation of the MS4 site separately, and you tracked offsets that were provided, the implementation that's been provided as offsets, I, I don't really see a problem with that. All right.

MR. TASSONE: And I, I would just add this. I think that the, the convention that was developed for the idea of doing this accounting that Jay's talking about, for the agricultural sector, is a, a possible model here. And it, it says that a particular farm has to have achieved baseline in order to generate offset credits. And there are standards to represent what that is.

Well, if a similar thing were done for upgrading septic systems, for example, to, to BAT, then you could follow a similar or analogous approach and it winds up being an accounting mechanism, just as Jay is talking about, and, and, and he tried to illustrate for stormwater.

MR. SHOCKLEY: Hi. My name is Pat Shockley. I'm a property owner in Worcester County, but I happen to live here in Hunt Valley, so this meeting was very convenient for me.

I guess a couple questions. The first would be, is this exchange modeled on any other State? I mean, is this something that has been proven or seemed to be, you, you know, efficient in other states, you know, outside of Maryland?

MR. RHODERICK: Are you talking about the trading models?

MR. SHOCKLEY: Trading, yes.

MR. RHODERICK: Yeah. There's 63 separate trading programs that are set up across the United States. We were somewhat fortunate in Maryland, we were not on the leading edge for once, so we were able to look at a broad spectrum of those programs, of what worked and what didn't work and, so -- in developing at least the, the general policy for the trading program.

MR. SHOCKLEY: Okay. The next question

is in terms of farm. I have both timber and farmland.

MR. RHODERICK: Right.

MR. SHOCKLEY: Do you consider timber as, as a possibility for an exchange or not, or how do you, how do you establish that?

MR. RHODERICK: Timber is folded in the assessment accounting, but the, the protection of timberland, as you just said, is, is, you know, it -- it's off the table as far as putting it up, and for credit. So --

MR. SHOCKLEY: Okay.

MR. RHODERICK: -- that component had protection. And I know we've looked at it quite a few ways. But to go back to the model and what they say in the model is that they've already accounted for all the forest acres in Maryland, and the water quality benefits from those, so they're already accounted for in the load that was given to us.

MR. SHOCKLEY: And the last question

is -- and I'll sit down -- is, I have property that's Plan Maryland R2-zoned. It's in an area that I don't think is going to be developed in the near term so, I mean, is the fact that it's zoned in a fairly high rate make my possibility as a business person a, a higher rate that I could exchange that or, you know, we -- you have an opinion which says market rates, but I just want to get an idea of how, you know, that market rate would be established. And, and, you know, if you threw out that -- a number, I'd appreciate it.

But just to give me some idea of, you know, this is prime property, flat, level land, again, it's in the Maryland road plan, et cetera, et cetera, so --

MR. TASSONE: I, I will try to answer, but I'm not 100 percent --

MR. RHODERICK: Yeah.

MR. TASSONE: -- sure what the question is. You've got land. It sounds like it's zoned residential.

MR. SHOCKLEY: Yes.

MR. TASSONE: Two lots per acre.

MR. SHOCKLEY: It's three to five lots per acre.

MR. TASSONE: Three to five lots per acre. Is it planned for sewer?

MR. SHOCKLEY: It's in the count -- it's in Worcester County. It is not currently under any plan for stormwater right now.

MR. TASSONE: Okay. And, so, what you want to know about it, though, is the thing I'm not 100 percent on.

MR. SHOCKLEY: Well, what I want to know is, shouldn't be -- it's not just farmland way out in the county, it is under a growth prospect. The fact that it is, you know zoned R2, and if I wanted, as a businessperson, to sell the land, or not sell the land, but there, there are the, the TMDL rights, or whatever, versus developing the land, does that put a higher value on the transfer rights versus, you know, land that may not be

zoned, or building, or something of a higher purpose?

MR. TASSONE: Well --

(Off-record discussion.)

MR. TASSONE: -- you, you -- the land is primarily right in, in agricultural use right now --

MR. SHOCKLEY: That is correct.

MR. TASSONE: -- forest and, and, and proper land.

MR. SHOCKLEY: Right.

MR. TASSONE: Well, first, there, there are no TMDL rights to sell, or, or to dispose of. You could conceivably use your land to generate offset credits that could then be traded on this market, depending on how you manage it and how you manage it in the future, so that would be a, a possibility for it.

MR. SHOCKLEY: Okay.

MR. TASSONE: But if you developed it, you would then be accountable for offsetting your

post-development loads under this policy.

MR. SHOCKLEY: Okay. All right. Thank you.

MS. DALY: Daphne Daly with the Carroll County Planning Department. I have a question and observation about the air deposition, I guess, process. I -- I'm a little unclear as to why the 10,000 people per square mile was chosen. I also -- I found it just a little bit troubling, because it seems to be different from the other calculations that are being used in that it's not a fixed thing. There seem to be a lot of assumptions built into how much nitrogen is produced by somebody living in one place versus another, and the fact that one person's living someplace that's going to have a certain commuting pattern, and also that that commuting pattern is going to remain fixed.

If you have a house, you know, that -- it's probably going to always have a bathroom in it -- always have a certain amount of, of, of

impact with respect to nitrogen, or phosphorus, whatever, you don't always have an -- a surety that the persons living in that place is going to work in another place or that. So it seems, it just seems a little bit at odds with some of the other factors in here.

MR. TASSONE: Those are good points, Daphne. What I can tell you is, is this. One thing that we looked at was, if you take a look at a typical -- an aggregate statistics for vehicle miles traveled person/residential/population in, in different air/land use areas as represented by density, density using Census Tracts as the boundaries, what you see are very much higher per capita vehicle miles traveled having an inverse relationship with density.

So the denser the Census Tracts have much lower per capita of vehicle miles traveled, and residential NOx emissions and, therefore, contributions to nitrogen deposition.

So that relationship was used in

conjunction with a State data and model on, on nitrogen deposition resulting from air emissions to come up with a relationship that's used in, in the calculation.

The calculation is very simple, and it doesn't attempt to finely cut things up according to a great variety of kinds of densities and development types. It sticks to, simply, really dense places, 10,000 population per square mile, or more dense, and then everything else. A finer gradation is possible, but it -- we chose not to try that to begin with.

And your point about permanence, in other words, you know, I can commute to work by car every day, but I could decide to start riding a bus, or the light rail and, so, that can change. That, that's true, but we can't really deal with that in this context just as we can't deal with a lot of other variability from place to place. And, so, all we could use are the general statistics for vehicle miles traveled associated with the

1 different Census geographies in the aggregate.
2 MS. LUDWIG: Hi. I'm Jackie Ludwig,
3 Harford County.
4 Jay, I have a follow-up question, and I
5 want to see if I understand correctly. The
6 county -- it goes back to the seller, that they
7 can't sell the offsets until they meet the
8 baselines. Well, what makes up your baselines,
9 your water components, your ag components, your
10 stormwater facilities, your wastewater facilities,
11 and your septics? And the regulations would need
12 to be written, or the policy would need to be
13 written that if you can -- are you saying that in
14 ag, even though the county is not meeting their
15 total baseline, but a particular farm is, then they
16 can sell offsets; is that what we're saying? So
17 for stormwater, or wastewater, or septic, you've
18 first got to meet that, that part of it before you
19 can sell it off, or --
20 MR. SAKAI: Mm-mm.
21 MS. LUDWIG: -- you're just one tract,

too, where you don't have this permanency even though we pled you will take 19,000 septic systems offline; is that what we're saying?

MR. SAKAI: Well, you know, that's a, Jay (sic), a, a good point you're making. I, I think we want to be careful here to, to make sure that we're distinguishing between trading and offsets --

MS. LUDWIG: Mm-hmm.

MR. SAKAI: -- okay? So it is true that we have established certain rules associated with those in the agriculture community that may be in a position to sell credits to whomever may, may actually need them and, presumably, it would be those as a result of this policy that would be looking for, for credits. So agriculture, understanding that it's primarily the, the individual landowner and the individual farmer that will be in the market selling his credits, agriculture has established a baseline that says, well, we want our farmers to, to voluntarily

1 achieve a certain level, level of implementation
2 before they do more at which they could sell.
3 Other states have taken a completely
4 different approach and established a very low base.
5 Pennsylvania's a good example of them. They look
6 upon implementation, and the ag sector is all
7 monetary, so it's primarily all tradeable.
8 What ag has done with respect to
9 establishing a baseline, I think, makes sense when
10 you understand that that sector in terms of
11 achieving of the Bay team deal is going to do
12 voluntary limitation of practice. And we've --
13 they've made a lot of progress as we've noted in
14 the, the basic TMDL. The other regulating sectors
15 are a little bit different. So we have not
16 established a trading policy that deals with an
17 individual property owner in the urban sector that
18 may want to sell credits. It doesn't mean we
19 won't, it just means that we haven't.
20 And we throw around the 20 percent
21 baseline number. The 20 percent requirement is a

regulatory requirement that, assuming that in Harford County, you got to get a permit --

MS. LUDWIG: Mm-hmm.

MR. SAKAI: -- only applies to the regulated entity. It doesn't transfer down the road, or down the hill to every individual property owner that says, oh, no, you're, you're -- you know, you've got two -- a, a two-acre house, and you've got four rain barrels on it -- and somebody's got to do the math and say, you, you retrofit 20 percent of the roof and the driveway of your house before you can sell any credits -- it hasn't gotten to that point yet.

So we've established baseline. We, we may ultimately have to establish individual baseline for these other sectors, but we haven't. So I think, you know, septics is duplicated because septics is really under a voluntary programmatic compliance regime with respect to the, the width. And, you know, we -- it is -- it's, it's -- you know, if people are going to sell BAT on a septic

system as an offset, then I think, you know, we -- everybody has to understand who's making money, who's selling, you know, who's buying the credit, and whether the particular jurisdiction is actually making progress. I don't see septics being saleable within the critical area anytime soon.

Now, that being said, the WIP assumes that only half of the 400,000 other septic systems in Maryland, they're going to be retrofitted. Theoretically, the other half are all creditable. You know, the question is going to be, how do you distinguish one from the other?

MS. LUDWIG: Mm-hmm. Yeah.

MR. SAKAI: It gets back to the, the accounting.

MS. DALY: Right, the accounting.

MR. MCGRAPH: Thank you. Erik McGraph with Prince Georges County. These comments don't necessarily represent Prince Georges County, just to clarify.

On the ag sector, I know ag is

generally exempt from stormwater management requirements; is that correct?

MR. RHODERICK: There's, actually, a lot of regulation on ag but, again, there's, there's issues about sediment. No, you can't have sediment runoff with ag.

MR. MCGRAPH: Right. But the stormwater management regulations are pretty much exempt in the State of Maryland.

MR. SAKAI: Most, most local jurisdictions, through their ordinances, have exempted the vast activity of agriculture activities and stormwater management at the county level, that is true.

MR. MCGRAPH: My question is, I know in some of the basin districts normally assist farmers with different best management practices, like, contour plowing, and designing ponds, and so forth. And I believe it's paid for by State and Federal monies. And it seems to me, like, the farmers are getting a pretty good deal here, okay? Again, this

is isn't Prince Georges County, this is me.

But the question of accounting, and I think it's fine that that's occurring, but it would appear that some of the credits the farmers receive should go back to the soil conservation to pay for some of those best management practices that result in a better yield, and also protect the environment for other areas. Can you address that a little bit?

MR. RHODERICK: Yes. Sure.

MR. MCGRAPH: Because I know the Farm Bureau also successfully defeated a bill that required herbicide application near waterways to have more stringent permit requirements as part of the NPS Program. So it seems like that community is always kind of pushing off anything to do with stormwater management regulations being forced upon them and yet, at the same time, they're, they're going to benefit from a program such as this.

MR. RHODERICK: It's time. You want to -- I got my audience in back, so --

MR. MCGRAPH: Thank you.

MR. RHODERICK: -- a couple things. Obviously, within the -- what we talked about, any farm that participates in the program has to have stormwater power plant which, again, is a plant that looks at all those resource plants on the farm and addresses just that issue -- any stormwater concerns, any soil removal -- so that's part of it.

The second thing is, Maryland is the only state where all farmers are regulated under the nutrient management law. So the application of fertilizer, whether it be organic/inorganic, is strictly regulated. That's also extended to biosolids and any other number of things.

As far as the cost share. Yes, Maryland has been very fortunate. We have both Federal and State cost share programs. But, again, they only pay up to 87 and a half percent maximum. The farmer's on the hook for at least 12 and a half percent to 50 percent, in some cases, for all those prefaces. So, again, you know -- and this is

all -- those practices, if they are cautionary, are not tradeable. So in the trading program you don't double-dip; the State or the Federal agency pays for them. You can't put them up on the market trade, so you have to do practices that come strictly out of your own pocket, or will be paid by, you know, a developer to the seller.

UNIDENTIFIED WOMAN: But can they use their baseline by using that cost share money; right?

MR. RHODERICK: Yes, you can use the cost share money. That's what we try to do, say, look, you're, you're not quite baseline, but if you do these one or two more practices, and we have cost share incentives to help you get there, then it pushes you into this whole arena where you can -- you know, this open market that you have other things you want to do on this farm, and you can set your own price, 'cause we were -- we regulate on a cost share rate, we regulate the price with price rates.

MR. MCGRAPH: And final comment on that as far as the accounting goes, the -- how would it work -- I guess it would be a money transfer between one property owner to another, and how would the taxes be paid on that; would it be at the lower agricultural rate, or, or how would that work? Would there be any taxes at all?

MR. RHODERICK: Are we talking about with the offsets?

MR. MCGRAPH: If you do the offsets, I assume there's -- payment takes place with the offsets.

MR. RHODERICK: Right. So -- there was an example the developer pays both the up-front costs to install a practice, any land costs associated with that practice -- because, remember, it's permanent, and there needs to be a recordation in the deed that would show that that practice is there permanently, it's used as an offset -- and then the monitoring cost as well. There's an annual monitoring and inspection that has to go on

to insure, one, that the farm continues to meet its baseline and, two, that the practices being used as an offset is being maintained and meets standards and specs. So that's all part of the -- that, and that's all spelled out in some contract between buyer and seller that we'd have cursory review of it.

MR. BEARD: Would that get taxed, that transaction that comes out?

MR. RHODERICK: Yeah, I'm out of my bent here.

MR. TASSONE: Well, sure. I mean, it's a business expense for the developer, and it's income for the offset generated, so it's -- it goes both into the -- they, they both go into their respective -- what's that tax that we all pay every year -- our income tax.

MR. BEARD: Since I got the mic, I might as well. Is that, is that working? Just a couple of --

MR. RHODERICK: Just identify yourself.

MR. BEARD: I'm sorry. Jim Beard with the Department of Trucks. And a couple of sort of observations, or comments, and a question.

First of all, there's been a couple of things about what -- about the future, you know, what if you started assigning baselines to individual houses, things like that. I get the impression that this group would be willing to make changes in the future based on changes in how good our information, how technology changes, that, that it's somewhat of an adaptable system if those things -- if, if, if they change; is that right?

MR. SAKAI: Well, I mean, the, the term of art that we use in the TMDL context is adaptive management, which is kind of the catchall for whatever we don't figure out now and changes down the road, we are flexible enough to be able to change our plans to reflect that.

So when you understand that, in the context of offsets and trading, many of our assumptions are going to change with you down the

road. And maybe your question is, how do you account for that down the road?

MR. BEARD: And is it adaptable? I mean, clearly, we don't know everything right yet -- right now, and there, there could be changes. This is a big issue for agriculture, because there are a lot of practices out that there that don't -- that either -- we may know something about them, but they haven't been invented yet, or we just don't know yet. And, and people are figuring that that's going to -- there going to be things that could come online in the future that were not fixed at this point, just here's the only practices that are allowable, but changeable.

MR. SAKAI: No, I, I absolutely agree with that --

MR. RHODERICK: Mm-hmm.

MR. SAKAI: -- and I -- our -- I mean, I can't, I can't speak to the ag side, but I can speak to the stormwater side. You know, one of the things that we're, we're trying to foster or

develop, you know, with this community is, we recognize that innovation is going to be a key component. And if we just told people right now, look, the only thing you can do to the stormwater is what the Bay Program has assigned, an efficiency, we're never going to get there. So we've come up with a framework that's pretty flexible that says, yeah, go do the things that you think have a water quality benefit, provide us some monitoring data to demonstrate that its effective, and along the way, you know, we'll try to fold it in as much as possible and build in as much flexibility in this process. So I agree with that.

MR. BEARD: Another comment, just on the whole issue of verification, and what people are doing. And I, I think mostly here what we're talking about is the trust, the real -- the concerns about do I -- it's, the concern is, do I believe you -- whether you're a farmer, or a developer, or a wastewater treatment, whatever -- that you're doing what you said you're going to do?

And we have lots of evidence that people don't always do what they said they're going to do so that, you know, there's concern, there's suspicion.

But we could easily get ourselves into -- I remember Steve Stewart talking about, how are we going to count every single rain barrel within the County of Baltimore? I mean, we could run an entire economy simply measuring the extent to which we're trying to make up for the problems which are caused by our economy.

MR. TASSONE: A jobs program.

MR. BEARD: This is the green jobs program right here, and I'm all for that. I think it's a great thing. But at some point, you know there is a cost. And I would really -- you know, we account for things like this in lots of other ways.

You know, in Howard County there was actually a question that came from here about -- was talking about verification of accounting. It occurred to me that, you know, bankers don't -- you

1 know, they don't watch my spending every day to
2 know whether I'm going to pay my mortgage, right?
3 They have a system together, and everybody else's
4 is there, and it's a pretty effective system. And
5 if you -- you know, they, they keep a certain
6 amount of data, and you get out of line, you get
7 whacked, right?
8 I think we should look to other parts
9 of our economy for some of this here, for methods
10 of verification that are proven and reliable. I
11 think getting out on a farm and really knowing
12 where you are has got lots of value, because it
13 sets a very, you know, a really strong baseline
14 that tells -- gives a lot of information at the up-
15 front. And it gives tell the farmer a lot of
16 information, too -- I think maybe that's true in
17 other places -- but -- and I think there's a little
18 bit of a tendency, and this is -- and a lot of
19 conversations around the Bay, we know, is for
20 people that kind of throw out hand grenades from
21 one sector to the other saying, I don't believe

you. But we're going to have to do all this stuff, and I think we're going to need to find a sensible way that, that this don't -- that they're not complete coverage, you know, of every single practice being done, but there is a reliability, and there are, you know, actual consequences if you don't, you know, if you get caught in cheating. Thank you.

MS. OUTEN: Janice Outen, MDE. It's a question for John.

MR. RHODERICK: Uh-oh.

MS. OUTEN: I understand the concept which you presented about, let's say, a developer. Let's say he owes you 1000 credits, he negotiates with a farmer, records the land records, he works out of DMV, and that's done. How are you anticipating, subsequent to the developer leaving -- so now we have 100 houses each owe 10 credits that starts to be an administrative and management problem; would you anticipate that those credits would be billed on the homeowners' property

tax bill, and collected, and somehow transferred? I mean, have you, have you worked out the total logistics of this, which are --

MR. RHODERICK: There is a huge --

MS. OUTEN: -- pretty --

MR. RHODERICK: -- a huge logistics here. I mean, there's -- as I just rattled them off. As a builder, you, you got 100 houses, you can calculate what your load is. Now you've gone through an aggregator, let's say, and he says, I can give you those 1000 credits you need. Well, there's a whole component about, one, the reliability of the aggregator 'cause he's representing; two, you want to see all those sub agree -- agreements he has for where those individuals credits are. As I said, you don't get the credits 'till it's installed. So someone has to go out, and it's got to be deadlined, installed, and inspected before the credits start.

He's also -- so he's got to pay for that, and he's got to pay, as I said, the possible

land costs, the installation costs, and then we've talked about it -- perpetuity, annual inspections, reports, et cetera. So it's a job.

MS. OUTEN: It's a little different.

MR. RHODERICK: Okay.

MS. OUTEN: The developer is gone. And I understood this credit --

MR. RHODERICK: Oh, so an HOA, yeah, they could.

MS. OUTEN: -- they're right here. So now I have 100 homeowners --

MR. RHODERICK: Mm-hmm.

MS. OUTEN: -- that each owe 10 credits. So how are we going to collect the money?

MR. RHODERICK: As you say, on that HOA, or on their individual tax bill, this is their individual portion.

MS. OUTEN: So do I revert to the local government to collect the money, to, to convey that money to the farmer --

MR. RHODERICK: Yeah. Sure.

MS. OUTEN: -- since it's -- well, you might want to tell the local governments that.

MR. RHODERICK: Well, I understand that.

MR. SAKAI: Janice, since you brought up the issue, I think, you, you know, it, it would benefit everybody, at least, to, to go over, you know, as we presented it, as, as described in the discussions here. Our proposal provides a permit issue mechanism for insuring -- it really imposes it on the development community, the developer, the landowner, ultimately, the person that's doing the land use change has got to secure permit. The folks that are in this business know what that means. You get the permit from us, which means we're in a regulatory regime.

Now, we, we do this every day, and for the folks in the audience that actually hold our permits, you know that there's enforceability, there's accountability, there's compliance. In some cases we'll do a good job, in other cases we

1 won't do such a good job on checking to make sure
2 that everyone is doing what they're supposed to be
3 doing. But the, the, the notion is, and the
4 assistance, certainly, on the EPA side is that
5 we're going to provide regulatory assurance. If
6 you're getting a permit from us that says, you have
7 to do a, b, c, and one of those things is, yes, I'm
8 offsetting my discharges, then you're on the hook.
9 So, the way this works in today's
10 world, even without offsets, is that we have some
11 communities, not a whole lot of them, but we have
12 have had communities that have been developed under
13 private development arrangements, they get a
14 discharge permit because they've got a groundwater
15 discharge system, spray irrigation, whatever --
16 they're out there and you've all seen them -- and
17 they hold a permit. At some point away -- along
18 the way for most of the development community they
19 hope this happens pretty quickly. After they close
20 out the development, they're gone and, there's
21 always an entity that has that -- that's going to

be the permanency on an ongoing basis.

And in the, the changes to the regulations, or to the statute that's occurred through that central Senate Bill 236 we now have more -- stronger, more stringent, clearer, stronger what we call controlling authority language. And what they means is that if the local government approves a development that's going to be developed under the regime that requires a shared facility, that requires a controlling authority, the county agrees that they will be the responsible party at the end of the day, if the homeowners association or whoever doesn't do what they're supposed to do.

So, yes, indeed, under that regime -- and I think we'll model it here -- it does put the local governments kind of as the backstop to make sure that the permanency does what they're supposed to do.

UNDENTIFIED WOMAN: What -- I got a question in regard to that. That when you say the permittee, are you referring to the construction

permit, the NIOI?

MR. SAKAI: Well, that's a good question.

UNIDENTIFIED WOMAN: 'Cause that's temporary.

MR. SAKAI: Well, that, that -- that's, that's right. And I think that because it's an ongoing that, I mean, we have a, we have a number of different general permits that we issue. We are looking and proposing -- I -- I'd love to hear other options here for implementation, 'cause I don't relish having to issue a whole bunch of new permits -- but, you know, that is one mechanism. That's a mechanism that exists today, to provide the regulatory shares.

I think we're, we're, we're proposing a general permit that will be somewhat different. Construct permit, you're right, does go away. I don't see how it can be an effective implementation mechanism. There'd have to be something that had some, some, some sort of permanency to insure that

the credits aren't secured forever.

MR. EMMART: Okay. The gentlemen in the back of the room.

MR. WARD: Yeah, hi. Fred Ward, Fred Ward Associates.

If I understood the presentation, it sounded to me like it's expected that the offsets that a developer would, would -- purges would have to actually be installed, inspected, and in place before the development permit can be issued. And I just say that because, from a financing standpoint, that's going to be extremely problematic if it's going to be fully funded by the developer, as opposed to having a, say, a private entity who is in the business of creating sellable offsets on an open market.

MR. RHODERICK: Again, and I'll reference the current policy is that the credits don't count until the practice is installed. So in the scenario you would give, as you say, you would line up the credits, you would have a construction

schedule for when that was going to go in, and it would probably be tied to potentially, I guess, when you break ground. You couldn't, you know, potentially until that offset's in place, and whether you phase your development based on those offsets, or whatever.

MR. BEARD: Just to follow up the supply side of that, 'cause it doesn't necessarily only get generated when that -- I mean, you could have credits being developed. People could --

MR. RHODERICK: Well, they can show up here. There's existing credits out there right now.

MR. BEARD: Right. So a robust market means that there should be some, some -- 'cause the farmers, or the -- whoever's generating the credit has the same issue about what, what financing. And, so, if there's a good market, maybe somebody's going to inspect, rather than baseline on top of it.

MR. WARD: Right. And that, that

certainly isn't going to work, but -- so it's to be fully funded by the developer.

MR. BEARD: Right.

MR. WARD: Well, the way other private improvements are, are done would be that -- it wouldn't actually be installed and inspected, but there'd be some kind of a financial guarantee put up, you know, like a bond, or a letter of credit --

MR. BEARD: Right.

MR. WARD: -- to guarantee that it would be put in place.

MR. MCGRAPH: Hi. Erik McGrath for Prince Georges County. My question is -- relates back to the question or comment made earlier about what happens later on when the developers gone, and so forth. But the way I understand it, it looks like from one of your slides here on Page Nine that MDE would be involved with the developer as far as doing, maybe, a general permit, or something much similar to your sediment control general permit where the State would be involved, maybe the

Department of Planning versus MDE. I don't know which it would be. But the agreement between, let's say, a developer and the person selling credits, that would be, certainly, an agreement between them, so the county would not be involved in any phase of that. And, so, they would come to the county. When the developer wanted to develop, he would bring the Letter of Credit to the county, and then we, we would just take that, and that would be our only obligation at the county level?

MR. RHODERICK: You want, you want to look, you want to look at the contract, because you just said the county's got some obligation to make sure these are -- these credits satisfied -- these are sound credits.

MR. MCGRAPH: Well --

MR. SAKAI: Before we get ahead of ourselves here, the, the -- a couple of things about the policy. The policy is drafted as -- the, the offset policies, the offset requirement is being implemented as a general permit obligation

that the Department of the Environment would issue the county.

MR. MCGRAPH: Mm-hmm.

MR. SAKAI: And our obligation would be to insure that the -- the contractual arrangement between the buyer and seller is robust, is, is, is solid and provides a good -- a surety that the discharge will be mitigated throughout the life of the, of the discharge.

I think this other discussion that we're having was related to, if there was an alternative mode of implementation that may offset some more of the local requirements similar to stormwater management, then the, the county would have a, a role in this.

If we implement a controlling authority requirement on the development as a condition of the permit, that would also bring the county into it, and what it would mean is that the county would not be able to approve of the development. And this is something that exists today, you know, when

you do a shared facility. The county is essentially agreeing that they're going to be responsible for the system if the homeowners association walks away.

So, I mean, these are, these are the kind of, I think, issues that we're looking for some, some input on.

You're a local government representative. I think the local governments have a role in it. Some of the local governments that we've gotten some of this input, you know, want to be in the business of, of providing credits and, and doing their own implementation. I mean, we have a fee-in-lieu of, of -- a bullet up here -- that could provide an alternative implementation option.

So there's a lot of different ways to do this, I mean, and some of it includes -- a lot of it includes the local government role.

MR. MCGRAPH: Thank you.

MR. EMMART: Next?

MR. YODER: Chris Yoder. I'm with the Sierra Club -- other people -- I'm a Sierra Club volunteer.

There's some kind of a magic box that we've alluded to, and that's the -- you know, there's going to be a robust market, there's going to be aggregators, there's going to be people doing their credits, and none of that has really spelled out when and where are things going to be defined, specifically, so that there are specific standards, so that there is something that -- we talked about the difficulty of measuring, but you can't control what you don't measure. And at some point and before all this becomes final, all that's going to have to be spelled out very specifically with standards, with accountability, and, and with consequences when standards aren't met. And who's going to set those standards, who's going to be accountable, what's going to be the consequences if people don't do what they say they're going to do, if things don't happen as they're supposed to?

And that, actually, leads then to my last question. If all of this talk today had been process, -- in my public service career, I quickly learned that you have to distinguish between process and outcomes. And the desired outcome is to reduce the pollution of the Bay, turn the Bay back into a healthy ecosystem. Where, in all of this, is that outcome specified? What's the feedback mechanism so that we look at what the ecosystem of the Bay is and, if it is not what we want it to be, how does that feed back into the system to change what we're doing? Even if what we're doing is the result of this process, and even if this process is robust and compliant, you know, it's got to change what's actually in the Bay. And who measures that, and what are the consequences of those measurements so we get to where we need to be?

MR. RHODERICK: I'll take the first one.

MR. SAKAI: Go ahead, you can answer

it.

MR. RHODERICK: No, I'm not going to do that. I'll let you do the Bay model.

First thing. If you go to Mdnutrienttrading.org, a lot of the questions you just asked about the process, the market base, the registry is all up there of the current so you can see how this marketplace will function, you can see how the credits are registered, et cetera, to give you a sense of, of the process, as you said.

One of the things, as, as you saw, at least for ag, we're out there very hard on the trail trying to get farmers educated and to get a sense of potential credits. But there is no driver, so we're going to kick back the farm community so where's the buyers, all right? So, it,it takes two sides to get a market going.

So, Jay, I'll let you --

MR. TASSONE: Standards --

MR. RHODERICK: Oh, the standards.

MR. TASSONE: -- organized standards.

MR. RHODERICK: Again, the standards, as I said when we talked about the verification to have the deed certified, should they fail, that's all in there -- on there -- in that information on the website. So there is -- all those processes are outlined -- the trading ratios, et cetera, delivery ratios, et cetera -- so --

MR. SAKAI: Just the two points you've made. The time line that we had shown at the last slide talked about all of this being rolled into a proposed regulation. So there's a policy documented, there's a presentation, and there's information that John talked about that all provide some level of detail. The proposed regulation, I think, ultimately, is what you want, if you're interested in looking at it, because that would be what we get implemented into COMAR, and, and enforced, and implemented by the Department of the Environment, and others along the way. So maybe that's the point at which you get to see or cobble exactly what the framework is in a regulatory

format.

The question about, you know, what's the feedback mechanism. You know, the great thing about being under this TMDL load is that we have, as you know, consequences as articulated by EPA. There's two-year milestone checks that measure progress along the way. There are -- you know, all this has to get rolled up into an assessment of the Bay that is done, by the way, that all the states and EPA work together, progress runs on a regular basis.

Reality check at 2017. The course changes along the way if progress is not being made, and further emphasis on additional regulatory policy changes if, if any of the states are not making enough progress. So I think we have enough oversight here, and I think we have enough reality checks to insure that we're making progress. If you think we're not making progress, then you need to, to, to zero in on a lot of the information that's being presented about the health of the Bay,

and about progress and activity going on in the State level.

MR. RUSS: You said training ratio, so I'm going to --

MR. RHODERICK: Yeah.

MR. RUSS: -- ask this question. I know a lot of trading programs address the certainty and uncertainty issues --

MR. SAKAI: Right.

MR. RUSS: -- and I know this doesn't happen right now.

MR. SAKAI: Correct.

MR. RUSS: There's a retirement of credits, five or 10 percent, depending on what kind of trade it is which you sometimes refer to as a margin of safety. I don't think of that as a margin of safety. So I'm wondering, out of the 63 trading programs you've looked at, have you done an inventory of the kinds of uncertainty ratios that they used and considered applying one in this context?

MR. RHODERICK: Right. Well, you're talking about one piece of the current program which is, as you said, is this retirement ratio where we require the buyer, if he needs 1000 credits, he's got to buy 1100. We retire 10 percent of any trade for the good of the Bay, okay?

The way the program is structured -- and I'm sorry to get in the weeds, but here we go -- if you look at the website there's potentially, I'll say -- Frank came up with -- 42 other practices that are potentials. The Bay Program model is only quantified, as we said, about 12 to 15. Because those have been peer-reviewed and quantified, those we use as the straight model efficiencies. Those other ones, we have a whole technical review process which talks about there, you know, a certain ratio to be applied at the minimum two-to-one going up to five-to-one, depending on the practice.

So, yes, unless it's been through a Bay Program technical review and is currently part of

the model, those certain BMP's fees, which is the subset fees, is a straight, you know, ratio, but the rest of them would average either way.

MR. SCHAEFFER: I'm Frank Schaeffer. I'm with the Town of New Windsor.

In looking at the slides, you're talking about there's nutrient loads and large -- allocation to large wastewater treatment plants. Of course, there a lot of small ones under 500,000 -- and we're about 100,000 -- and in the examples you gave -- well, everything is based on ENR. Where are these small treatment plants going to pull out; are they going to have to do offsets from the very beginning, or do their discharge fit parameters, or are they going to be given a go, or how they going to, how they going to shake out on this?

MR. SAKAI: Well, I mean, for -- as you know, the major wastewater, the 67 majors, by and large, have been allocated under the Bay team bill for a growth load under the assumption that they're

all going to upgrade to, to ENR using the, the Bay restoration funds.

My numbers were allocated and capped at the, the, the, the lower of 5100 pounds, or the 2020 growth load. But the assumption was that, for minors to upgrade, they would have to -- for minors to grow, they'd have to upgrade it, a BNR to ENR, and they have to do so with their own money.

So under the offset policy, if, if -- if there are -- there, there are minor plans that have allocations under the current -- under their current permit limits, and those -- there are those that are very close to being at capacity. There are options to figure out a way to, to, to, upgrade to get capacity into the nutrient cap.

There is under the Bay Restoration Fund increase a provision for providing funding for the subset of the largest minors along the way, and then, you know, at some point along the way there may or may not be funding for other minors. But right now there is, as you know, no founding for

all the minors to upgrade.

MR. SCHAEFFER: So, right now, if you're, if you're in a minor facility, particularly a smaller one, and you're approaching your permit limits, you would have to upgrade on your own to ENR in order to do this, because there's -- or come up with offsets some other way.

MR. SAKAI: Well, let me -- there's two things. One is -- I mean, obviously, if the, the -- if a development -- if the developer is seeking, you know, permission to tie into a plant, that is, the plant was at capacity -- and all the plants that I'm aware of are actually managing at capacity and making sure they stay below the limit on the way, so they're not allocating any new development at all -- under this policy, though, you know, this relates to individual developers. And if you're proposing to allocate -- to, to develop an area that does not have capacity under its existing example, you must fully offset -- the developer must fully offset his load.

MR. SCHAEFFER: Let me -- I don't want to be tedious, but go back. So if you're out -- say you're out -- the place has 200,000 gallons a day -- granted something less an ENR, an ENR is second nature -- but you're still at your capacity limits, the developer would be required to be offset, and that's all that would necessarily have to occur under this?

(Off-record discussion.)

MR. EMMART: They, they would send --

MR. SCHAEFFER: It's not a hard question.

MR. SAKAI: I'm not sure I understand. I mean, the scenario that you're --

MR. SCHAEFFER: No, what I'm saying -- what I'm trying to understand is, if the small plant is under its term limits, all right, and they're coming in -- so a developer wants to come in -- then they are responsible with doing the offsets. And that's -- that is all that really has to occur as long as the plant still belongs under

its current limits --

MR. SAKAI: If you have allocations that you're -- if you -- the capacity of your plant takes it to new development.

MR. SCHAEFFER: Mm-hmm.

MR. SAKAI: It's not allocated under the Bay, it's not one of the plants that has current allocation under the cap. The developer, under the post -- the policy that we have here, would be required to fully offset both point and the non point source load associated with that, that, that discharge, because there is no -- I'm assuming that your plant doesn't actually have a nitrogen cap in the permit right now.

MR. SCHAEFFER: It does.

MR. SAKAI: It, it does. It's 5100 pounds, or --

MR. SCHAEFFER: It's -- well, yeah. Right. I, I don't know the number off the top of my head but, yeah, it does have the balance.

MR. SAKAI: Now, was there, was

there -- just upgraded to an ENR, right?

MR. SCHAEFFER: Right. We aren't bound by -- I don't know the point we're talking about. We do have pounds, yes.

(Off-record discussion.)

MR. TASSONE: So the Windsor has capacity?

MR. SAKAI: So the Windsor has capacity.

MR. SCHAEFFER: Yeah, we have capacity. But the question, the question is that, do we still have to seek offsets from this developer when he comes in?

MR. SAKAI: No. No. If I understand what you're presenting, the answer is no.

MR. RHODERICK: At capacity. Not for the wastewater still.

MR. SCHAEFFER: All right.

MR. SAKAI: All right. I don't know what it was, but --

MR. EMMART: Further questions?

Please, Dr. Cheng?

DR. CHENG: I have a question related to implementation of this. Currently, county is responsible for issuing the stormwater management published in their stormwater improvement, MDE, and based on the ordinance that developer are required to be settle and be at peace over them. And, then, after the BNP comes up in there, the county's responsible for inspection and minerals.

And, so, for this, each offset a month, if the developer did not go trading, most likely, they probably would have to install more BMP just to take care of the offset. And my question is, who's going to be responsible for issuing, the company for the extra BMP's, who's going to inspect that, who's going to maintain it?

MR. SAKAI: You know, this question came up the other day in a discussion with the development community, and --

MR. EMMART: Jack, can you repeat the question, please?

MR. SAKAI: Well, the question was, if the developer chooses to address his offset requirement for the point sources stormwater load with additional implementation on-site -- and we understand that local government is reviewing, not us, the stormwater management plan -- then, you know, who's supposed to, to do that review, and at what point in the cycle are they supposed to do this; what's the role of the county with respect to insuring that the BMP is, is all, you know, is all there?

Well, the, the question, or the, the option of the mitigation for an offset with on-site implementation is, is a complicated process, as you know, because what we envision was something that would have fairly simple accounting that -- you know, we don't, we don't have -- we've got a good, I think, framework for ag credits. You go on NutrientNet, you, you go buy 10 pounds of nitrogen, you know, we understand that it's there.

Stormwater's not so clear, because if

you string together all different practices you need to meet environmental site design to the maximum extent practical as defined and approved by the county, and they do three more practices, what's the -- what's the nitrogen value of the practices? I, I don't know that -- what we know is we don't really quite have the tools to do that evaluation like they do in NutrientNet. Maybe we need to develop that so that we can do that, that, that process.

But what we're trying to avoid, what I was trying to avoid is having a very complicated stormwater review process that would be necessary to determine exactly what the pound of nitrogen coming off that development site was, because it's going to be difficult for every development site, and that's a very time-consuming, very lengthy, very resource-intensive process. So -- and it's a, it's a point we have to address as we move forward. I'm not exactly sure how we're going to do it.

Yeah, Steve's got an answer.

MR. STEWART: Just to kind of follow up on that, because from the local government perspective, if they have the opportunity to pick up offsite drainage and provide water quality for that --

MR. RHODERICK: Mm-hmm.

MR. STEWART: -- that would be our preference, would be our first preference --

MR. SAKAI: And --

MR. STEWART: -- okay? And we have efficiencies. If they put in a sand filter, put in a bioretention, you know, to tweak that drainage, it's fairly easy to calculate the load and fairly easy calculate its removal. And, so, you -- that would be, to me, that would be the first option to look for.

MR. SAKAI: Well, I mean, I -- I've, you know, looked at enough plans that I could tell you that environmental site design. If they did a true kind of off-site, or a standard BMP, then, then what you said is true, but it's probably not

1 going to be that way. It's probably going to --
2 they're going to tie another -- a bioretention
3 practice, in theory. And it's not so clear exactly
4 what the hydrology is and what the treatment area
5 is, because they're going to string them
6 altogether.
7 So I'm not saying it can't be done, I'm
8 just saying it, it -- we need to -- if we're going
9 to do it that way, we're going to compromise on
10 outside mitigation. I mean, the locals are going
11 to have to, I think, help us resolve a way to do
12 that, because the manual doesn't really try to
13 address the question of -- I mean, we have
14 efficiency, but it's a little more complicated than
15 that.
16 UNIDENTIFIED MAN: Just a quick
17 follow-up. As a farmer, say I want to sell my
18 credits, and then 10, 20, 50 years later -- and I
19 understand these credits are deeded so, I mean,
20 it's not like you can walk away from them -- but,
21 for whatever reason, I want, I want to develop my

land, or I want my credits back. I'm assuming that the only way to do that is kind of like commodities, that you have to buy similar credits on the open market, or you can't -- I mean, you're forever, you know, out of the picture, you know, as a developer; is that correct?

MR. RHODERICK: Exactly.

UNIDENTIFIED MAN: Yeah.

MR. RHODERICK: You hit it on the head. You've got to replace those credits in kind.

UNIDENTIFIED MAN: Okay.

MR. EMMART: Are there any further questions? Please.

MR. BEARD: I got one more.

MR. EMMART: Okay.

MR. BEARD: So, so we get this system all in place, and we're -- and we get to the 2025. So we're at -- we know what our cap is, we know what our offset requirements are, we know how that's all going to happen. Growth happens. At some time point -- let's just assume no improvement

in technology for a minute -- at some point growth keeps going. We're going to get backed up, we're going to bump up against the cap, and we're going to start polluting the Bay again, right?

MR. RHODERICK: Technology.

MR. BEARD: What's, what's Plan B, because, you know, infinite systems -- well, we just can't -- at some point we will, again, hit a new cap. We will, we will have done a great job for a certain number of decades. Do we know how long it is, and do we have -- are we starting to think about Plan B?

MR. SAKAI: Well, I, I -- I'm still very much concerned about Plan A.

MR. BEARD: I know, and I -- me, too, but do we have a sense of how we're -- I mean --

MR. SAKAI: Well, here -- all right. And, so --

MR. BEARD: -- we're basing this system on --

MR. SAKAI: -- we are not trying, I

don't, I don't think and, you know, maybe I'm off base here, but I, I don't think that we are trying to get to 2025, and whatever, and the target load, and we're done.

MR. BEARD: Right.

MR. SAKAI: The goal of all of this is to restore the Bay.

MR. BEARD: Okay.

MR. SAKAI: Now, you know, there's -- the reality is there's going to be continuous assessments and progress. Let's say, for the sake of argument, we made all of the progress that we have said we're going to try to make in our plan, and we actually get to the point where the, the Bay is using water quality. Then, you know, the, the -- as far the EPA's concerned, I think they signed off on the TMDL in the list, which would be a, a dramatic event.

But, you know, the obligation of everybody is not to re-impair a water that's been restored so, you know, it's, it's -- we have the

framework. I mean, under any degradation, it's this notion of, you're not -- you're trying to protect high quality water, that's just it, for high quality water now. What you're asking is, what's the plan for maintaining the restored Bay forever.

I think from the EPA's perspective, I think from all states' perspective, when we have policies and programs in place that will be able to provide for sustainability -- and that's kind of the, the mantra for the current administration, and, and it's, it's -- at MDE we're very much focused on sustainability. So the practices that we adopt now are going to continue with us in the future.

We're not going to stop with wastewater treatment plan. I mean, everybody thinks that ENR is it.

MR. BEARD: That's --

MR. SAKAI: I think by 2025 we'll have, have a different paradigm. So I think this is

1 going to be a process. Nobody wants to hear that
2 it is forever, but it is forever.
3 MR. BEARD: Right. And because we're
4 accounting for growth. So we've got a system
5 that's based on trying to be able to continue to
6 grow forever, essentially.
7 MR. SAKAI: Well, and, and a lot of
8 people that look at it --
9 MR. BEARD: There's no cap. We're not
10 looking and saying, okay, at some point we're going
11 to say, sorry, that's it, we really -- the system,
12 we really hit it, and we can't grow anymore.
13 MR. SAKAI: Well, everybody has seen
14 the Patuxent graph. You know, it's the one that,
15 that goes up, and then it goes down and back up
16 again, and that's not what we want for the Bay --
17 MR. BEARD: Exactly.
18 MR. SAKAI: -- you know, that's not
19 what we want for the water.
20 And, by the way, you know, it's not
21 just the Bay. I got news for you, it's not just to

maintain the TMDL that's going to drive water quality. We have local water quality issues that we're trying to address on the way as well.

MR. EMMART: So, ladies and gentlemen, given that the last comment said that, yes, this is a continuing process, it is coming up to 4 o'clock, and we're scheduled to end at that time.

I do want to reinforce that if you do have written comments, to please send them to us at afg@mde.state.md.us. And go to our website, and check out these documents that are posted, and please keep thinking about this issue. There will be other meetings that we encourage you to come to, and the policy will result, we hope, in a regulation that you will get another chance to review and to give your input on.

So, with that, I want to thank you, very much, for your participation, and look forward to seeing you at another meeting.

(At 3:56 p.m., the hearing was concluded.)

STATE OF MARYLAND

COUNTY OF BALTIMORE

I, Janet A. Brown, a Notary Public of the State of Maryland, County of Baltimore, do hereby certify that the above-captioned proceeding took place before me at the time and place herein set out.

I further certify that the proceeding was recorded stenographically by me and this transcript is a true record of the proceedings.

I further certify that I am not of counsel to any of the parties, nor an employee of counsel, nor related to any of the parties, nor in any way interested in the outcome of the action.

As witness my hand and seal this 8th day of August, 2012.

JANET ANNE BROWN
NOTARY PUBLIC
Baltimore County, Md.

Janet A. Brown

Janet A. Brown
My Commission Expires 05.20.15

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