MEETING OF THE NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION

Raleigh, North Carolina
July 12, 2012
Minutes

The North Carolina Environmental Management Commission met in the Ground Floor Hearing Room of the Archdale Building, 512 North Salisbury Street, Raleigh, North Carolina. Chairman, Stephen T. Smith presided. The following persons attended for all or part of the meeting.

COMMISSION MEMBERS:

Christopher J. Ayers	William L. Hall	Jeff Morse	J. Dickson Phillips III
Marvin S. Cavanaugh	Benne Hutson	Mayor Darryl D. Moss	Clyde "Butch" Smith, Jr.
Tom Cecich	Steve P. Keen	Dr. David Peden	Stephen Smith
Marion E. Deerhake	Dr. Ernest W. Larkin	Dr. Charles H. Peterson	Steve W. Tedder
Tom Ellis	Kevin Martin	Amy E. Pickle	

DIVISION OF WATER QUALITY:

Bradley Bennett	Alan Clark	Elizabeth Kountis	Jason Robinson
Janice Bownes	Nora Deamer	Susan Massengale	Jay Sauber
Ted Bush	Bethany Georgoulias	Matt Matthews	Lois Thomas
Kevin Bowden	Deborah Gore	Sandra Moore	Julie Ventaloro
Connie Brower	John Huisman	Diane Reid	Chuck Wakild
Amy Chapman	Steve Kaasa	Jon Risgaard	

DIVISION OF AIR QUALITY: Sheila Holman
Mike Abraczinskas
Joelle Burleson
Michael Petratjic

DIVISION OF WASTE MANAGEMENT: Ruth Strauss
Debra Watts

DIVISION OF WATER RESOURCES: Tom Reeder
Tom Fransen
Sarah Young

ATTORNEY GENERAL'S OFFICE: Frank Crawley

I. Preliminary Matters

Chairman Smith: Let me start by asking if any member knows of any known conflict of interest or potential appearance of conflict with respect to matters before the Commission. Commission members were asked if they knew of any conflict of interest or appearance of a conflict to please so state at this time. If that occurs to you as the meeting unfolds don't hesitate to speak up.

Mayor Moss: I don't believe this is a conflict but I will bring it to your awareness on item number four. The City of Creedmoor is an NPDES permit holder but I don't think that will impact my ability to participate in that item.

Chairman Smith: Thank you sir.
Mr. Morse: There is a possibility as a city manager we have an NPDES permit in Valdese and I'm going to assume that will not prevent me from acting on number four as well.

Chairman Smith: Secretary of State Elaine Marshall swore in new member Benne C. Hutson. Upon motion, second and vote, minutes from the May 10, 2012 meeting were approved.

II. Action Items

12-18 Request Approval of Final Drafts the Savannah, Hiwassee and Little Tennessee Basinwide Water Quality Plans

After a detailed presentation by Heather Pitt, and upon motion by Dr. Peterson and second by Dr. Larkin, the three basinwide water quality plans were approved by unanimous vote.

12-19 Request Approval of Certain Falls and Jordan State and Federal Stormwater Nutrient Accounting Tools and Baseline Loads

After a detailed presentation by John Huisman, and upon motion by Dr. Peterson and second by Mr. Hall, the request was approved by unanimous vote.

12-20 Request to Proceed to Notice and Public Hearing with the Proposed Consolidated Buffer Mitigation Rule

After a detailed presentation by Amy Chapman, and upon motion by Dr. Peterson to send the rule package out to public hearing and to approve the fiscal note, seconded by Mr. Keen, the motion was approved by unanimous vote.

12-21 Request Approval of the Statewide Mercury TMDL and NPDES Wastewater Permitting Strategy

Kathy Stecker: I'm here again to talk about mercury. Given the high level of interest in and statewide nature of this Total Maximum Daily Load you've asked that we come to you with this particular TMDL for approval. So I am pleased to present to you today this request that you

approve the mercury TMDL and associated permitting strategy. You might recall that we have a third document that went out for public comment at the same time as these two. That was called Reduction Options for Nonpoint Sources. That's not part of the package for today, although I will say a little about it toward the end. I'll go over some of the background briefly to put the documents in context and then review the TMDL and permitting strategy. I've got a chart that shows where different decisions and actions could occur. Then I'll touch on the comments we received and our responses.

But first, let's go right to the good news. The TMDL uses 2002 as the baseline year, and calls for a 67% reduction in mercury loading from all sources. As of today, wastewater sources have already achieved their share of the reduction. And as you've heard in previous presentations, we expect that North Carolina air sources will have met their share of the reduction by 2016. The good news for the permitting strategy is that 99% of facilities already comply with those requirements.

We've suspected that, as has been found in other parts of the country, the biggest contributor of mercury in NC is atmospheric deposition. So really, a regional or national approach to document sources would have been better, but that hasn't happened. A statewide TMDL is one way to document mercury contributions from various sources. We do have a list of states with approved and draft statewide TMDLs. A group of seven states adopted a regional TMDL for those Northeastern states in green on this slide. Florida and Michigan are not far behind us and will finish their statewide mercury TMDLs this year. Alabama and Missouri are working on theirs. One important point to note is that all but one of these states had individual waters listed for mercury on their 303(d) lists. Except for New Hampshire, they had not listed all of their waters. Yet they still elected to develop statewide TMDLs, due to the large proportion of mercury from atmospheric deposition and large numbers of waters affected. North Carolina has recognized for a long time that mercury in fish is a concern. We have been monitoring fish tissue levels of mercury for decades. The Clean Smokestacks Act was passed in 2002. One of the reporting requirements in the Act was for mercury emissions information in 2003, 4, and 5.

In 2006, the EMC adopted "Mercury Rules for Electric Generators" which became effective in 2007. They included some reporting requirements, and you'll be hearing more about that later on today as an information item.

In 2008, NC was named as a source of mercury to the northeastern states in a petition to EPA under Section 319(g) of the CWA. The Divisions of Air and Water Quality represented NC at the conference EPA convened 2010 as a result of that petition. Division of Air Quality Director Holman reported on that to you in September 2010.

So the TMDL is another tool for NC's ongoing efforts to manage mercury. What does it do for us? In going through the steps for developing the TMDL, we, in collaboration with the Division of Air Quality, were able to quantify in-state source contributions. And we estimated the proportion of atmospheric contributions from in-state vs. out-of-state. With DAQ, we were able to select a baseline, the year 2002, that makes sense for NC and allows us to measure our success. By tracking reductions achieved since the baseline, we provide information needed for future decision-making. All of this is right in line with the requirement in mercury rules for electric generators to develop a mercury balance for the state.

The TMDL estimates that a 67% reduction in mercury loading from all sources is needed to meet the fish tissue target of 0.3 mg/kg. It allows us to demonstrate how we're doing our part to reduce in-state mercury sources. Our approach is to say that if we in NC achieve a 67% reduction in our sources, we've done our part. Our 67% reduction translates to about a 12%

overall reduction in total loading. We expect to achieve and maintain that by 2016, including atmospheric deposition, and we're almost there now. The TMDL also gives us flexibility in wastewater permitting. The statewide aggregate wasteload allocation in the TMDL is 81 pounds per year.

Now I will move on to the second document we've brought to you for approval, the wastewater permitting strategy. Because we've already achieved significant reductions in loading from wastewater since the baseline year of 2002, more than 99% of facilities in NC are already meeting the requirements outlined in the permitting strategy. What this means is, if you have a discharge, as long as nothing changes about your effluent, for 99% plus of you, your permit requirements for mercury will not become stricter under the TMDL. The reductions we have seen since the baseline year occurred because of power plants shutting down, converting to natural gas, and installing improved wastewater treatment, and because municipalities did significant source reduction work, like requiring dental amalgam recovery. We recognize the success already achieved by the regulated community, but we need to be able to document that the wastewater load stays low. The major components of the permitting strategy are: monitoring, reasonable potential analysis, water quality-based limits (annual), mercury minimization plans and technology-based maximum – 47 ng/l.

Some facilities will monitor mercury in their effluent, some more frequently than others, according to the potential for mercury to be present in their discharge. Under the permitting strategy, many facilities will monitor less frequently than they are required to now. Water quality-based limits will be set if reasonable potential analysis indicates they are necessary and those limits will be expressed as annual average concentrations. The general process I've described so far is not different from how we would approach permitting for mercury in a waterbody that is not impaired. To implement the TMDL, however, we have also included requirements for mercury minimization plans for those facilities that receive a limit, plus a maximum concentration. In this way we can make sure we don't exceed the wasteload allocation in the TMDL, and we lock in reductions we've already achieved. This gives us flexibility in individual permits while preventing hot spots and protecting downstream uses. As things stand right now, we have an approved 303(d) list in place, and a TMDL for mercury is needed. Currently under federal regulations any wastewater facility in the state with the potential to discharge mercury has to be given the water column standard at the end of pipe as the permits are renewed, to ensure that the discharge does not cause or contribute to water quality standards violations. Many new facilities or expansions of existing facilities could not be allowed at all. Until we submit the TMDL to EPA for approval, we have not properly documented the circumstances that allow us to have that flexible statewide aggregate wasteload allocation.

Those circumstances are:

- the mercury is predominantly from air deposition
- air deposition is relatively uniform across the state, and
- the contributions from individual point sources are very small.

So, to summarize how the TMDL and permitting strategy are related, we made a diagram. With a TMDL, we can implement the permitting strategy as soon as EPA approves the TMDL, likely 1-2 months from today. As I've mentioned, great reductions have already occurred, such that more than 99% of facilities already comply with the permitting strategy. New and expanded facilities could be allowed, as long as we don't exceed the aggregate wasteload allocation. We

can still revise our assessment methodology if we want to. On the other hand, without the TMDL, we can't implement the permitting strategy, which leaves us where we are right now.

Under federal rules, we can't allow new discharges or expansions, and either we issue permits with strict limits or stop reissuing permits that require limits. If we attempt to issue permits that don't meet the federal requirements, EPA will object. In any case we would review the Assessment Methodology used for the 303(d) list, as we do every two years. This methodology describes how we determine impairment. We always have the option of revising it. Most commonly it's revised when new standards are adopted. It would be at least 2-3 years before we'd be able to use a different process for mercury (or any other pollutant). We'd have to develop another assessment methodology that EPA would concur with, develop another 303(d) list using that methodology, put it out for public comment, respond to comments, and submit the list to EPA for approval. EPA approval of NC's past 303(d) lists has taken as long as 21 months.

Both of these paths go to the same place. This way puts a reasonable permitting process in place almost immediately, during the 2-3 years minimum that would take to get a different assessment methodology in place, it that's what we want to do.

And now on to the comments we received. 1690 individuals and 10 organizations sent comments. The 10 organizations are Catawba Riverkeeper, League of Municipalities, Progress Energy, Utility Water Act Group, Water Quality Association, Duke Energy, NC Conservation Network, U.S. Department of Defense, Town of Valdese and Waterkeepers Carolina.

The comment contributed by the greatest number of individuals was some variation of this: "I am writing to urge the Environmental Management Commission to pursue the strongest possible measures to reduce mercury pollution." We got hundreds like that. All but two of the individual commenters expressed that kind of support. Many of the individual commenters included personal notes, like about fishing with their children, or from doctors having to warn patients about eating too much fish.

I have summarized some of the main comments in support of at least parts of the TMDL and strategy. Many applauded us for addressing mercury, many liked the way we did the source and trends analysis, some supported the use of mercury minimization plans and some, but not all, supported not including stormwater in the permitting strategy and many commended the decision to prepare the TMDL for mercury.

Some of the commenters believed that the fish tissue target and species were too conservative and some did not like the idea of a level currently achieved that's in the permitting strategy. Many encouraged the EMC to approve the TMDL and strategy but didn't think the 67% reduction would be enough and urged us to study hotspots and follow up with site-specific TMDLs if those are needed. Just like we got comments about supporting not including stormwater, we got comments that thought we should have included stormwater in the TMDL. Over 1,300 of the individual commenters specifically mentioned concern about mercury from Progress Energy's Asheville facility.

Some specific suggestions we received were some of the commenters wanted to see more language about adaptive implementation. Some wanted the ability to get different permit limits if it could be demonstrated that water quality standards are met in their receiving waters. We also had a suggestion that wastewater sources should not have to reduce loading from the baseline at all. We had conflicting suggestions on assessment methodology, which really wasn't the focus of the public review and comment on these two particular documents. But one commenter suggested that we delist all the waters for mercury impairments, and then add waters to the 303(d) list based on site-specific data. Another commenter argued that if we did that one

by one that it would guarantee that watersheds with significant contamination problems would not be listed as impaired or addressed for years. One commenter also suggested an earlier and longer public notice and comment period for the assessment methodology. We also had a suggestion to use the 5m approach. Category 5 is for waters that are impaired and in need of a TMDL. Category 5 is the 303(d) list. 5m is a subcategory of the 303(d) list that's offered by EPA. The M is for mercury.

I have more information on 5m. We did consider this approach rather than a TMDL because it's for waters that are impaired by mercury predominantly from atmospheric sources. EPA would allow a state to defer development of mercury TMDLs while they carry out mercury reduction programs. However, it does not allow for the flexible permitting that we'd get with the TMDL. Under 5m permits must be issued with limits such that dischargers don't contribute to water quality standards violations. In other words, 12 ng/l at the end of the pipe as I described earlier. 5m does not remove the state's obligation to develop TMDLs because the waters are still on the 303(d) list. EPA issued this guidance in 2007. No state has used 5m to date, yet 13 states have developed statewide mercury TMDLs in that same time period. There does not appear to be a benefit to North Carolina municipalities or anyone else in using Category 5m and 5m could not happen quickly. The documentation required is extensive and must be submitted with the 303(d) list. Public review and comment are required and EPA must concur with the categorization in order for the state to continue to defer TMDL development. For all of these reasons we do not recommend the use of subcategory 5m.

Based on the comments we received we did make some revisions. Some of our statements about sources were apparently confusing, so we deleted them. They were not essential to the document. We clarified the language describing the implicit margin of safety, and we made it clear that while we must express the TMDL as a daily load (because it's total maximum daily load) an annual allocation is more appropriate for permitting considerations. We included language that allows for revisions if we meet the fish tissue target early (that's the adaptive implementation part) and we made it clearer that we could in the future develop individual TMDLs if we found local hotspots. For stormwater we received comments supporting and critical of our approach. In the end we did not include requirements for reductions in stormwater loading because we believe it will be controlled through reductions in loading from atmospheric deposition. Likewise, we received comments supporting and critical of the level currently achieved for setting the maximum concentration allowed in wastewater permits. After considering the comments we retained the 47 ng/l maximum in the permitting strategy as a reasonable way to lock in the reductions we've already achieved in wastewater loading, and to stay within the wasteload allocation specified in the TMDL.

Real quick, that other document that's available for public review is a menu of options for additional actions North Carolina might take to further reduce the amount of mercury entering waters through nonpoint sources, including atmospheric deposition. The TMDL does not regulate mercury loading from atmospheric deposition. Achieving those reductions will require strategies that fall outside the scope of our wastewater permitting program. You've heard about them and we will hear about them again later today. We continue to welcome comments, questions and additional suggestions on this particular document that's posted on our mercury webpage. I understand that the Division of Air Quality plans to summarize the feedback that they gather at a future Air Quality Committee or EMC meeting. So far we've received a wide range of comments on this document.

Before I get to a recommendation, I wanted to recognize some of the key people involved in this effort, especially Dr. Jing Lin, who developed the TMDL; Laura Boothe with the Division of Air Quality, who oversaw the modeling and other essential pieces of this work; and Jeff Poupart, for providing the key implementation plan for the TMDL. There were many others, too many to list, who made valuable contributions and I thank them for their time and talent as well.

In summary, the TMDL provides important documentation of mercury sources, a baseline to measure progress, a reduction goal and an aggregate wasteload for the state rather than individual facility wasteloads. The permitting strategy outlines a reasonable approach to mercury that ensures wastewater contributions remain low. We now ask for your approval of these two documents. Thank you.

Chairman Smith: Comments and questions?

Dr. Peterson: As a coastal resident who is very concerned with fish and fishing, and concerned with the business and economic value that fishing brings to the coast, I'm very concerned. One aspect of this set of rules and that is we don't, as I understand, we can't address the offshore migratory king mackerel, tuna, swordfish, other sorts of species. I can say with some assurance, although without data that there's been a tremendous decline in focus on such things as king mackerel fishing ever since this mercury problem became well publicized. I think this has truly affected our coastal businesses related to sports fishing offshore. I feel very disappointed that we can't do something about it. However, I do see a way to do something about it and that is I urge the Commission to do what we need to give us the greatest effectiveness of our further appeal at the federal level to EPA for a regional approach to this problem. Because it's only a broader approach that will be successful in dealing with these highly migratory fishes that I'm speaking about. As I say, this is in some ways an irrelevancy, but not fully an irrelevancy to our deliberations today and I thought I'd start what it might be an easy one to appeal to everybody's best interest.

Mr. Tedder: I guess part of my concern with what's proposed is it kind of perpetuates what I see as may be an error in that you don't, the reason that we have this proposed TMDL and monitoring permitting strategy before us is because of the 303(d) listing itself. North Carolina does not have a fish tissue criterion monitoring our water quality standards. They chose not to put it in there. I don't think it's proposed even in the upcoming triennial review. That's information they've seen before. That could pose some problems. The methodology referred and used an advisory, a state advisory from DHHS for fish tissue consumption. I'll quote from that, "the vast majority of North Carolina waters don't have problems and most fish from them are safe to eat and enjoy; North Carolina encourages people to eat a wide variety of fish because of health benefits." That along with, if you go back and look at the information that was utilized back in 2008 for this advisory, and again remember that advisory carries no regulatory ramifications. It is strictly an advisory. When you look at the information that was utilized the fish the information data came from Florida, FDA, Washington State, part of Florida, the king mackerel says North Carolina but was in reality North Carolina, Georgia and South Carolina. You can go on for about three pages, its Florida data; other states, some tiger sharks, and other sharks in North Carolina. When you talk about the information at the time it was utilized for North Carolina it was south and east of I-85. That's a pretty broad brush to say the waters are impaired and I echo what Dr. Peterson said, I think we have probably delivered the wrong

message to a lot of folks, especially the recreational fishing community and the commercial industry. If you read the advisory we have two or three pages of fish to consider. I'm sure everybody carries that in their back pocket when they go to the seafood store or to the restaurant. I doubt it. We've got a lot of information in North Carolina. We've got a lot of fish tissue data. It's interesting that if you look at it, you can go down to the basins. I looked at the data for several basins, the Broad, good example. There are a couple of areas, not the entire Broad River, one lake that may be worth consideration that I think you could do site specific information. If you go back and look at EPA guidance, for the 303(d) listing. It encourages site specific data collection. It says you could use an advisory if you wish because it's part of the information database. It repeatedly says site specific information is the best way to go when you're doing a 303(d) listing which led us to this point. I look at the New River. There's nothing. I look at Little Tennessee. There is some but it's not largemouth bass; it's walleye. Right onto the Hiawassee, nothing, Watauga, nothing, White Oak, nothing; Catawba, the largest basins in the state, nothing. The lower Cape Fear, Lumber, there's some spots we need to pay attention to. The whole idea is we've got information. We should be developing information continually to identify the areas that should be specifically identified on the 303(d), not just do a broad brush with an advisory that carries no regulatory consequences. The information is there and the process is there. We've chosen not to. I think that's a mistake. Just to start the discussion here are some problems that I have because the 303(d) listing led to the necessity for a TMDL. The document from staff has good information in that document, excellent information. It says we're taking care of the problem already without the TMDL. It's already underway. We're almost to the point where you want to be anyway. I look at the permitting strategy that the water quality folks put together. Considering what they had to do, I think they did a very good job with that. I still go back to the beginning of the issue is what put us here. The staff indicates they may look at this in the future. Well it has been in there for quite a while. We've listed the entire states waters in 2008. That means we've been 2008, 2010 and 2012, three different 303(d) listings under that same methodology. I think it's time that we proceed past that and do what is, to me, scientifically valid and logical; and that's to back up and let's take a look at that before we just jump back in doing the same old thing when. I'm not convinced. The data does not support that there's a statewide problem with mercury and fish tissue in North Carolina.

Mr. Hutson: As the newbie I've got a couple of questions. In the draft TMDL document it said the ultimate objective of it was to reduce fish tissue levels and mercury so that fish consumption advisories can be removed and the fish can be safely consumed. I'm trying to reconcile when I read that. Only two percent comes from wastewater discharges or point source discharges. Will this TMDL, if implemented, cause the advisory to be able to be removed, if that's the only thing we do?

Kathy Stecker: It requires kind of a multi part answer to that. If the TMDL, the TMDL being defined as the waste load allocation plus the load allocation for nonpoint sources, was fully implemented, we believe yes, fish tissue levels would be low enough to lift the advisories. However, the TMDL includes the contributions that come from outside North Carolina. What we've described mainly is how we're achieving our part in North Carolina. But it would take the other reductions from outside the state in order to fully implement the TMDL.

Mr. Hutson: So if all we can do is what we can do in this state the advisory will stay in place, if no action is taken anywhere else?

Kathy Stecker: Correct.

Mr. Hutson: Second, there's a lot on the 303(d) list, a lot of segments that are listed. Are there TMDLs in place right now for all of the segments that are listed on the 303(d) list and if not, why is this one at the forefront as opposed to others that may have been on the 303(d) list longer?

Kathy Stecker: We have been listing for fish tissue concentrations and mercury since 1998. The methodology changed and we followed the fish consumption advisories from waterbodies specific to statewide. All of the waters that you see on the 303(d) list still require a TMDL. If they had a TMDL they wouldn't be on the list anymore. There was the beginning of a trend for states to go ahead once we saw that EPA was not going to develop national mercury TMDL or regional mercury TMDLs. It began with Minnesota, went to the northeastern states, New Jersey; and there are other states listed on the slide there too. But the states begin to address mercury impairments on their own. We still continue to work on TMDLs for other parts of the state. But it seemed like the right time to go forward with this one.

Mr. Hutson: My only follow-up to that is it strikes me that I'm hearing there are TMDLs that could be developed for specific segments that could very well achieve water quality goals for those segments and I'm trying to reconcile in my mind how we do this TMDL when all the actions that we've taken our part would not achieve the goal that we're trying to reach. I'm trying to balance in my mind the policy and allocation of resources issues when I'm faced with that conundrum, quite frankly.

Kathy Stecker: I might have misunderstood you. You were only speaking of mercury, yes?

Mr. Hutson: I'm talking about all the segments on the 303(d) list which under all requires a TMDL to be developed. I'm trying to find out why it was decided to develop a TMDL for mercury when if we do it, if the other states don't do anything, we won't achieve our goals. There could be TMDLs for some of these segments where if we do it, it will achieve the water quality goals. So I'm trying to figure out what went into that policy determination why mercury was opposed to focusing on resources on the ones that would achieve water quality goals if we took actions within the state.

Kathy Stecker: I'll try to respond to that. It was one staff person that worked on this particular TMDL. The other staff in the modeling and TMDL unit were working on other TMDLs throughout the state and we continue to do that. We recognize that. But this would cover the entire state with one TMDL and seemed like a good use of resources.

Mr. Phillips: One point there is I think is the direct effect on human health associated with mercury consumption. That's not the case with all impairments. There's always a public health connection with many or certainly other uses. But there is that factor seems to me. It also strikes me that in addition to the regulatory benefits of which admittedly was a result of putting this on declaring the statewide impairment of the regulatory flexibility this offers is fairly persuasive to

me. Admittedly that only results from having declared the statewide impairment, but that exists. In addition it seems to me that there is something of a paradox of collective action just in the way that one person's vote is not going to change an election, usually. But if everybody thought that therefore there's no reason to vote, then there would be a serious impact. It's important that since this can only be addressed through collective and regional action that establishes the policy and importance to this limit, ensure that we hold onto the gains that we are making, have already made and will make, and act collectively with and appropriately cooperate and set a model for cooperation regionally and nationally so this problem can actually be addressed. I'm a person who only a couple of weeks ago went down to the coast and caught a bunch of Spanish mackerel, took them home and fed them to my six year old. I was shocked to see Spanish mackerel on this high concentration list which I am also dismayed that I was not aware of that. The Sunday evening, Wednesday night fish fries become a sinister event in eastern North Carolina. With those additional comments I'll stop.

Mr. Morse: I've got a couple of questions. We've been listing since 2008 on this 303(d) for mercury. Since 2008 what has the permitting Division been doing with existing permits and renewals of permits regarding mercury limits? Have they been issued, up until today, the 12 ng/l with the non-dilution factor? How have you been dealing with permitting local governments or point sources between 2008 and now, especially for renewals? Valdese had its renewal last year. So how have you been doing that and why is that going to be different now? Why are you proposing now, at this particular junction, we adopt a statewide TMDL and if we don't we're got to go to this more stringent category?

Kathy Stecker: I'll try to answer this one myself. If I need some help or if I don't quite get it you let me know and I'll get some help up here. So you're referring to the statewide listing that followed the statewide advisory for largemouth bass because we have listed based on individual waters before?

Mr. Morse: Yes

Kathy Stecker: This time -- right now -- does not mark that change to a different approach, to permitting. That occurred between 2008 and now as a result of, as I understand it, Region 4 permitting staff realizing that we had placed all the waters on the 303(d) list. Then from that point on, at some date in between, requiring us to do permitting differently. We also still practice that reasonable potential analysis and looking at any effluent data that we have in the permitting.

Mr. Morse: So you don't automatically, from 2008 say to the ones that you're currently holding because this is now on the front burner, prior to that front burner status we had not…you had done reasonable analysis and had not applied blanket limits on the permits the most restrictive now that is being considered, if we don't adopt a TMDL. Is that a fair assessment?

Kathy Stecker: I think so, if I understand you right. I would just add that I don't want to sound like its EPA making up something. It is in the federal rule.

Mr. Morse: Sure.

Jeff Poupart: As Ms. Stecker said the EPA seemingly, suddenly noticed that we had a mercury advisory and we needed to issue our permits with 12 ng/l end of pipe. Since that point we've been offering people to either accept 12 ng/l end of pipe or been backlogging the permits awaiting this TMDL action.

Mr. Morse: Thank you. Could I follow up with my statement? The reason I bring that up and the reason that I wanted to get a clarification on that is, as a point source, I believe the actions that we're going to be taking regarding this particular TMDL is more of a statewide policy issue that's following bad policy. We're just continuing, in my mind, this continuation of bad policy. We should have never in 2008 adopted a statewide ban on mercury or statewide listing, because traditionally on the 303(d) list it has always been on whether or not a particular stream, river basin has been impaired. Then you create the backup data and then you submit that program for that particular stream on the 303(d) list. That is what has been the fundamentally the practice that this Commission has and through staff, not necessarily through this Commission because this Commission has not been involved in that process and I'm hoping that we will change that action soon, that has been a practice we've always followed. For some reason back in 2008 the staff, not the EMC made the collective decision, let's just go ahead and do a statewide mercury. What that creates out in the market, what that creates in local government…we're trying to develop a residential second home residential development on Lake Rhodhiss. We get calls from all over the country about people that are getting ready to invest money in buying property on Lake Rhodhiss and they say, "We went on the state 303(d) list and we see that you're impaired for mercury. Why are we going to invest?" I'm sure this happens all over the western part of North Carolina. Like Steve pointed out, the Catawba River doesn't have any impairments. Yet we are being stigmatized because of this foul, incorrect process that we adopted in 2008. There is another approach that I think North Carolina can follow that meets the requirements and meets the same objective, but does not continue to do that stigma in bad policy. That's why EPA even created the 5m category. The fact that no other state has adopted it doesn't mean that it's not there for, in particular because of the creation of our 303 statewide. That's why it's there, I think. What the 5m and this is just my opinion. I'm not an expert on and don't claim one so I apologize. This is my layman's opinion is that the 5m category allows us to do just what EPA wants us to do. In fact, it encourages that it says that you can get into the 5m; you can then do your statewide analysis or statewide studies; you look at all the contributing factors. It avoids having to do a TMDL immediately. It doesn't say you have to; it puts it aside. It does recognize that you eventually have to do one but what you can do is develop a strategy based on point source, or does it based on those areas that have been defined as impaired. It gives you that leeway. I took the opportunity to call some people in Atlanta just to get some EPA comments. The comments that I received paralleled very much what you have indicated in your presentation. But what I heard that I haven't heard in the presentation, yes-you start the process over again, but EPA recognizes the importance of that process because I was told EPA usually gives you thirteen years, gives a state thirteen years to develop a total strategy including air and water. What we have done and what the state has already done can easily fit in this 5m category. I suggest we look at the 5m, adopt the 5m category allowing the state to work with EPA to develop the strategy, the implementation strategies and the permitting strategies that they already have recommended. Take that to EPA and say that's our strategy but we're going to do it site specific. We're going to do it based on impairment, not just on a blanket allocation that puts a stigma on all of our water basins that are not impaired. I think that 5m category is designed for

that purpose. I've had conversations with staff and they say we don't really know what EPA is going to allow. It's there but it has never been done. What I would suggest is the EMC look at this as an option before we adopt a statewide TMDL that it's only going to be. Now when you say a statewide TMDL affecting air and water, air it doesn't. It recognizes the issues in air but it only sets up a strategy and that permitting strategy on point source. It doesn't set up a permitting strategy on air sources. We have other things that the state has done very successfully for air such as smokestack legislation. That should be all added as a collective process. I think we need to take as a Commission a hard look at the 5m that helps point sources not deal with a stigma of regulatory rule that's not necessary, use the 5m that avoids an immediate TMDL and allows the state and EPA to work together with point sources, and develop a specific strategy. We have thirteen years, in essence, to do that. We've used up five years. We still have seven or eight years, eight more years to do that. Based on some limited conversations and I'm not going to.. I'm paraphrasing. I'm not directing direct comments what I got out of those conversations was, from EPA officials, but that's what 5m is designed for. Granted it doesn't eliminate a future TMDL but it allows you to develop that strategy that maybe we already have developed that EPA will approve. That's just a comment I'd like to make. Thank you sir.

Ms. Pickle: I have a couple of comments and then some initial questions to get started. First of all I want to commend the Division and the Department for taking on such a significant public health issue like mercury. I know it's a complicated issue. The mechanism for exposure for vulnerable populations is complicated and I think it is an important step for the Department and the Division to take. That is certainly emphasized by the number of comments that were received from the public where they recognized the importance of mercury as a public health issue. So I definitely commend you for taking this on. Second commendation is for reaching out for cross media pollutants for which mercury is only one and there's certainly more. It's great to see some precedence for the Division of Air Quality and the Division of Water Quality working together to address that kind of cross media pollution. So thank you very much for that work. That's sort of a general agreement with taking this on. I do have a few questions specifically, mostly just to clarify my understanding. The first is, once the TMDL is approved do the state waters that are not delisted, but they do move to a separate category. Is that correct? They move to category 4?

Kathy Stecker: Yes they do go to category 4 of the entire statewide assessment. I would say it's not quite correct to say they are not delisted. They are delisted because the 303(d) listing is category is 5 alone, but splitting hairs, probably.

Ms. Pickle: I just want to be clear that if the TMDL were approved then the waters in the state would move to a separate, at the very least move to a separate category and I stand corrected, and we'd be technically, actually delisted. The second sort of area that I want to explore a little bit is around this idea of site specific TMDLs. I understood from the TMDL documentation in the CMAQ. My rough understanding of the CMAQ model that CMAQ is not appropriate for doing site specific modeling. Do you know of an air modeling tool that would accurately address regional and/or site specific air contributions of mercury?

Kathy Stecker: For air hotspots I am not aware of any of those kinds of models. That doesn't mean they don't exist.

Ms. Deerhake: AERMOD is used for more localized deposition.

Ms. Pickle: So they're able to incorporate both. I guess in the CMAQ model there's global which in my mind looks a little bit like regional contributions.

Ms. Deerhake: Actually Ms. Holman, Division Director Holman is the modeling expert.

Sheila Holman: I'm much more familiar with regional modeling and the CMAQ model to do that. AERMOD, I'm still learning on that. It is much more a point source oriented model looking at impacts nearby. I'm not as familiar, certainly not with mercury deposition using AERMOD.

Laura Boothe: The AERMOD does look at just specific stationary point sources that are located in the area. You have kind of a background concentration that you can include but that's something that you set so you have to be pretty much aware of what that background concentration is or that global regional contribution, other than from the point source, that is contributing in that background in order to set that value appropriately. Where you would get that number is hard to say, so you might have to use the CMAQ model trying to come up with a background concentration to use. But you would have to have something to set that background.

Ms. Pickle: One completely in the weeds question, is, the CMAQ model was recently updated to a 5.0. Can you give me a three sentence or less explanation about how that CMAQ model has been updated and what enhancements it might have?

Laura Boothe: I am not sure what all the enhancements were. I did look to see whether or not it included source apportionment which was a question that Ms. Deerhake had asked. It does not include source apportionment at this time. EPA was hoping to get it in there but it is not in the publicly released version of CMAQ at this time.

Sheila Holman: But we can follow up and give you and provide all the Commission if they're interested a list of those enhancements from the CMAQ version that we did use for the analyses that were made and included in CMAQ version 5.

Ms. Pickle: Ultimately what I'm interested in is whether or not doing the modeling with CMAQ 5.0 would inherently change any of the results or shift any of the analyses from a policy perceptive. So that's something that you all can say yes or not on that at some point and time. That would be great and I may be the only one who's interested in that level of information. So I recognize I'm in the weeds a little bit here.

Sheila Holman: We can look to see if the deposition mechanisms have changed because that's where we make the biggest impact. But what it would do is just change how much it estimated was actually deposited in the state which may change the nonpoint source load number up or down but not change the overall picture that the majority is coming from point sources and the majority is coming from outside the state. It's not going to change that big picture but it may change the numbers up or down.

Ms. Pickle: Thank you. If I may, a question or two more about a site specific TMDL. How might, the TMDL specifically says that it would do a site specific TMDL as needed or as

information became available, and I'm a little curious, particularly somebody who's new on the Commission how that site specific TMDL in very general terms might be initiated and also the kinds of information that the Department or the Division would rely on.

Kathy Stecker: For example, we do know of three sites in the state that exceed the instream standard of 12 ng/l so we might look at those sites to see if there's something different about the relative contributions there. Is there a local air source or water source or some other source that we don't believe the statewide TMDL will resolve or properly quantify what it would take to meet standards at the sites. So that would probably be the first place we would look at doing site specific mercury TMDL.

Ms. Pickle: Just one final follow up. Some of the commenters discussed ways of both getting into and out of the TMDL, and I'm assuming the information, for folks, that it would be possible to develop some mechanism for areas that have demonstrated to be below the standards. I made that as a statement and I meant it as a question. Is it possible to look at areas that currently for which there may be information that demonstrates that they do not have a mercury problem? If so, what would be the regional cutoff for that area? Does that make sense?

Kathy Stecker: I think you are mentioning one of the challenges and I see it as related to the assessment methodology, and whether we revise the assessment methodology, because really the point of any TMDL is to result in standards being attained. So there must be a way to measure whether that has happened, and we acknowledge that. Currently if you were to stick with the current assessment methodology the advisory would need to be lifted for a particular area in order for it to be considered not just delisted but in a category 1 or 2 as unimpaired. So I think that's another reason to look at revising the assessment methodology to see how that would happen. But among the many challenges of doing that would be determining, because fish do swim you know, what the upstream and downstream limits of such an area would be.

Ms. Deerhake: Just a few points to explain further why I think the state is recommending a statewide TMDL. You all have done an excellent job of doing that. Let me first begin by saying this isn't a TMDL that we normally the type that we deal with. We usually are looking at something coming out of pipe or just running off from a neighborhood or talking about nutrients and such. As a result this is going into a new area that we are not as comfortable with. However, it is recognized by EPA that mercury is a water quality problem that stems in large part from atmospheric deposition and that's the issue we have in the State of North Carolina. I think I may be reading into this wrong. But I think what's driving a lot of the concern about this is what impacts it's going to have on the wastewater treatment facilities. I would argue against defeating the state's recommended TMDL approach just because of the impact on the wastewater treatment plants because of the way in which it's worded. Ms. Stecker has said that they will be looking at the one percent of the wastewater treatment plants, as I understand it, that could potentially have an issue. Then they will be working one on one with each of those to negotiate the most suitable remedy for the wastewater treatment plants to do their 2% part. We all recognize that the mercury issue is a regional issue though these sources and the state, under the electric utilities category, have made great progress. We've heard about that yesterday and the installation of equipment that has the co-benefit not only for NOx and SOx reductions but mercury reduction too. However the benefit of approaching this from a statewide perspective is because we are talking about sources that are regional in nature and we do not have the source

apportionment data in hand to go through and make determinations across the statewide of each and every stream, that's a problem. Also, to apportion strictly to North Carolina sources, doesn't get us there. We already know that. We know that there are external sources. The 5m criteria that EPA puts out in its program that have to be met to implement that, I don't believe we have implemented or have adopted or have satisfied three of the criteria that are in their list. I'm not convinced that we have a fully negotiated mercury reduction goal. We have something in the TMDL but I don't think it's quite there. We don't have any mercury emission monitoring in place. All of the numbers that are out there in the public right now are based on emission estimates and emission factors. The actual mercury monitoring will not take place until 2015 so that's not there. The other criterion in 5m that we don't have satisfied is working, coordinating across states. That's a two way street. We don't have that yet. Let me say that, by implementing a statewide TMDL we achieve multiple things. We not only, certainly, work toward our primary goal protecting public health, especially in streams that haven't been monitored and sensitive populations, perhaps that haven't been fully monitored, but we are also protecting those unknown streams. But we're also giving ourselves justification to take action outside of the state. It's obvious that there's a large portion of deposition that could be coming from our upwind states. In order for us to pursue getting them to reduce their emissions, we need an instrument or vehicle such as a TMDL in place to justify action such as Clean Air Act Section 126 petition. Further, as mentioned, our emissions to northeastern states have been questioned, and if we don't have a TMDL in place that takes a statewide approach, again, I don't think we're going to be able to possibly avert threats from northeastern states issuing a 126 petition on us. Because of the lack of information on source apportionment, the regional nature of the emissions that are depositing across the state, I do think a statewide approach is appropriate. I also recognize that there are hotspots issues. I've done research on this myself over the years, as well as the communication issues with the public-why some people don't recognize certain fish are not suitable to eat on a regular basis. Because of all that I think a statewide approach is necessary. I do think, though we should move toward a follow-on actions of multiple stages, multiple milestones in which we further look at the research, at the literature that's out there, to help us get a better understanding of what some of the local source issues are, identifying those most vulnerable waters with potential for methylating mercury that is bioaccumulated in those fish. I recommend that we stay with, and this is not a motion because I know we are still in discussion, but I support keeping a statewide study with additional steps along the way to build toward a more refined TMDL that not only addresses the potential statewide threat, giving us leverages with the federal negotiations, but also gives us more information to protect the public on a localized basis.

Dr. Peden: The problem from a physician's perspective is that we really want to be very protective and particularly from a pediatrician's perspective, which is my primary specialty. The issue with mercury is probably more germane to developing brains and developing infants than just about means, mercury disasters, frankly, happen in those populations. So we tend to be really conservative. I'm frankly, however, very sympathetic to the idea of having some local understanding of what the risks really are for certain areas. If you're a doc and Dickson had called me up and said what do I do about this, my answer would have been a really academic, "I don't know." I know a fair amount about this compared to a lot of other folks. My first plea is just all of us remember that the health effects are very real and are accumulative and there are very susceptible populations now. Some of us who are susceptible may not be the ones eating the fish but we need to be aware of that. I also think we need to be careful not to condemn, so

much, fish consumption and we steer people toward things frankly that are much more immediately toxic than an occasional fish dinner. If we take a statewide action I think we oftentimes speak to subsequent actions we're going to take and subsequent studies, and subsequent adjustments that oftentimes than become less immediate because new issues come up. So I would urge, however we do this, we really do need to have a focused intent and really keep track of where we're going with this. All sides of this have legitimate concerns.

Mr. Cavanaugh: On one of your slides I was looking at the third or fourth slide it states only New Hampshire had listed all their waters as impaired.

Kathy Stecker: That's correct. The other states had multiple waters.

Mr. Cavanaugh: They have different waters and not just a blanket of picking up every stream or waterbody in the state. Then my second question is, to make sure I understood this correctly, that we did in North Carolina list all of our waterbodies as impaired with mercury. Am I getting that information correct?

Kathy Stecker: That's correct. I want to clarify. I want to make sure to clarify that before that we had listed based on fish consumption advisories that our statewide listing was following previous years listing based on fish consumption advisories, that started out waterbody by waterbody, then went regional, and for Largemouth bass went statewide. It wasn't suddenly a statewide listing based on a statewide advisory. It followed the advisories as they developed over the years.

Mr. Cavanaugh: I understand that and I'm very, very old fashioned when it comes to rules and regulations. When you cast a wide enough blanket you get everything but I wondered how much damage you do on the way with that blanket because there will be a lot of little places that we already are seeing a lot of municipalities and waterbodies that are not impaired. Then the next thing I heard was getting them delisted takes an act of Congress or maybe even God. I'm not really sure. I worry a little bit about that. The assumption of automatically just listing this because here is a reason and a reason of these two are listed, so we'd just get a big blanket and cover the state. That's scary and it's scary to our public. I'm just a little concerned with that. I want to make sure I've got a full understanding of that before I cast a vote. Second I want to thank you, as our state has been thanked, what a thorough job, and it has been long and hard and tedious. That doesn't go unappreciated by this Commissioner nor this body. I want to thank my fellow Commissioners because I've asked questions and I've gotten some awful honest answers and I really do appreciate that, to help bring us along as we make the decision. Thank you.

Mr. Ellis: My concern is we've used the fish advisory to go statewide. Back before I retired in 2004, I was Director of Aquaculture with the Department of Agriculture, and there we were encouraging people to grow, to sell and buy and eat fish. So when the mercury issue came up, we wanted to make sure that things were clearly identified rather than scare people away from eating fish. I agree with both Dr. Peterson and Steve Tedder in that the communications need to be out there and a lot better. In the last few weeks, I've had a Philipino neighbor who told he would not eat freshwater fish in the United States because they were poisonous due to mercury. Also, I was stopped for a few moments by an employee at a Wal-mart when I was buying fishing tackle, because "why do you want to go, you cannot eat the fish." This fear of fish is not good.

Fish for the most part are very good for people. It's a very good activity to get people involved in the environment and to understand the need for environmental protection. When we started looking at mercury in fish, we initially just looked at saltwater species. It was just the very large mackerel like expert fisherman like Mr. Phillip's catch. It was tile fish; it was shark. I believe there's one more species which is not commonly eaten by the general public. You can buy them if you can afford them but you don't eat them very often. With the freshwater we have a situation where mercury is converted to methylmercury mercury primarily in areas of low acidity. The best example is down around Lake Waccamaw. They have the black fish down there which for decades we've known has accumulated mercury. This is not only because of the acidic waters because these fish are top water predators that bio-accumulate and they also live a long time. I'll put in my plug for aquaculture right now -- we don't let fish live a long time. We grow them fast and get them out. They can't bio-accumulate. In focusing on the people that need to know about don't eat certain fish. We need to be focusing on people who are still subsistence fisherman, and we still have a lot of those people in North Carolina who go and catch fish to eat, not for sport, not for recreation. The information is not out there, at least accurately. When we were doing these studies we had Dr. Louis Daniel with Marine Fisheries went and caught fish off the coast for analysis. We did not find the levels of mercury that had been reported from Florida. When we looked at the DWQ and other data in the western part of the state, we did not find the mercury levels in Largemouth bass. We found most samples being taken in the areas where the levels were high because you got high readings. That was interesting. Also there are more fish down there to catch. We don't need to scare people away from North Carolina, as Mr. Morse said, thinking we have highly contaminated waters. We don't need to scare the housewife away from eating most fishes and providing it for her children because of fear of mercury. We need to be very specific because mercury is a very serious issue. We need to be very specific as to where to be concerned, what to be concerned of or else we're not doing the state of North Carolina or any of our resources any good. I just wanted to put that forward because in 2004 when I left, there was a lot of effort in trying to be specific to say eat fish, however if you are of a certain category which was pregnant, women of childbearing age or children under fifteen, here are a specific list of fish, fresh and saltwater, to completely avoid. Then we had others that said you should eat but on a limited basis, and then the majority of fish, go to it. So I'm afraid of what we're doing is scaring people away from the environment by making them fear it. Thank you.

Mr. Hall: My concern deals with the net that Mr. Cavanaugh is talking about. According to your presentation 99% of the permittees comply. What I've heard from the permit person was that all the permits that were issued since 2008 had mercury in it. Is that correct? How many do you have?

Jeff Poupart: There are currently 67 permits with a mercury limit in. There are 67 permits out of roughly 2,000 that have mercury limit in.

Mr. Hall: If we pass this TMDL will all future permits have mercury limits in it?

Jeff Poupart: No. Our analysis of the 2011 data that under the new permitting strategy, only 12 permits would have a limit going forward. As they came up to renewal, we would look at their mercury data vs the new permitting strategy and determine if their limit was necessary.

Mr. Hall: Now is that with the 47 ng/l or 12?

Jeff Poupart: It depends on something called the instream waste concentration, so if the wastewater makes up a majority of the creek then they only get the 12 plus the dilution factor. If they are the entire creek as in some cities then they would only get 12 as the limit.

Mr. Hall: Have you all had a chance to look at the annual cost for a permittee to monitor and report on mercury content?

Jeff Poupart: Yes under the new permitting strategy there'll be a savings for municipalities of $133,000 per year in monitoring costs and $20,000 for industries or non municipal sources.

Mr. Hall: Ok. My understanding is if we pass the TMDL as proposed that only affects the NPDES permit holders for what we will be passing here. It's not going to solve the air pollution problem. Is that correct?

Jeff Poupart: That's correct.

Mr. Hall: We need to keep in mind that we're talking about 81 lbs of mercury from point sources and almost 4,000 lbs per year from air, which is a very small quantity. I would hate to see 99% of the permittees impacted adversely by us passing this when you could do a site specific and analyze information, and maybe have a better improvement in the situation, than if you try to look at all thousands of permittees.

Kathy Stecker: I just kind of want to reiterate what Jeff was just saying. Under the proposed permitting strategy the number of facilities with mercury limits would go from 67 to 12, and the monitoring requirements would be reduced such that there would be a total statewide savings of $153,000 per year.

Mr. Hall: Thank you.

Mr. Cecich: I have a lot of notes and many of my comments are articulated by others. I'm not sure but I'll go through them. I do have a couple of specific questions. By the way it has been noted by other Commissioners, the material that was put together was very good in helping me understand or get better educated. I think if nothing else, whatever actions we ultimately take that having this dialogue puts us in a better position to adopt good public policy. Listening to the discussion about the actual level of contamination across the state, in reading your report, (I just went back and looked while some of the others were talking) I started thinking that the impairment was more widespread than it appears to be from listening to the discussion. It's probably not appropriate to go back and look at detail of what was written but in the section on fish tissue mercury data, maybe it was because all the information was averaged that I came away with the assumption that this is more pervasive. If you've got yours on page A16 of the document that talks about Largemouth bass, the average fish concentration for total mercury in Largemouth bass was .52 mg per kilogram, much higher than the state's fish consumption advisory of 0.4. If that's a statewide average of all the data as opposed to looking at it regionally, I came away a little, I guess I didn't fully understand that the hotspots are more regionally located as opposed to pervasive throughout the state. Am I now making the right assumption that by averaging it, gives a false analysis or false conclusion perhaps?

Kathy Stecker: I think it might be beneficial to ask if you could go maybe to A25 because it shows the geographic distribution and is color coded. While the information on A16 was summarized for the state, these maps do show that there can be high concentrations in Largemouth bass, and this is Largemouth bass only statewide. That's why, I understand, DHHS issued statewide advisory for Largemouth bass in particular.

Mr. Cecich: If I could ask Jeff perhaps again at least 67 out of 2,000 have mercury limits, why would somebody have mercury limits? Why the 67 vs the remainder? Is it because of the nature of what they do? Could you explain that?

Jeff Poupart: The data is highly variable since the standard is so low. The reasonable potential analysis we use now is a predictive tool, and so if you just get a few detections, the reasonable potential analysis will predict that you're going to have a very high value and you will be given a limit. But once we have this permitting strategy in place we're going to use a different method for mercury. Because of the TMDL we will be able to separate that potential from that current methodology that we use for all the other pollutants, and approach this one differently. What we're going to do is if your average is less than 12, which is the water quality standard, or you don't have any single value higher than the limit currently achieved, you wouldn't get a limit.

Mr. Cecich: So it's not necessarily occupancy based like if you're a research lab or university?

Jeff Poupart: It's actually difficult to predict. Some municipalities have mercury showing up in effluent and some municipalities don't. It's extremely variable. Some municipalities could go a couple of years without a single detection or very low levels and then suddenly have a 15 or 17, and because of the reasonable potential analysis-that shows the variability, and that predicts that the potential for a higher number is greater so it would suggest that a limit would be necessary.

Mr. Cecich: The 67 of the 2,000 are all NPDES permit holders. What would be your anticipation for those organizations that have non-discharge permits that discharge to the POTWs?

Jeff Poupart: Under the pretreatment programs for industrial users, it would depend on the particular municipality. If they had a limit in their permit in how they would pass that on; that's almost impossible to answer on a statewide level if they would have a limit or not. But if the industry had shown in their wastewater characterization that they had mercury present, the permit authority, the town, makes the decision whether to put a limit on that industry's permit or not.

Dr. Larkin: I think a lot of the discussion about site specificity makes a lot of sense to me. If that's what we do for all the things why don't we do it with this? I think I'd like to answer that a little bit. That is that most of what we're dealing with mercury toxicity and it is, I believe a significant issue. It's difficult to measure. There have been areas, internationally, where there have been severe mercury toxicity, and it has been really obvious in the people who live there. Sometimes if it's not as severe it may not be as obvious. We're dealing with brain development primarily. It's primarily in pregnant women and babies that are the biggest issue. It's pretty hard to measure the effects of any kind of toxicity in that situation. I do think it is significant, at least potentially significant. So our job might be to think about how best to deal with that and

that leads us to the air, not so much to the water because that's where all of our deposition, not all of it, but most of our deposition is coming from. To me the best way to deal with the air issue is to (1) be able to demonstrate to anyone that we're doing our part and (2) by doing our part, attain the standing to talk with others about doing their part. I think we have to maybe think a little bit broader about this issue. I recognize the local issues and the site specific issues and I think they are real. I think there's another public health issue that Tom raised, Dixon or maybe David about disuading people from eating fish at all. That itself is a public health issue. If you're going to eat hamburger or hot dogs instead, that's not good. So I think we need to try to address the broader issue rather than either going back and starting over or do nothing now but maybe doing something in the future. We need to go ahead and do what we can now to give us the kind of standing now that we need.

Mr. Ayers: You indicated that statewide fish advisory was issued by DHHS? Is that right?

Kathy Stecker: That's correct.

Mr. Ayers: Our decisions in terms of the TMDL, the listing on 303(d) and all that flow from that, the decision by DHHS? Am I understanding that correctly?

Kathy Stecker: Yes.

Mr. Ayers: Was there any collaboration, any consultation between DHHS and DENR when the DHHS was deliberating in making that decision?

Kathy Stecker: It's my understanding that DHHS uses our data. We are the ones that collect the fish tissue data.

Mr. Ayers: Ok. So we supply them with that data and then they made a public health determination based on that?

Kathy Stecker: Yes.

Mr. Ayers: We sort of touched on this but I'd sort of like an exhaustive answer here if possible, and it's an elementary question. How do you get 303(d) waters off the list once they've been listed? I know once you do a TMDL you can re-categorize. What are the ways to get that off, to get waters off the list?

Kathy Stecker: In general right. At the foundation, all of the assessment methodology, which includes listing and delisting, has the basis in standards, so our adopted water quality standards. So the listing and delisting are often similar, the same thing that the same kind of analysis that would get you on the list often is what gets you off the list. There are many different parts of this, assessment methodology. So it's not the same for every pollutant.

Mr. Ayers: Sure. Well if DHHS rescinded its statewide fish advisory of our removal of the statewide water from the 303(d) list, is it that simple?

Kathy Stecker: Consistent with our assessment methodology, the next time we would go to do a 303(d) list, if that happened, we would look then at the remaining fish consumption advisories.,

because there are many for particular streams, and we would still list if we didn't change the assessment methodology. We would list on whatever fish consumption advisories remained.

Mr. Ayers: Those would be what we've been talking about as in hotspots as opposed to all North Carolina waters. At that point you could potentially delist the entire statewide and then put individual waters on the 303(d) list. Am I understanding?

Kathy Stecker: Yes. Because currently we have individual listings for PCBs in fish or dioxin or other pollutants that follow the advisories.

Mr. Ayers: Now you mentioned in the presentation that no state has used the 5m designation to date, has any state attempted it?

Kathy Stecker: No. From the few states that I've talked to who have considered it, they didn't see a benefit in it.

Mr. Ayers: Ok. What states were those?

Kathy Stecker: I did a poll with my counterparts in other states about whether they're developing statewide TMDLs, how do they do their listings for mercury and were they considering 5m? I got a few responses on the 5m, "No we're not going to use it".

Mr. Ayers: Did you get anybody who said they were considering it?

Kathy Stecker: No and I checked with EPA headquarters to see if they knew of any 5m demonstrations underway and they don't.

Mr. Ayers: From the poll that you did was that southeastern states or across the country?

Kathy Stecker: Across the country.

Mr. Martin: You mentioned that 13 states have adopted TMDL so far and I curious if off the top of your head you could tell me who they are and if they are statewide.

Mr. Morse: When you qualify the term statewide, I heard you say that some were regional. How many of those states are actually doing the exact same thing that we're proposing on a statewide TMDL certification, all the waters that are listed impaired?

Kathy Stecker: Not all the waters are listed. Only New Hampshire listed all the waters. The others had individual waters listed but decided to do a statewide TMDL because they had atmospheric deposition that was the cause and many waters impacted. But all of them have done statewide TMDLs. I apologize. When I said regional I meant that Maine, New Hampshire, Vermont, Massachussetts, Rhode Island, Connecticutt and New York had gotten together and done a big regional TMDL. Not a region within their state but all the states together.

Mr. Morse: Are all their waters listed or not?

Kathy Stecker: No sir.

Mr. Morse: See that's where I'm confused. You say all waters are listed in these states but they're not all impaired but there is a statewide TMDL for all the waters.

Kathy Stecker: They elected to do a statewide TMDL despite the fact that they have not listed all of their waters.

Mr. Morse: But for all the waters they do have a TMDL?

Kathy Stecker: They did, a statewide TMDL.

Mr. Morse: Were they with a permit strategy?

Kathy Stecker: Yes.

Mr. Martin: The reason I asked the question and I didn't realize it was up there but it made it easy. I was sitting here trying to do some searches which is dangerous, and I can't come up with anything consistent with that where it looks like they're saying they did do a TMDL for all the waters in the state. I'm finding a lot of them that did a TMDL and according to EPA you could do it regionally within the state, you can do it waterbody specific within the state and so to just to clarify one time without being redundant, because I know my search just now was not thorough. Every one of those listed in that first line has a blanket TMDL with a standard for every single waterbody within that state.

Kathy Stecker: Each of them developed a statewide TMDL. If you look for the seven in sort of greenish you would have to look for, let me see if I can remember, it's New England Interstate Water Pollution Control Commission. That's where you would find that particular TMDL that covered all those states. Then each of the states have strategies for permitting in place.

Mr. Martin: Ok. It was strange to me I found some guidance document form EPA in 2008 and it looked like they're encouraging this 5m approach and it's surprising that everybody has chosen not to do it. I'm wondering if they've chosen it because it's easier or cheaper, or if they've chosen for some scientific basis that I can't seem to find. Then I don't think we'll answer that here today but I was just curious about what they were doing and why. Thank you.

Mr. Cavanaugh: To make sure I understood on the delisting, I'm going to beat that until it's dead, I guess. But I don't quite understand and if it's delisted because it's blanketed, say it has mercury in it, whether we test it or not or just blanket. We took every little, my little Snow Creek runs at the back of my house is delisted for mercury and testing or whatever proves there is no mercury in it, it cannot be delisted. Is that what I'm understanding? Or is this a huge process or we could as Mr. Ayers says we could delist the whole list and then relist it according to and based on what's there instead of just casting the net. I'm not sure I got a good understanding on your answer on that.

Kathy Stecker: No, keep asking me because I have a feeling that I'm not being clear in my explanation. At any given point in time we are operating with an approved 303(d) list. So that's our list of impaired waters. The one that we have right now says all waters are impaired by mercury in fish tissue, so that's what we have. In order to change that, we would have to develop a different assessment methodology that would describe how waters are listed and

delisted in a different way. Then assess our waters according to that, then take that out for public comment and then respond to the comments and take that new list that either includes or doesn't include various waters to EPA for approval. It's not instantaneous. I guess I am just trying to say it's not instantaneous and the current approved list stands until the next list is approved.

Mr. Cavanaugh: That's what is making it so difficult for me. I live in a county and I am soil and water supervisor and I'm well aware of 303(d) list. The Mighty Dan right now we're struggling with it to get it cleaned up. Not for mercury. We got labeled for mercury because somebody labeled us as mercury. That's a part of the 303 impairment for mercury listing that bothers me and I can't seem to get away from that and probably won't get away from it today. If we put it on there, voluntarily we're saying to the Division of Water Quality or whoever put out the list we gave back to the EPA this is our list and we just cast a net and put every waterbody, every creek and everything we got is full of mercury, then we created it; then why can't we uncreate it and then put it on correctly done. That's the part that I'm having a little struggle with. It wasn't exactly broken in blanket form and we fixed it with a blanket. We just took a big blanket to keep us all warm together, but some of us are a little more hot natured than others. That just doesn't work. I can't understand since we started it, why can't we undo it? Maybe somebody can help me. As I said I'm new but I'm getting there.

Kathy Stecker: We could come up with a different assessment methodology and go through the process and submit a new list to EPA. We're required to do so every two years. So we can do that. The blanket occurred because we were all along listing on fish consumption advisories and the advisory went statewide.

Mr. Cavanaugh: And they cast the first blanket and we just grabbed up and ran with it.

Kathy Stecker: That was our current assessment methodology, yes.

Mr. Cavanaugh: Thank you very much. I appreciate your work on this.

Mr. Tedder: I like the last answer. It was very succinct and I appreciate that. The answer is you can if you go back and redo the 303(d) methodology and do it a different way which again, I guess I'm a little stickler on what's in the water quality standards when we go about this. When you start talking mercury you're really assuming there's a loss of use because the only water quality standard we have is 12 ng/l water column. It's not a problem. Even if it was our problem before we lowered the detection level, I went back and looked at the information in the RAMS network where we do low levels at 60 locations around the state, 1,300 samples, 21 exceeded the 12 and that was at 3 of 60 locations. Again, when you look at water you get very site specific areas of concern. When you're talking best usage, in a way it reads, it says it is going to be suitable for aquatic life, propagation to maintenance and biological integrity, wildlife, secondary recreation and agriculture, and sources of water pollution which preclude any of these uses shall be considered to be violating the water quality standards. What we're doing with mercury does not preclude. It's not a loss of use. It's an advisory. You can still go eat fish and you can go catch fish. They are still nice and big and healthy. So the standard is not being violated in my interpretation. Some other issues, and I'll try to narrow them down real quick. The delisting we've covered. 5m I guess maybe Jeff is the one that I just need… this is more for clarification than anything. Kathy, you mentioned that if it's 5m it is automatically an issue but

an issue of what? As I read the 5m guidance from EPA it kind of clearly says you use water quality base limitations based on reasonable potential, which is what we do now anyway. Why are you saying 12 as opposed to using the process that I see listed in the guidance document?

Jeff Poupart: We sought a clarification on the 5m issue from the permit supervisor, region 4 and he said in the absence of site specific data showing assimilative capacity, we recommend the end of pipe 12 ng/l, no dilution. Since the 12 ng/l are still on the books permits have to meet that too.

Mr. Tedder: That's not what the guidance says.

Jeff Poupart: Since no one has used it, we have been seeking guidance from region 4 on how they would interpret it if we listed in 5m and that's all we have.

Mr. Tedder: Do you have that in writing from region 4?

Jeff Poupart: I'm reading from an email. We asked for site specific data that shows assimilative capacity that would recommend end of pipe 12 ng/l no dilution.

Mr. Tedder: Ok. I appreciate that but that's not what the guidance says. That's the only reason I ask the question. What we keep hearing is the same thing. There is a need to revisit the 303(d) listing methodology no matter what we do. I complimented the staff on the document, TMDL if you want to call it that, compliment the staff on what they came up with for the permitting strategy. They did an excellent job. The only thing to me that's missing, that is incredibly important and is the most important, is to back up and revisit the 303(d) methodology. When I say revisit it, I clearly say that in context of what's in the General Statute 143b-282 which clearly gives that authority to the Environmental Management Commission to oversee the 303(d) listing methodology as well as the listings and any TMDLs. I think that's critical. I think it's critical to the public and it's imperative that we move fairly rapidly because I know the staff is already starting to churn the numbers for the 2014 listing. It's a pretty quick process every two years. They never stop. Not taking that critical step for that one part is the biggest problem I have. If that is a part of the staff's motion, I would probably be the first one to vote on the whole thing. Thank you.

Mr. Morse: When you said the guidance document and then you talked to EPA regional representative he said in absence of end of pipe data they would recommend a 12 or they would go with a 12. Is that what you said?

Kathy Stecker: I think it was more site specific.

Mr. Morse: Well in that case would it not be true that if anybody getting a permit renewed either through their head analysis they have that data to make a determination as to whether or not they need to go to 12 or what the receiving stream through their head analysis is already in existence so that data is there. Is that a fair assumption?

Kathy Stecker: If I could just make a comment, I think that what it says under 5m references 40 CFR 122.44d. It's really what we operate on all the time, that you can't allow a discharge that would cause or contribute or have the potential to cause or contribute to a water quality standards

violation. So that really is the root of all of this, not exceeding the instream 12 when you're issuing the permit.

Mr. Morse: And I agree. So the question that I've been hearing or the concerns I've been hearing from the Division is, you got maybe 12 permits that are being considered right that have not been issued. If we go to a 5m then you can issue those permits but everybody is going to get a 12 with non dilution. But if those 12 have existing end of pipe data that doesn't indicate that they are going to have to have that 12, their permits will not have that 12 non dilutional factor. Is that a fair assumption?

Kathy Stecker: I think that goes along with our current permitting. If you don't have the reasonable potential to have mercury in your load.

Mr. Morse: Would you go back to your first slide? Again going back to my basic concern it's a policy issue. You clearly state, we all clearly see that wastewater resources have met the reduction, yet we're setting a TMDL that's going to require a permitting process and we've already met our reduction levels. We're going to have a TMDL with a permitting strategy. What I'm suggesting is we don't need that statewide TMDL right now. What I am suggesting is, that we go to the 5m and just because no other state has adopted it, EPA highly recommends it for situations like ours. We go to the 5m. We don't have to adopt immediately a TMDL. We work with EPA in developing our permitting strategy that meets the overall classification but the most important thing, going back to what Steve said, as part of this process we begin to change our methodology to correct the mistake that was made in 2008, and take the blanket off of North Carolina, and deal with site specific. It's a two prong strategy. That's way we don't have to deal with statewide TMDL. We work with setting up a permitting process that can be acceptable to EPA, an outline and we got 5 or 6 more years to develop that. In the meantime work on getting off the 303(d) list and develop a methodology that allows it in 2014. We are all saying the same thing. What I'm pointing out is it's just not appropriate for the policy to add a blanket wide TMDL when we don't have a statewide issue. That's my biggest challenge. We are still going to accomplish the things that you pointed out because we're going to still develop a site specific policy. We're dealing with hotspots through this process, but we don't have to blindly label all of our streams and waters as impaired for mercury by taking it off the 303(d) list. That's all I have to say.

Dr. Peterson: I want to speak a bit to this issue that has been raised several times of making a mistake to have human health as an ultimate responsibility and whether fish, in particular are safe to eat. That is our ultimate purpose for sitting around this room. We certainly have responsibility for other things, but it is the ultimate uses of our water that underlies the federal EPA Clean Water Act and underlies the many state actions that we've taken legislatively by administrative procedures. Specifically, this issue arose in the Nutrient Forum that many of us attended. The issue is actually reversed in another issue. Specifically, EPA is encouraging us to use somewhat esoteric measures of concentration of nutrients in the water column. Things like, maybe, we have a nutrient standard that determines impairment based on an orthophosphate. Well, ok, my golly. What does that mean to us? The ultimate issue is the uses of our waters. Those are things like for drinking water purposes, for propagation of fish and wildlife and for human health in many regards, and for recreational uses of those waters of which fishing is one of the prime issues that we have to deal with. So, quite frankly we are in a new ball game and

we've talked about that where we have to merge air emissions and subsequent deposition that occurs with the various traditional ways in which waters become polluted. We have to think about that holistically and there's no question that the air is not just even a North Carolina issue, but a regional issue. The scale of that is appropriately defined by a statewide action. In addition, what we're dealing with here is not something that we can conclude that the fish are healthy and propagating. The notion that a fish doesn't have a brain, the notion that mercury doesn't harm fish and harm fish in a way that's analogous to humans is just nonsense. There are issues. We just simply haven't spent the money to go to that level of assessment when there's a higher order of concern that drives us all and should drive all of our opinions including on this issue, and that is human health and allowing these uses of the water to continue. I hope that it is even more broadly used in the future on such things as nutrients which are separated from their human use concerns. But I think the human use concern is something that we need to think about more broadly as was spoken to by several people in that particular arena of the Nutrient Forum. I also see this as you all do; that the bigger part of the issue is an air one. Yet what we're doing here is including a TMDL for a modest part of the pie, and that is the contributions in discharge from waters, at a minimal cost, even in the short term a positive economic cost and relief to some of these communities that have discharge limits and have monitoring requirements associated with them. So from my perspective, there's something of a subterfuge in that we are requiring these sorts of actions, but at that very low cost, maybe even the cost being a positive gain for many communities. That puts us in a context of being able to argue more effectively, regionally and nationally, for what truly needs to be done and needs to be done for the public interest and the public good. Thank you.

Mr. Hutson: Could you do the permitting strategy that you've developed (which I think compliments to you; it's a well thought out permitting strategy.) under 5m or is it only limited to using it under a TMDL implementation?

Kathy Stecker: It's only through the TMDL and documenting the atmospheric contributions and developing the statewide aggregate wasteload that we're able to implement that permitting strategy. That permitting strategy is for the TMDL.

Mr. Hutson: And it would not work under a 5m approach?

Kathy Stecker: No. Absent the TMDL, we would have to apply the standard at the end of pipe.

Mr. Hutson: That gets me to my next question. This may be for Jeff to answer. If someone gets a 12 ng/l limit in their permit, they would then have the right, wouldn't they, to challenge that permit on the grounds that the receiving stream, it's not necessary for protection of the receiving stream and the like. Then if we go that route shifting the site specific determination to the permittees as opposed to being done on an agency or policy basis.

Jeff Poupart: Someone has the right to adjudicate their permit or fight their limit. They would individually have to do the study to prove that their particular receiving stream was not affected in order to prevail. We're a delegated authority from EPA so it's not solely our decision in that I could issue a permit saying whatever I want, but if EPA doesn't sign off on them, then EPA can either take over the permit as it has happened in other states if we don't issue a permit that has an appropriate limit in itself.

Mr. Hutson: Understood. But if there is a permit for a segment of a stream and it does not have a mercury impact as it appears to be under this blanket, then the onus in terms of time, effort and money would be on the permitee to show that limit should not be in there in the first place; so we've reversed the burden of proof on this, I guess what I'm saying.

Jeff Poupart: Yes, you're correct.

Mr. Hutson: Mr. Chairman I'll just say I am troubled by that. As you well know having been in a similar situation with this Commission on another issue and that is troubling, I am still trying to get my arms around. We're doing construction at our house and I'm trying to figure out (I think we're working on the molding here.) and there appears to be a finishing nail that we're looking to put in that may already be in, but my fears is TMDL is the wrong tool. You don't put a nail in with a drill or we're trying to put a finishing nail in with a sledge hammer. Either way I feel that may cause more damage than the benefits that would come out of this. That's my concerns.

Mr. Phillips: Kathy can I repeat and ask you to clarify a question that Amy asked you earlier about what would be the effect on the 303(d) listing after adopting this TMDL?

Kathy Stecker: I don't know which part of it you're listening for. But I feel kind of silly explaining it but when you do an assessment water bodies and pollutants fall into one category, 1-5, and so category 5 is the 303(d) list, which is waters that are impaired and require a TMDL. After the TMDL is approved -- any TMDL -- the waterbody and pollutant are at least moved to category 4 which means impaired but not requiring a TMDL.

Mr. Phillips: Would it be on the 303(d) list?

Kathy Stecker: No.

Mr. Phillips: So all the waters of the state if we adopt the TMDL would come off the 303(d) list for mercury?

Kathy Stecker: Correct.

Mr. Phillips: Except to the extent there may be some, I guess ……

Kathy Stecker: Three?

Mr. Phillips: It just seems to me that a lot of the discussion here and a lot of the concerns expressed relate to the blanket 303(d) listing which is not the decision before us. The decision before us is whether to approve this TMDL and it appears that adopting the TMDL would actually address what appears to be the largest concern of the 303(d) listing. There would no longer be a need to even respond to people calling in from out of state who want to build a house on Lake Rhodhiss. Just say that we're not listed for mercury. Again, a lot of this discussion certainly meritorious about concerns about the assessment methodology, and that debate can go on, it seems to me that adoption of this TMDL is clearly the shortest and best path to moving forward both on the mercury issue and also on these collateral concerns that have been addressed.

Mayor Moss: Thank you sir. Mr. Hutson actually went down the path that I was going to go down so I'm not going to revisit that. So I will just throw this out for conversation. I've done what I never do. I'd made my mind up when I came in here today that I was going to vote against the state's recommendation. With that said, two things have been said that make a lot of sense to me and I hope that we can maybe find a way to weave those into our ultimate solution. Marion talked about positioning the State of North Carolina to be a part of this regional discussion, ultimately whatever solution we come to. Dr. Larkin talked about the site specific I call a location of limits, but I think we're saying the same thing. I'll add the last piece with Dr. Peterson; ultimately our top priority is protecting public health. I agree with you a hundred percent. But I'm very concerned that what we are talking about will have a devastating effect to local government. I can't get away from that. I'm a local government guy so I guess that's in my blood. But I'm still listening.

Chairman Smith: I'd like to make several comments. Like you all, I've thought about this a lot and it's a complicated series of issues, like so much of what we do. I guess it's fair to say I agree with most of what all of you have said. If it were my decision, which of course it is not, I'd like to see us do a hybrid in which we recognize that there are significant areas in the state that we don't have the evidence of what I'll call mercury contamination. The Catawba may be one of those that Mr. Tedder named, some of those segments or basins. I'd like for us to whatever we do to build into it this hybrid I had in mind the way for those areas to be excluded. At the same time I'd like for us to build in ways for those areas that are significant problems to be dealt with on a site specific basis. Sort of an on ramp and off ramp somebody had said and I'll use that analogy. I also think that what I would like for us to do is to adopt a statewide goal,call it a statewide TMDL if you want to, at which we set this 67% reduction as a goal, recognizing that's an average, a statewide average; and some areas are going to require more than that and some areas are going to require less. But that would be the average. Then from that, if it's a statewide TMDL, have ways for waterbodies to get off and ways for waterbodies to get the greater attention that they deserve.

The reason that I'd like to do that hybrid is partly so we've got credibility in going to other states and dealing with the real problem which is what's coming in from outside North Carolina. It rings true to me that if we take this sort of hybridized statewide action we can not only probably ward off being the defendant in a 126 petition, but be a proponent of that sort of regional or national action to try to encourage and/or force other areas to do at least the same level of attention that we've done. Sort of like what we did with the TVA which wasn't a TMDL. But that sort of state action was very successful and that's an option. I think an option, not immediately but an option that this hybrid would allow us, is to continue to look at a 5m approach. I don't think the criteria are met for it at this point and I don't think it's the immediate answer. But I do think that it's an option that ought to be on the table for this ongoing consideration now.

As you all know, I'm not an environmental law and regulation expert. As I've said many times to many groups, I'm an amateur here amongst professionals but I also am an optimist and I believe that there's a way, a legal and defensible way to do that hybridized approach. It would answer Mr. Tedder's concerns and the local governments' concerns about not being overly impacted. It would, and this is the primary motivation for me on all of this. Back in '06 when we did the mercury rules I was one of the hearing officers and it was really my coming of age on this body. What I learned was, what you all know but I will say, when elemental mercury

converts to methylmercury it becomes a neurotoxin. Ok. What does that mean? It means that if it's injested by women of child bearing age and gets in the fetal blood or ingested by small children maybe up through teenagers, that it changes the developing brain. It restructures the architecture of the brain. That's permanent. There's nothing we can do about it once that is done. Sometimes that means there is mild retardation; sometimes it means there are various levels of what I'll call learning disabilities for lack of a better word. Sometimes it means it's just horrible results that one of you spoke of in those areas where there's intense mercury pollution. Well, that's different than a pollutant that's going to maybe impact the difference between one cancer in a million or two cancers in a million.

So I'll come down off that soapbox to say I really do hope that what we can do is something on a statewide level with the ability to back areas out reasonably easily and add, increase the attention, and requirements on areas at the same time, an off ramp and an on ramp. The other thing a statewide action would do is immediately delist everything. Then we can do it on a site specific basis. It might require site specific modeling. I thought the CMAQ model would do local source, would give us an idea about local sources. I have learned today it would not. I'm not sure that fish tissue is the best thing to look at as opposed to the mercury concentration in the water column. But for now I think our fish tissue standard is where we are.

I'll sum up by saying, I'd like for us to do some variation on what the state is proposing and redesign itso that areas can get off and we can pay attention to the real problem areas.

Mr. Tedder: And I'm framing this not as a motion yet, as a question. Clarity of the motion that you just mentioned. I understand that we can't change 303(d) methodology and that was never the intent. If a motion were to come forward to approve the TMDL and to approve the permitting implementation strategy as well as language that along with that the Commission would proceed to oversee and approve all 303(d) listing methodologies beginning in 2014 that require listings for impaired waters that are clearly stated in the statutes, would that be an acceptable motion based on those comments that you and Frank had?

Chairman Smith: I'll let Frank be the expert on that but I don't think so. I don't think we can decide today that we're going to do something about assessment methodology in the future. We haven't done the public notice on that.

Frank Crawley: Maybe what you're doing is suggesting subjects that ought to be delved into at the Water Quality Committee.

Mr. Tedder: Well, then that answers my question because voting on those two standalone issues I would definitely vote against it.

Mr. Morse: I'd like to make a motion at this point and bear with me. I would like to make this motion because I believe that this TMDL implementation plan is the wrong path to take in North Carolina. Let me state from the onset that my motion does not diminish the need for North Carolina to address the health impacts that mercury causes both to aquatic and human life, nor weaken the actions posed by the staff. DWQ has estimated that 98% of the mercury in North Carolina waters comes from air emissions, many of them out of the state, yet the implementation plan for the TMDL only targets 2% of contributors, wastewater point source dischargers. The TMDL does not take into account the activities that NPDES holders have and have already taken to address situations where mercury has been identified as a concern relating to specific

wastewater discharge. Ultimately we find ourselves here because the listing of all state waters as impaired for mercury is not, and I use for lack of a different word, correct. Still we as the EMC have the statutory authority to oversee the way waters are listed on the 303(d) list as provided in the general statutes. We unfortunately just haven't chosen to exercise that authority. With this motion I want to provide a road map for us to get back on track on how we regulate mercury in our waters. My motion is in three parts. Granted now that our attorney advised us that part of my motion won't be out for voting, but maybe I can clarify. First, disapprove the TMDL plan before us today, (2) instead have DWQ develop a plan to place the state's waters on the 303(d) list 5m category until such time the staff and EMC can revisit the methodology utilized for the 303(d) listings, and (3) meanwhile we on the EMC will move to oversee the 303(d) listing methodology that will be applicable for the 2014 303(d) process. That's exercising our authority to oversee a very important area of regulation. Once the EMC has approved the 2014 methodology for the 303(d) listings, staff will then proceed development of a 2014 listing of impaired streams in accordance with the methodology approved by this Commission including the mercury issue. That's basically my three part motion. Obviously part of that motion can't be done and I'm not suggesting that we change the 303(d) process immediately but I think if we go to the 5m. The motion is two part. Not approve the TMDL, go to the 5m.

My motion specifically disapproves the TMDL plan before us today. Instead we have DWQ develop a plan to place the state's waters the 303(d) list 5m category until such time as the staff and the EMC can revisit the methodology utilized for the 303(d) listing in North Carolina. That's my motion.

Chairman Smith: We have a motion that's a two part motion as I understand it that we disapprove the statewide TMDL as presented and adopt the 5m approach that has been discussed.

(Mr. Cavanaugh seconded the motion.)

Mr. Martin: The exhibit that you had up earlier if I understood it and to make sure you don't have it up there right now. If we approve your recommendation it's something that you could implement in one to two months and going the proposed route that Jeff has just put out which was a longer term process, my question is if we choose to go this route and for some reason in the process decide this isn't going to work, is there the option to fall back to that process you proposed which only takes two to three months to implement? I would think there is but I'm just wondering if there's some arcane bureaucratic reason we can't.

Kathy Stecker: No, I don't know of any reason. We would not be able to implement our permitting strategy.

Mr. Martin: Ok. That wasn't my question. But if something came up. Let's say there was this huge outcry that there was this big problem. There's nothing to prevent going back and saying, "Ok we're going to vote to abandon the strategy and go with the one you recommend."

Kathy Stecker: No.

Ms. Deerhake: I'd like to introduce a substitute motion. I'll give you my rationale for it in a moment. But I'd like the substitute motion to be in essence the strategy that was described by

the chairman as a hybrid. The rationale being that the 5m approach as I mentioned and the chairman had also described too, I believe it has six criteria that EPA weighs in evaluating whether or not the 5m approach is viable for a state. As I mentioned earlier I think three of those criteria have not been met and they cannot be met readily, especially the one regarding emission monitoring for mercury. That will not begin until 2015 in essence. Also they want to see an engaged effort to negotiate with neighboring states. That is not in place. So I think by going the route of a 5m, we will continue to prolong this process. That means the 55 of the 67 facilities that could get relief immediately will continue to be pressed to comply with their current permit conditions. As Dr. Peterson so eloquently put it, this is a public health issue. We have 12 wastewater treatment plants in the state that are opposed to this. I would ask you to weigh the site specific negotiated process that's being offered in this TMDL for each of those 12 facilities against the population of the State of North Carolina.

Chairman Smith: We have a motion for a substitute and the shorthand is that we adopt the hybrid as Ms. Deerhake described. Ms. Deerhake you want to elaborate on that?

Ms. Deerhake: Yes. It's approval of the 67% condition with the condition that in the upcoming year the staff with the Division of Water Quality will develop, what was commonly referred to as an off ramp process. I guess you might call it a delisting process from the state TMDL as well as the strategy within the next year for screening and conducting site specific analyses.

Chairman Smith: Is that enough specificity? We have a motion for a substitution. (Dr. Larkin seconded.) We have a second by Dr. Larkin and a motion by Ms. Deerhake. Mr. Crawley, advise me here: after discussion we may vote on whether to accept the substitute motion. If we do accept the substitute motion then we vote on the substitute motion. Is that correct?

Frank Crawley: You vote on the substitute motion. If it passes then it would become the main motion. Then you would vote on the main motion. Sounds redundant but that's what Mr. Roberts has suggested.

Chairman Smith: So this first vote on the substitute motion is whether to substitute it for the original motion. If we don't, we go back to the original motion. If we do, we then vote on the substitute motion which at that point becomes the only motion on the table. So we have Ms. Deerhake's motion and Dr. Larkin's second. Is there further discussion?

Hearing none I'll call for a vote by show of hands of whether to accept the substitute motion and convert it into the principal motion for decision. Seven voted for the motion and ten voted against the motion. So the motion to substitute does not pass and that puts us back to the original motion which is to disallow or disapprove the 303(d) statewide TMDL and adopt the 5m strategy. Discussion?

Mr. Tedder: One thing that could hit the floor that has not yet is, there are some things I think several of us would like to do that we're being told we can't do because it was not noted as part of this meeting. One idea is to table what's in front of us until the next meeting so that something could be reframed in notice of the meeting in the agenda which could probably have moved us along a lot quicker with a lot less consternation, and that's just a comment.

Mr. Cecich: My comment was going to be somewhere along the same lines. The short term part of it is it would be nice to take lunch and allow us to think through this. But I'm not sure my broader thought isn't similar to Mr. Tedder's that I'm pretty conflicted about both motions. I see there's pluses and minuses. To force an up or down vote, at least in my mind I am personally struggling with all points because there's good points that are being made.

Ms. Deerhake: I'd like to ask the Division to explain to us what taking the 5m approach will mean to their whole level of effort the timing, the schedule and all that would require?

Kathy Stecker: It's just like the regular 303(d) list cycle in which we have to develop the assessment methodology, not just for this but for all waters. Put out a 303(d) list, draft a 303(d) list for public comment and get EPA's approval. EPA has to concur with the 5m categorization. However, it's unlike the regular 303(d) process in that we would have to compile the documentation. From what I understand we don't have that. We don't satisfy all the requirements. We could compile what we have but I don't see that we would have everything we need in time for the 2014 303(d) list. Does that kind of answer your question?

Jeff Poupart: In terms of permitting, I currently have 15-17 major permits backlogged and we could not issue those permits until the 5m strategy was approved, nor can any new permit or expansion above 12 be allowed in the state until such time as the 5m strategy was fully approved. So with that backlogging of those permits waiting on action by the EMC and at some point we have to do something with those permits. They can't just sit there expired.

Ms. Deerhake: Given that the 5m approach has not been taken by any states in the past and it's probably unfair to ask you this. But how long are we thinking that this would take to get through, presuming that we met all of the criteria which I don't think we do. Presuming we did, how long would it take EPA with everything they had in front of them to decide?

Kathy Stecker: They never had it come before them. I don't know what their criteria would be for evaluating it and I would note that although they came out with the 5m guidance in 2007, I believe they came out with statewide TMDL guidance in 2008. That kind of took off from there. So I don't even know if they're very well versed in what they are doing with 5m.

Ms. Deerhake: Mr. Chairman the point I'm getting to is that we're embarking on a very long and uncertain path. We just don't know how long it's going to take. We don't know what the outcome is going to be, if it's going to send us back to square one again.

Dr. Larkin: I think the motion as currently crafted includes the 5m process which to me is a significant flaw. I'm just not convinced that's the way to go. I do like the concept of the hybrid. I would like to make a motion that we table this motion until our next meeting at which time we can notice appropriately with some wording, that I'm sure our Chair would help figure out, what this hybrid might be. That is if we can pass the statewide TMDL or consider the statewide TMDL at our next meeting and the actions resulting there from as well as a way to get appropriate waterbodies off the 303(d) list, and others would therefore get a little more attention they deserve.

(Various Commissioners: seconded the motion.)

Mr. Morse: If it's appropriate I'd like to add an amendment to your motion.

Chairman Smith: Dr. Larkin's motion is that we table this motion which under Roberts, Mr. Crawley tells me is more appropriate, a motion to postpone to a certain time, which takes precedence over the main motion.

(That motion was seconded by a number of Commissioners.)

Mr. Morse: I would like to add an amendment to your motion if you would agree. I think there has been a lot of discussion today about 5m. Mayor, I think you're absolutely right. There are a lot of questions out there. My limited conversations with the regional office did not lead me to believe we had all these challenges that you have identified. Therefore, what I would like to add to your motion that we ask the state staff, Chuck, in particular, with maybe a few members of the EMC to meet with EPA, discuss the 5m program in detail, what we see as some of our objectives, and get a straight answer as to a lot of the questions that you asked. If those questions are answered the way you have described I would agree. I would withdraw my motion immediately but I'm conflicted because I've had conflicting conversations. So I think it would be appropriate that we clarify the 5m with EPA and some members of the EMC, get a clarification, ask these tough questions and maybe ask the Mayor and you to be at that meeting because you ask the right questions and see what they say. If you're correct then I think by a delay until September and going on with your motion recommended, I think we can come to a good response.

Dr. Larkin: I accept that as an amendment.

Chairman Smith: We have an acceptance of the friendly amendment. Do the multiple ones who seconded accept that? So as I understand we have a motion to disallow the statewide TMDL and proceed with the 5m approach. That has been seconded. We have a motion to postpone until the September meeting further consideration of the statewide TMDL and the permitting strategy. Did I hear in your motion, Dr. Larkin, that at the September meeting we hear a recommendation from staff about the portion of or did you add anything in your motion about the upcoming assessment methodology? Was that part of your motion?

Dr. Larkin: Not specifically. There was a part of the motion that did request recommendation for how we can efficiently remove certain bodies from the 303(d) listing.

Mr. Morse: Are you saying just for mercury or are we talking about the 303 methodology in general as to the involvement of the EMC?

Dr. Larkin: I was thinking just about mercury. It depends on what the answer is as to whether it's just mercury or other things.

Mr. Phillips: I understood you to be picking up on their, Marion's previous motion to have a hybrid approach. That's what I heard you picking up on.

Chairman Smith: And the hybrid approach as Ms. Deerhake stated it would include addressing how to either promptly, it wouldn't be delist some waterbodies because everything would be delisted but take some waterbodies out of the impact of the TMDL. That may require some

change in the Department's methodology. Mr. Wakild, would that be correct? To that extent that would involve a consideration of the change in the Department's methodology. I guess in that sense that would not be limited to mercury because if we devise a methodology, an off ramp for mercury, that off ramp would theoretically be available for another pollutant. Is that correct?

Mr. Cavanaugh: It was my understanding that all these waterbodies were put on a 303(d) list for mercury. It wasn't for coliform or anything else. It was just for mercury. That's how they got there. Can they not be removed the same way? That would, Mr. Chairman as I understand it, take an entire delisting of those streams and bodies that were put on there for mercury. You could delist the whole group and then come back with the ones that are affected. Am I off base on that?

Kathy Stecker: With a change in the assessment methodology, yes.

Mr. Cavanaugh: And at the next 303(d) list?

Kathy Stecker: Yes.

Mr. Cavanaugh: That would be change in our assessment, our local assessment. Not something that Washington has put down or anything else?

Kathy Stecker: We would have to get EPA approval for it.

Mr. Cavanaugh: Alright. One last question. We were talking about permitting and that's one other thing that's hitting me a little bit. We are holding these permits and my question is why are the permits being held? Are we putting something much more strict, or this a renewal permit or a new permit?

Jeff Poupart: EPA has objections to permits with anything other than the 12 ng/l limit. So we have been holding permits that are going to require a limit higher than 12 that we don't think that the permittee would be willing to accept. Some permittees have been willing to accept 12 water quality standard end of pipe. But some plants can't meet that so we've been holding those permits pending this outcome, because we know EPA will object to them if we issue them higher than 12.

Chairman Smith: Is it correct that if we were to postpone this until September you would hold them until September?

Jeff Poupart: I believe we would continue to hold them, yes.

Mr. Cavanaugh: And we would not be impeding anything that would stop any kind of day to day operations?

Jeff Poupart: Not to my knowledge.

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Chairman Smith: Let me restate the motion and then put it to a voteTthat is, that we are postponing until September the consideration of the statewide TMDL and the permitting strategy, and specifically, the motion that's on the floor to deny that or disallow that, and approach the 5M or take the 5M approach. Between now and September we are asking, I suppose DWQ, to be in contact with EPA and ask the questions of EPA that have been put forth around this table about what the 5M approach would entail specifically; whether or not we meet the criteria, what it would mean, timetable, all of those questions you heard which I think we have a record of. Part of what we will be asking for in September (if I heard it correctly) was a specific look at what a hybrid approach would look like and what changes we would need to consider in order to, if we did a statewide TMDL in order to reasonably, quickly back stream segments or waterbodies out of that. Is that a fair assessment of what we're dealing with here? Then we have a motion to postpone until September on those terms with a second.

(All voted in favor of the motion.)

Mr. Morse: I would like to withdraw my original motion.

Mr. Keen: For clarity on Commissioner Morse. The third part of your beginning motion that we had to climb out of because there wasn't sufficient public notice. Just for clarity bringing that into the picture, would that be appropriate because we have the time now?

Mr. Morse: Dr. Larkin's motion, that we just voted on includes that third part because now we're noticing it for the next public meeting. So that discussion can occur.

Chairman Smith: What I heard was to the extent to deal with the issue of how to create an off ramp. Not the entire 303 methodology assessment which is a much bigger area, but to create an off ramp. Is that everybody's understanding?

Mr. Morse: Which could include, (I heard you say earlier) a bigger picture discussion in order to do what we want to do.

Chairman Smith: It could include that down the road.

Mr. Morse: I just want to make sure that we discuss this so that it's part of the public record that when we go to advertise, we can discuss it.

Chairman Smith: I'm trying to answer that. It could include that down the road but I don't hear us deciding today that what we're going to try to do in September is reassess the entire 303d methodology assessment which would be a huge undertaking that we couldn't be ready for. We are going to look at the extent to which we can create an off ramp for a particular waterbody from a statewide TMDL. Is everybody in agreement with what I just said?

Commissioners: yes.

Chairman Smith: So with that, let's take a break for lunch and come back at 1:20.

(The meeting reconvened at 1:20 p.m.)

III. Information Items

12-11 EMC Fiscal Notes

Sara E. Nienow (DENR): I work in the Budget, Planning and Analysis Division of DENR and part of my job is to help our different Division people who are going through the rulemaking process with their fiscal notes. The 2011 regulatory modifications lowered the threshold for requiring a full fiscal analysis and it went from $3,000,000 dollars to $500,000 in cost and benefits.Things that never had to have a fiscal note before; they now come through as the de minimis notes which is essentially to say we don't have any fiscal impact. Then there are the in-between rules which will have some impact but it's not more than $500,000. There have also basically been much more fiscal analysis which has been a little overwhelming for staff at times and I imagine it has been overwhelming for you too just because you've gotten a lot of comments from people.

Imagine you came to work one day and your manager said, "you know we're going to make this change and we want you to tell us how much it's going to cost, how much it's going to save and who's affected." Essentially that is what a lot of people here and our Divisions end up doing. Our draft fiscal notes are written by what we call our subject matter experts so they're the people most familiar with the changes in the rules, whether it's a water buffer or an air quality change. So they're not generally used to looking at things from a economic cost and benefit perspective. After they've gotten through a draft document that they've created within their Division, they usually work with me together to create some numeric estimates, develop assumptions and reflect on the issues more from a more distant perspective. At this point we'd also really work hard making sure the documents are clearly written.

After my Division has approved the note it goes concurrently to EMC and the Office of State Budget and Management. So generally the note that you all are going to see has already gotten at least semi-approval from OSBM because we want you to both approve the same version of the rule package and the fiscal note.

After we go out for public hearing we consider the public comments that we've received on the fiscal note. This is also a new requirement and it gives us the opportunity to incorporate maybe better information or information from people that we might not have been able to connect with before to better inform our analyses. So after we do that OSBM again certifies that we've gone through the correct process and they move on from there

We also include a necessity statement which again, is something required by new legislation and it's to say that we're in compliance and that this rule is being advanced in the public interest, and that we have observed the correct rulemaking procedures.

I've heard the question about why are some notes longer, bigger and more expanded than others. It's because the Office of State Budget and Management believes that the amount of analysis that you do should be proportional to the impact of the rule change. For a very small impact you will literally see maybe two pages. For a very long impact you might see hundreds of pagesThese things can take a lot of time. But when you get to the substantial notes that are greater than $500,000 in impacts, you're going to see three things that you won't see in your basic note. These notes are going to talk about the impacts and they're going to divide it up either by rule or by the affected party. So it might go local government, state government, private industry.Again, you're going to have to consider time value of money so as we go out into time cost and benefits, obviously the value of a dollar changes. We need to just discount everything back to the current time period so that you're looking at, you can compare dollars that have the same purchasing

power. That's very important. It's also kind of a concept of discounting that talks about how we value money more now than we ever do in the future because a dollar in five years isn't going to mean the same thing as a dollar now. So we want the dollar now. Essentially, we're saying the state puts a premium on cost and benefits that happened earlier and discounts the ones that happen at a later date. You're also going to see a risk analysis section and that's going to include factors that are going to influence the results of the analysis. We try to consider what is probable. We don't consider every scenario. Oftentimes if we're doing a scenario where we're going to send the absolute maximum cost we will state that. Just so you kind of have a range of what the potential impacts could be.

Then there's the section called alternatives which I think has sometimes been a little bit confused. It doesn't mean that you're going to go forward and consider lots of alternatives in the rule itself. Because when the rule comes to us it should have what we consider final language which means you've made the decisions about what we think the appropriate course of action is and you have a definite idea of how you want to move forward. In this case alternatives simply mean how could you have done things differently to achieve the same result or either you may even question the rulemaking. We could do nothing. We could implement to a different strategy that wouldn't involve rulemaking or we could have implemented in a different way through rulemaking. But in this area we're definitely going to be discussing why we selected the preferred alternative. Maybe some of the issues that we wrestled with when making that decision. We just ask for common sense. I just think when you read it, hopefully everything is coming out clear, but you want to know why something is being changed and the impetus for the rule change. Was it a stakeholder group that wanted the change? Has there been something that's been challenging for businesses to comply with? You know every note has a story about how we got to this process. Again, you'd want to see all the summarizing by the groups, you would definitely want a discussion and you want to consider the limitations of the assumptions that people had to use when making the analysis. We always have to start off at the baseline which is what the current conditions are right now. Even if we know their rule is going to change in the future, we don't consider that; we have to consider the legislative and the rules that we work under right now, and the future with the new rule in place.

Another thing you might want to look at is the time period that the rule is estimating over. Because a lot of times with environmental regulations and rule changes they have a lot of costs that happen up front. Then if you're with a local municipality you must know that you have to invest in the wastewater treatment facility and pay it off over 20 years. Hopefully, it's delivering a stream of benefits during that whole period of time too. But those costs are definitely loaded in the front end whereas benefits tend to happen over a stream and often occur later in the project time period which is another reason we need to be looking at discounting and again, affected groups. Our analysis does look at how the distribution of impacts happen. For instance, if they happen in certain counties or if it's going to impact a certain group of companies or certain municipalities or local governments. We try to kind of tease that out and figure out really is this proportional and who might it be impacting more than another group. A lot of times with environmental issues we have un-quantified costs and benefits. When we cannot quantify them we are definitely going to be describing them in detail to you because I think that a critical part of coming forward with rulemaking is being able to demonstrate to people what is in it for them. At other times other reasons we don't sometimes have quantified impacts is that there can be conflicting information about value and this can come from peer reviewed research where some people have an opinion one way and other people present countervailing evidence that's just as valid. Sometimes we do run

into those conflicts. Oftentimes, though we do know the direction of the change even if we don't know the dollar figure or can't understand the magnitude. More people affected vs fewer, things like that. Another reason it's been challenging to quantify some of these things is because some values are fairly subjective. You and I don't value things the same way necessarily. But there are also different groups in our society who place very high values on certain environmental features or landscapes or animals, for instance. So their value of these resources might justify a financial description. At the end you just want the gut check. You understood the assumptions, the data and do you think the impacts are reasonable? Are the data sources cited? That's something we're working really hard on kind of getting word to the peer review journals. We have this kind of hierarchy of what kind of information we think is valid and good for use and at the same time I think it's important to realize that a lot of the publications we have to rely on are going to come from places like the EPA, because that's literally the only source of information. Sometimes groups or their trade publications might estimate the cost of compliance with the rule. We kind of have to follow what information is out there in the public realm. When people go out and they have to figure out what it's going to cost you to pour 300 feet of concrete for a well, they only call up three engineering companies and we get an estimate of what they think that's going to cost just to try to keep this as real as possible. You read the note. It's really my desire that you know exactly how the impacts were calculated. It's important to keep in mind that these are estimates. Nobody has perfect knowledge of the future; perfect data. We can't consider every possible outcome, so we try to hit what we believe to be the most possible outcome. The further into the future we project, the more uncertainty there's going to be around our estimate. That's simply because things can change, new rules can come into effect. There could be a catastrophic event, something like that we've completely changed the environment that the rulemaking, the environment that this rule will be implemented in, and that is something that we cannot foresee. With environmental regulations they're often done without precedent. We've never had to implement a mercury TMDL before. We don't have a lot of experience about what that's going to cost. Sometimes when the federal government promotes rulemaking, for instance like the Clean Water Act at the beginning of that or the Clean Air Act even a better example, they overestimated cost of compliance by a tenfold. It was just because it's very hard to make estimates about things that have not been done before. Also, technology can often change and that changes the situation quite a bit too.

The final points are that these new fiscal note requirements have really promoted a lot more transparency, I believe, in the rulemaking process. It has made information more accessible to the public and it's given them an opportunity to comment on the things in the fiscal note, which again did not happen before. Hopefully, it's providing you, as decision makers, with the kind of information that you find helpful and informative. I think that the people I have worked with over time, I've been astonished at the amount of effort the people have put into this. I'm really impressed by their efforts and working together with only as collaboration to make these notes. I think it's been incredibly beneficial for the Divisions, for the Department as a whole and hopefully for you too. The only point is that you know there's a little tradeoff; the more time that we're spending on these notes the less time we have for other professional duties, and that is a factor that we have to weigh into, take into consideration when we're doing these notes. Sometimes we're not able to get the level of perfection that we would like either. Maggie Monast is going to present next and we thought we'd hold our questions until the end.

Maggie Monast: I'm a policy analyst with Environmental Defense Fund. I got my masters from Duke in environmental economics and prior to that I worked at an economic consulting firm where I helped to conduct cost benefit analysis for the U.S. Environmental Protective Agency.

Today I'm going to compare the fiscal notes to cost benefit analysis. This is important because over the past few years fiscal notes have been moving more closely toward cost benefit analysis. As you'll see cost benefit analysis has different objectives, different assumptions and it's much more time-and resource-intensive than fiscal notes they're originally conceived. I'm also going to make the point that all kinds of economic analyses provide good information to decision makers, however they should never be the sole basis for your decision.

With that I'm going to start with the original mandate for the fiscal notes seen as in the Administrative Procedures Act. It says "The fiscal note must state the amount of funds that would be expended or distributed as a result of the proposed rule change and explain how the amount was computed." It must include impacts on DOT and local governments and it also must describe the purpose and benefits of the proposed rule change. Now from my read this looks like a relatively straightforward budget exercise. You look at the cost on government, you care about the distribution on local governments and you should note that it describes the benefits. It doesn't say to quantify the benefits. The fiscal notes that you get don't look like this. They have more toward cost benefit analysis. They're trying to quantify more costs and more benefits. So with that in mind it's very useful for us to know more about cost benefit analysis in order to understand the role the fiscal notes play in your decisions.

There are variety of rationales for why we might want regulation but from an economist's perspective there's one that's worth highlighting up front. Economic activity can cause unwanted by-products that economists call negative externalities. I drove here this morning in my car. I experienced all the benefits of driving in my car; that AC was nice. But I impose a cost on society in the form of air pollution and that cost was not included in the price that I pay at the pump. So because markets don't include all the benefits and costs to society, that can create a situation that economists call market failure. So everybody faces the same decision that I face when they drive their car and that results in a widespread air pollution problem. Environmental regulations are often designed to correct market failures so we have tail pipe regulations to make sure that people aren't polluting too much. The overall goal is to maximize net benefits to society. How do we do this? With cost benefit analysis which is a tool to compare different policy alternatives with the overall goal of maximizing net benefits to society. Policy A is considered to be more efficient than policy B if the net benefits are greater under policy A.

There are three major steps to this analysis. First you identify the impacts and their benefits and costs. Next you measure the costs and benefits on a common yardstick. So if you have a piece of pollution control technology, you've got a health impact and you've got a recreation benefit. What economists do is they use different methods to put all those into dollars so that you can really compare them. That's step number two measuring the costs and benefits. That's the tricky stuff. Because not all costs and benefits have a price tag, especially when you're talking about environmental costs and benefits. Clean water and clean air aren't things you go out and buy in the convenience store. So why are some of these impacts difficult to measure? Public goods, again like clean water and clean air are not treated in markets, no price tag. There're also different kinds of value. There's use value: so I enjoy running in Umstead Forest so I use that forest so I'm getting a use value out of that environmental benefit. There is also non-use value. I value the existence of bald eagles; not because I use a bald eagle but because I

have a patriotic feeling and I value that bald eagle. Even if I never see one I'm glad that they exist.

The way economists capture this value is through a concept called "willingness to pay". The basic concept is if I really value that something, whatever that benefit is, I should be willing to give something up in order to get more of it. You'll note that's inherently human-centered. It's what I feel for the bald eagle. It's not the value that the bald eagle feels in just being alive. It's also time space specific. It was just the 4th of July and I'm feeling patriotic. Maybe I'm going to place a higher value on bald eagles right now. You should also note that "willingness to pay" does not equal "willingness to accept". Willingness to pay would be what I'm willing to pay to have one more bald eagle. You conceived that might be very different from willingness to accept. That would be mindless to accept getting rid of the last bald eagle. That would be a very different value.

So there's some contention in the Field of Economics about whether you should focus on "willingness to pay" or "willingness to accept". The basic difference is am I getting more of something or am I having something taken from me. Be that as it may most analyses use "willingness to pay". We measure this in two big buckets of methods. The first big bucket is reveal preference. We use studies of related markets. For example you confirm my value for clean water from the price I pay for a water filter. When we can't get at things through related markets we use stated preference. So that's where you combine structured surveys and statistics to get at those willingness to pay.

Just to give you an idea of what it takes to do one these studies, when I was working at the consulting firm there was a study that was funded by the National Parks Service looking at folks willingness to pay for better visibility in national parks. The studies started before I came there. I worked there for two years and worked on the study. It was very interesting. It ended long after I left. So this is not the type of thing that DENR can go out and do. Really both of these methods are not things that DENR can do. What are they left with? Well, they can look at benefit transfer. This is when you're not able to conduct original research and you transfer values or equations from previous studies. The key thing in benefit transfer is that the original study could be very closely related to the policy context that you're looking at or it could be very far apart. So the quality of your transfer really depends on the similarity of those contexts.

Another example from my time at the consulting firm is that I was trying to find a specific value for an environmental amenity. I found one value in a paper. I wanted to see the source. I looked at that source which cited back to another source. I looked at that source. I followed the trail back and it all went back to this obscure Turkish paper where the methods weren't even really good in the first place. You can see that benefit transfer can get a little out of hand if it's not done well. If Sarah is facing a situation where she doesn't have any good benefits, any values that she can find in peer review publications, then she just has to list as a qualitative benefit in your analysis, and you can't put a number on it.

I should also note some bigger broad based criticisms of cost benefit analysis. One is that it's argued that it omits fundamental rights or duties. For this reason sections of the Clean Air Act don't even allow agencies to consider cost when they're making regulations to protect public health. Another criticism is that it privileges current generations at the expense of future generations. Sarah got into this a little bit and I'll explain in more detail. When costs and benefits occur over time, as they often do with environmental regulations, economists translate them to their present value so they can be compared. They do this with a discount rate which extremely plain English, it essentially makes the future go away after a certain number of years.

With a discount rate of 7% which Sarah is required to use, a rule that has a benefit of $100 in the future would only have a present value of $3.40 if the benefit accrues 50 years in the future. This is for benefits and for costs. If you're a stormwater utility it might not make that big of a difference to you if you expecting to invest a million dollars today or a million dollars in ten years. But it's going to look very different in that cost benefit analysis. Last a big criticism of cost benefit analysis is that it obscures the distributional equity of the benefits and costs. Now, we start from the original mandate for fiscal notes and from Sarah's presentation that DENR does care about distributional equity. However, if you're doing a full cost benefit analysis and you just boil it down to two numbers, these are the costs; these are the benefits. You compare them. You'll lose that subtle detail; you lose the big impacts that it might have on a certain community. So it's important to know about that. If these fiscal notes go more toward cost benefit analysis, then that is crucial detail that could be lost. When should this be used? It should be used in comparing multiple policy alternatives and you're trying to find the most efficient outcome. It should be used when distribution of impacts is not a major concern. Cost benefit analysis should be used when time and the resources permit it to be done well. Please note that none of these conditions hold for DENR. The consensus among economists is that cost benefit analysis and I would argue fiscal notes as well, should be viewed as a means of improving the information available to decision makers, not as the sole guide to decision making. They can help you but they're not going to do everything for you. With that said, not to end on a negative note, how can this help you? I have composed an extremely hypothetical and somewhat exaggerated email to help you see how the information from this presentation can help you sift through the emails that I'm sure all of you get in your in boxes very frequently. So I'll read aloud.

"Dear Commissioner Jones. I'm writing to comment on the proposed rule to ban lawn fertilizer. This is a terrible rule! The rule will cause countless lawn maintenance staff to be laid off and will cost $1 million to reduce nutrients in the river by only 2%. I don't care about my neighbor's drinking water; I just want a lush green lawn. Sincerely, Disgruntled Homeowner". Now probably the emails that you get are nicer than this but this is just for an example.

So if I was the Commissioner and I was looking at this, first I would say, "Ok, what's the source of this information"? And if I think that this might be a legitimate complaint I would perhaps respond and ask how did you get this number?

Second, I would see that they are comparing a dollar figure of $1 million dollars to a water quality standard of 2%. Now we don't know what the benefits of that water quality improvement are. With comparing 2% to a million dollars just doesn't make any sense. You can't do that. What you need is you need some estimate of the benefits of achieving that reduction.

Next I noticed that this home owner talked about his or her neighbor so there might be a distributional impact in there that I might want to pay attention to. And last, I see that they're talking about drinking water which we know is a fundamental right. So that's another thing that I want to pay attention to. Hopefully this example will help you as you're sifting through your emails, just catch your attention. Ok, they're comparing a million dollars to a health impact. That doesn't make any sense. Ok, I don't know where this number came from. I should look into that. These kinds of things can help you sift through this information to make better decisions.

My final points are: (1) DENR does not have the statutory mandate or the resources to conduct a full cost-benefit analysis; (2) Fiscal notes and cost-benefit analyses provide valuable

information, but should not be viewed as the sole guide to decision-making; (3) Understanding the basics of these analyses can help you ask the right questions. That way you can come to the best decisions. So with that Sarah and I will both welcome your questions.

Dr Peterson: In my experience the main use of cost benefit analysis is to follow the requirement of an agency and for the agency to justify something they wanted to do already by cooking the books and the cost benefit analysis to make it come out to look like what they wanted to do has greater cost benefit. You didn't mention that particularly. I do a lot of environmental economics in the context of computing compensatory restoration required for some sort of environmental accident by a responsible party. We use and I follow the federal guidance in that decision. We use 3% as our discount rate. Yours is more than doubled that. What's the rationale for such a high one in what you presented?

Sarah Nienow: I do believe we'd be doing and using something kind of lower too. Because in particular with environmental problems like I've mentioned situations that they tend to be very long in the future. I mean we make changes that have impacts that might not be felt for 15 or 20 years which would suggest the use of a lower discount rate would be appropriate. But the Office of State Budget and Management, that's a decision that they have made that every agency will use 7% in their analysis. I think it's just a reflection of the fact that the state values money more in the immediate term than they do in the future. So when their planning cycle might be 5 years, 10 years but when we're doing things that might not even be able to be measured for 20 years, you're right. That would be kind of a better way to be doing the comparison.

Dr. Peterson: Likewise, when the benefits, net benefits have a lag compared to the cost you have an inner generational penalty that you're applying by using a fairly large discount rate.

Ms. Deerhake: On the last slide of your presentation you have a cost ratio but you also have a net benefit. Then your conclusion with that example is you choose the option because of higher net benefits. Does that mean that you all don't consider a cost benefit ratio?

Sarah Nienow: We do present a net figure which would be benefits minus costs or costs minus benefits. But we do not present generally a cost benefit ratio. That's a term that's often used in making business decisions and I cranked a lot of those when working on the same projects about building a building or not building a building. Because there are so many unquantified factors that can occur in the situations that we're dealing with here, I don't place a lot of creedance in that and generally that's not considered an acceptable practice in the industry.

Ms. Deerhake: Ok. I was just curious. Are you going to follow up with something you were just saying.

Sarah Nienow: So this is a really good example where you would have policy A. It cost a billion dollars. It produces benefits of 10 billion and so your cost benefit ratio looks great. It's 10. But with policy B it costs 10 million dollars and the benefits are 50 million. So the cost benefit ratio is going to look lower but the total on that benefit is much higher. So when you're using a ratio like that to make a decision, you might not take the one with the higher net benefits.

Ms. Deerhake: May I just follow up? I was interested in discussing something and I think that might have been one of the reasons we called upon you all. That is putting a value on social benefits and the fact that a lot of the fiscal notes that we receive focus on the value of the benefit to the regulated community or the impact on the regulated community. But there's no discussion oftentimes about the benefit to society on the opposite side of the coin. Has that been a point of discussion in your group? Have you thought about doing anything with that?

Sarah Nienow: I think this is what biogenic CO_2; I remember that was one of the ones when this issue came up. I do think that's very important. In instances when we are able to have good information, we definitely try to do estimates. When we can't do an estimate itself we try to describe the benefit. I think that this is something kind of new to the agency because I think before 2010 we weren't; first of all we're not required to do it and I don't really think people kind of thought about it in the same way. The people who work on these projects work with them so long that they just understand what the benefit is. They know why they're keeping the water clean; they know why they're changing a water quality standard. It has been hard sometimes for us to articulate that benefit currently in the fiscal notes. I'd like to think that we're moving to a better place in that but sometimes it just depends on the amount of information that's available.

Ms. Deerhake: I guess that the last thing that I would mention is sort of going off on a tangent. But the primary markets in market failure leads me to just raise the point that I think North Carolina has made an effort toward nutrient trading in the past. Dr. Peterson could talk about this. I think with time the value of nutrient trading to both the gray infrastructure and the green infrastructure is becoming more attractive to both parties. Anything that the Division of Water Quality is pursuing regarding improving and making the current trading program more successful would be information to our benefit in the future.

Dr. Peterson: I was going to suggest that you gave one of the answers to why perhaps you don't have the benefits quantified in a sense that lets you compare. You said that it's probably inappropriate to expect a cost benefit analysis for the DENR sorts of needs that we have. Because the non-market value things are effluent and not all agreed to, and the cost of doing it if you've got to go out and do the study to put the numbers in are huge, and time and money, and that goes beyond the scope of what you can do with the other thing you had on there was rigorously and do well. So your choices are to do something quickly with poor data and do it poorly or not do it based in a quantitative way.

Sarah Nienow: I think that there's an element of intellectual honesty involved in this. You know sometimes I don't feel that we've gone…I'm not really satisfied with the fiscal notes either but I feel like I've gotten them as far as I can in the time that we have and with the resources that we have. I think people have done a great job now looking for information and sources, and people are sending stuff to me all the time now of what they see. They are a little more excited and if nothing else, more aware that we need this information. So I think we've got a whole bunch of eyes on it now and we're kind of getting a little bit more of a hand on it. It's king of like Maggie was saying, you know, you can go into a store and buy a can of beans for .79 cents and you know you're going to pay .79 cents. But when someone asks you what that bald eagle is worth I'm not certain. I know it's worth more than .79 cents but again that's challenging.

Dr. Peterson: Persevere. In other words, that issue where it's real easy to address the cost ordinarily. Somebody has to pay this amount of money in a short term to implement whatever we come up with. But the benefits falling over a longer period of time to the environment and to human health is really what motivates us so the more that you can develop the methodologies for including them so that we don't have an unequal playing field between cost and benefits, the more I'll appreciate it.

Margaret Monnast: That's why it is also important for you to recognize that there might not be anything Sarah can do about it and there might be an unequal playing field. So you should just know that you can't just skip to the end and look at the end numbers and know the whole story.

Chairman Smith: I think both of these presentations, at least for me, are very helpful in that I have a better understanding now of how the fiscal notes that come before us are created. I have a better understanding now of what they do and don't do which will put me in a position, at least of asking better questions and doing a better weighing of what the value of that fiscal note is and what is missing from it. Thank you very much. I also know how hard you've worked to pare your information down to a reasonably presentable and understandable form. I commend you both for that as well. Thank you for coming.

Next we move a legislative update. This was Dr. Larkin's suggestion. I completely overlooked this and forgot it. Trina Ozer was going to make a presentation to us but she's out sick today so Kari Barsness is here for us to tell us what the General Assembly did in the last session that relates to environmental matters.

12-12 Legislative Update

Kari Barsness: I am the Director of Legislative Affairs for the Department. What I'm going to do is just touch on the highlights of some of the major legislation. I'm not going to cover all legislation because we would be here way too long.

I will just touch on the budget a little bit. There are a couple of things that I think are worth mentioning to you so I will talk about those as well. The legislation that I'm going to go through there is like I said about six bills that are not in any particular order.

House Bill 585: Vehicle Emissions Inspections – This bill popped up at the very end of session and what it does is it exempts three model years from vehicle inspections. It also exempts another category and those are vehicles that have less than 70,000 miles on the odometer. Just to give you a little bit of history. In the winter of last year both DMV and the Division of Air Quality did actually recommend exempting the last three model years. What is new in this legislation is the 70,000 miles and Air Quality actually is in the process of evaluating how much impact, if any, it will have on our State Implementation Plan. The second piece of legislation, State Air Toxics Program Reforms; that's House Bill 952. What this bill does is emission sources subject to the federal standards for control of toxic air pollutants are exempted from additional state air toxics requirements, unless DAQ makes a written finding that the source would pose an unacceptable risk to human health. This written finding, you guys maybe should be familiar with that. That's actually called the Director's Call. So this legislature would so ensure that the Director's Call is in place. Entities that are subject to this legislation so that they would no longer need to do state requirements or EPA rules requiring sources to control emissions of TAPs through MACTs or generally available control technologies, or state permits

that established case by case emission limits for those same TAPs when EPA has actually failed to adopt those regulations for those particular industrial sources.

What the legislation does not actually change is it does not actually change sources that are actually only subject to the state air toxics rules. There is no change to the regulations for those particular facilities.

House Bill 953: This is a Non-environmental Laws 2. Again this bill changed late in session. It did start out as a technical corrections bill and there are couple of provisions that are late in session that changed it from a technical bill to a bill that has a couple of substantive policy pieces in it. I'll highlight those. The first one is what it does is it changes the timeline for the local governments' stormwater management programs under the Jordan Lake nutrient strategy. What it does is it delays by two years the new development stormwater requirements that were to go into affect right around the 10th of August. It delays it for two years. I will tell you this provision is actually in another piece of legislation and I will talk about that in just a minute. It's also in Amended Environmental Laws which is Senate Bill 229.

Another provision worth noting in this bill is that it makes some changes to the fracturing legislation. You guys may be all aware of that legislation that's the Shale Gas Bill, Senate Bill 820. There are two provisions in House Bill 953 that actually do make some improvements to the fracturing bill. It does two things that extends the studies that are required as part of the fracturing legislation. It extends the deadline for those studies by nine months. The studies were originally to be due by January 1, 2013 but it gives us another nine months, until October 2013, to complete those studies. Another thing that the legislation does is it extends the cooling off period that was part of the Shale Gas Bill. There was a cooling off period in the Shale Gas Bill of three days for those people that actually entered into a mineral lease. What this legislation does here, House Bill 953, extends it for another 4-7 days. The next piece of legislation that I'll talk about is Regulatory Reform Act of 2012. This continues the legislative regulatory reform process that the legislature has started. You may recall this legislation last year. It was the 2011 Regulatory Reform Act. Again, Senate Bill 810 is Regulatory Reform Act of 2012. There are several provisions in this bill. The first thing that it does is it does actually make some changes to contested cases. It doesn't require but it says that an agency may pay an opposing party's attorneys' fees in a contested case whereby the ALJ has ruled arbitrarily and capriciously. So this could pertain to, in some cases when the ALJ says the agency has erred and the agency has acted arbitrarily and capriciously. This could also apply to third party suits when it's not the permittee that's actually been the one that has filed the contested case but it could be a third party like an outside organization. One other thing that it does is it extends the effective date for transfer of final decisions to OAH in contested cases. You may recall in Senate Bill 781 that was the Regulatory Reform Bill last year. What it did was change the final agency decision making authority from agencies to OAH. This just extends the time for that implementation to occur. I know that our Divisions have been working, our Divisions and our General Counsel has been working with OAH to get this implemented and we still are in process of doing this. So this gives us about four or more to get this provision implemented. One other thing that this does, it amends G. S. 143-213 to redefine discharge and discharge of waste to exclude an emission. The word emission that it changes is that it changes emission that is actually defined in the same statute and the definition of emission is the release into the outdoor atmosphere of air contaminants. This is the actual results of one particular case.

There's another provision in here that I will mention in that Regulatory Reform Bill. We, as an agency are required to report to the legislature on how long it takes to issue permits, and

we've been doing that for a long time. But the one thing that this does is that it actually in addition to just reporting on how long it takes to issue a permit, it requires us to report on how long does it take to issue a permit from the time we receive the application in the door until the time it has finally issued, which would include time when we are actually off the clock because we're waiting for more information from agencies. But we'll still waiting for more information from the permittees. Typically, what happens is that when we are reporting we're actually reporting the time it takes the agency but are not counting the time while we're waiting for an applicant to provide us information. So this will require us to provide that additional information.

Senate Bill 820, this is probably about a 30-35 page bill so again, I'm just going to touch on the highlights of what this bill does. If you guys have additional questions I can certainly try and answer them. This is the fracturing bill, Senate Bill 28. You guys might know it was vetoed by the Governor and then the veto was overridden. So it did go into a law, I believe last week. The first thing it does is it reconstitutes the Mining Commission as the Mining and Energy Commission. So the Mining and Energy Commission will actually be the entity responsible for accommodating rules related to the oil and gas activities. It also creates a structure for potentially allowing hydraulic fracturing. I say the word potentially and the reason why is the bill actually does lift the ban on horizontal drilling. But they put some moratoriums in place and they put moratorium for issuing permits for hydraulic fracturing cannot occur until the General Assembly acts to actually authorize the permitting of well and gas activity. Another thing that it does is it requires the Mining and Energy Commission to adopt rules for oil and gas by October 1, 2014. What it does do which is pertinent to the EMC is that it does allow the EMC to maintain rulemaking specifically for stormwater management and also for air emissions from oil and gas activities. One other thing that it does is it directs the Mining and Energy Commission to ensure rules are consistent with EMC standards. It also directs the EMC to consider recommendations of the Mining and Energy Commission. It renames the Division of Land Resources to the Division of Energy, Mineral and Land Resources. Three of the studies and I mentioned these earlier when I talked about House Bill 953. Those three studies that are required again the due date is now pushed back until October, but the first study would be related to force pooling. Currently the oil and gas law that's on the books does actually have a provision on force pooling, so force pooling is part of the current statutes. The General Assembly opted to not make any changes to that. But what they did do is they left the statute in place but do require a study of force pooling so that at a later time they can make a policy choice as to whether or not they should continue force pooling or if they want to make changes to how that statute works. The second study that we need to do is to look at the potential sources of funding to support regulatory programs for remediation, and impacts to state and local infrastructure. Some of that would include roads and other types of impacts that might occur as a result of increased activities in the area. The third study is the role of local governments in regulating oil and gas activities. This particular study gets at the issue of local presumption and whether or not local governments should, in addition to the state, regulate oil and gas. Should local governments also have some regulatory oversights for oil and gas activities and some of the stuff might be around, so will any other types of issues. So that's the third study that will be done over the next year or so.

The last thing I'll mention about is Senate Bill 820 is various landowner and public protections. I'll just mention a couple of them just so you are aware. Again, there are several provisions to the legislation. One thing that the legislature does is that it increases a civil penalty assessment from $1,000 per day up to $25,000 per day. Another thing that's in the bill is related

to presumptive liability. So if there's water contamination that's within 5,000 feet of the well head, then there's presumptive liability that the oil and gas operator is at fault. Again, I had stated that there was a cooling off period that's part of the legislation. That cooling off period was three days and that bill is extended to seven days in House Bill 953 and that's also part of the Consumer Protection Sections of the bill.

This is the last bill I want to highlight. It's Senate Bill 229 and it's called Amend Environmental Laws. This is the second Amend Environmental Laws for this session. There are probably about 25 or 26 sections of the bill, and I'm choosing just to highlight a few of them. If you have questions about some of the other stuff I can also answer questions on that. The first thing that this does is it prohibits DWQ from requiring a Type 1 compost facility to have an NPDES permit for process wastewater. These Type 1 compost facilities would still be subject to state stormwater requirements and federal stormwater requirements from MS 4s. Another section of the bill prohibits DWQ from requiring the use of stormwater retention ponds or other devices that promote standing water at public airports. A third thing is that it transfer authority to designate additional counties for vehicle emissions inspections from the EMC to the General Assembly. Next item is that it removes the requirement that NPDES permitted facilities must be in compliance with a nutrient management strategy within 5 years after the receiving waters have been classified as nutrient sensitive. It also extends the review schedule for river basin plans from five years to ten years. The last provision that I will mention in Senate Bill 229 and again, I just mentioned this as it relates to House Bill 953. It extends for two years the new development stormwater requirements that local governments we need to comply with for the Jordan Lake watershed. That's also another bill.

I don't have any notes on the budget, but let me just touch on a couple of highlights from the budget. I think probably one of the more important things that I do want to mention that was in the budget is that the budget as it pass the General Assembly does actually, fully restore funding for DENR's regional offices. You may recall from last year there was a provision in the budget that required a justification review of our regional offices. In addition, when they did that they actually eliminated the budget for regional offices. It was about 12 million dollars and they eliminated that budget in the second year. So what that meant was that in order for us to have full funding for the regional offices, we needed to actually have that money restored in the budget. The General Assembly did do that. So we were pleased to have that funding in the budget this year. Again, that was about 12 million dollars. The budget was a 20.2 billion dollar budget. DENR came out about on par with some of the other state agencies. They did cut our budget about 2%, however what they did was they allowed for a 2% flexibility, now a cut reduction. So it would be up to the Department to determine how best to achieve those reductions, again about 2%. That equates to about roughly to 2.2 million dollars that are reductions we will have achieve. One other thing worth noting in the budget is that the General Assembly did appropriate $250,000 for three positions to implement the Shale Gas Bill. That's not quite what we had asked for. We thought that we might need closer to seven positions, about 1.2 million dollars, but I guess three positions gets us partially there. With that I would be more than happy to take any questions you guys might have.

Chairman Smith: Thank you. Questions or comments?

Mr. Ellis: We adopted a river basin plan this morning. Is it for five years or ten?

Kari Barsness: Let me look. I'm not sure exactly when, how the effective date works for that particular assumption. Let me look and I should be able to find it and let you know.

Mr. Tedder: I think it read up to ten, so there's flexibility built in.

12-13 Final Report of the Division of Air Quality to the Environmental Management Commission on the Control of Mercury Emissions from Coal-Fired Electric Steam Generating Units

Steve Schliesser: This is a report that's required under part of our rules. The topics will be mercury emissions in the past as well as the projections. We included discussions on the principal mercury emission sources, those that have represent 1% or more of the statewide emissions and mercury, and then get into a lot of information on emission control technologies and their performance for mercury control. A little bit on mercury deposition modeling and Ms. Stecker hadn't talked about that this morning, and a little bit more on mercury levels in fish and related health issues. Finally, on rulemaking recommendations. Here is a list of the acronyms that you will probably be using. Electrical generating units are EPA's acronym is EGU. MATS is the mercury and air toxics standards. It's the recent rule that EPA just developed. ESPs are electrostatic precipitators for particulate matter control. SOX or SO_2 is for sulfur dioxide. FGDs are flue gas desulfurization units. These are the big wet scrubbers that are on the plants and NOx are nitrogen oxides. SCRs are the NOx controls, the selective catalytic reduction units. There are some other types of NOx controls, that is selective non-catalytic reduction, SNCR.

This report we're doing in 2012 is the fifth of the series of reports. There was three reports under the Clean Smokestack Act that we did back in 2003, 2004 and 2005. Then a few years ago there was this rule, the 2500 rule to do reports in 2008 and 2012. Back in 2002 what prompted this was that we were discovering mercury and fish tissue that then prompted those fish advisories that Ms. Stecker talked about this morning. When we looked at the emission inventories at least two-thirds of the emissions came from the coal fired power plants. At that time there was not much data available on speciated mercury emissions. Some of the data showed that there were facilities getting zero control of mercury and some getting 99%. Us engineers and scientists couldn't identify, couldn't explain why. Then way back then there was little known about the relationship among emissions, depositions and fish tissue levels. This report requires us to do an emission inventory on the most recent data so that makes it 2010. So for 2010 it's a little less than 2,000 pounds of mercury emitted a year. Largely, from the same top facilities that we've been seeing in those other four reports. A little more than half came from the 14 electric generating units, those facilities across the state. Back in 2002 the emissions were well over 3,000 pounds, 2010 they were actually a little less than 1,000 pounds. So that represents about a 70% reduction from EGUs in the past eight years for mercury emissions. A third of the statewide emissions then are from these other eight industrial facilities that fire coal or some form of waste or treat iron, you know some of the steel mills. Nearly all of those have effective mercury controls on them. Say the mercury emissions from that segment of the industry was almost 2,000 pounds. back in 2002 and less than 900 pounds in 2010. So that represents about a 50% reduction over the past eight years. Three of those units are industrial boilers subject to this upcoming boiler MACT. That rule hasn't been finalized. We're not in a position to really estimate whether the reductions would be associated with that. But for some of those industrial boilers some of the other ones in the state have already switched from coal to natural gas. So we expect some others to follow the same suit. Then the remaining 15% of the

statewide emissions are from various and sundry, other lower emitting facilities across the state. This map here shows what the large sources are as well as somehow widely distributed the sources are spread out across the state. So all those except the red dot up there, that red dot is the steel mill up in Cofield, NC. All the rest of these beige and yellow circles designate the EGU plans that are in the state. Those other kind of half parenthetical symbols are the smaller units that have 10-50 year, less than 10 pounds per year. I would like the point out the ones that are going to be retired, the EGUs that are retired, these four in the eastern or southeastern part of the state or let's just say the most southeastern located EGUs and that a few of them here will be also retired, at least retired from burning any coal. You're familiar with the Clean Smokestack Act but from 2003 to 2010 the utilities spent nearly three billion dollars on controls. The type of controls that they put on were these SCRs and SNCRs for NOx control, and these FGD, the flue gas desulfurization for SO_2 control. In the Clean Smokestack Act there was hard and fast emission limit reductions, emission CAPs established for the NOx and the SO_2, but there was no quantitative requirements for mercury emission reductions. They acknowledged that there were expected to be significant emission reductions for mercury, but there was no way to quantify that or at least get consensus from the stakeholders as to what those emission limits were. As we are finding out now and what was indicated in our previous reports, now that all those tentative plans have gotten through scrubbers and SNC numbers and SCRs on them, we are seeing that the combination of the SCR, ESP and FGD, that combination removes 90+% of the mercury. So even though they are not designated mercury controls, in those people's book 90+% is considered very effective, highly performing units. This figure here just shows the timeline from 2002 up to 2025. The blue line is the total mercury emissions statewide form the EGUs and the non EGUs and the red line is for the EGUs. You can see from 2005-2010 is when the utilities installed all those controls and you can see these huge emission reductions from roughly 3,000 pounds nearly down to like a 1,000 lbs. of mercury per year. The start line is the 90 EGUs and that has gone from 2,000 to less than 1,000 pounds, but it's the reductions that are not nearly as dramatic as what they are for the EGUs. Even in the future going forward we expect to have further emission reductions from the EGUs because of they are going to retire their smaller units. So there's twice six smaller ones that they are going to be retiring. The other thing that comes into play here is the EPA rule, the MACT rule. It is a Maximum Achievable Control Technology rule so that's requiring maximum achievable meaning that they take the top 12% and they take the average of the top 12% so that's like the equivalent of the top 6% units. But they named it the Mercury and Air Toxics Standards or MATS rule. Compliance for that is scheduled for April 2015 and they have already included some water one or two year extension options with that. But with that rule there are numerical emission limits and continuous monitoring requirements for mercury in those other pollutants. This slide kind of reflects what was going on before the MATS rule, but as of 2010. There are 13 gigawatts which is 13,000 megawatts of coal fired capacity in North Carolina. Seven of those facilities makes up the lion's share of that so ¾ of the capacity is there at those seven plants covering almost 20 boilers. Most of those are well positioned to meet the EGU MATS at this point and time. All those will continue to operate. Those are the ones that have got the SCRs and the FGDs on them. The other seven facilities are the smaller ones so they only account for a quarter of the state capacity even though there is a higher number of boilers. In the past they've had 10% to 30% emission reductions for mercury but none of them can meet any of the EGU MAT standards and all 26 of them are planned to be retired by 2015. A few of them have already been retired at this point. Those facilities will continue to operate and still use their infrastructure but they' fire natural gas

instead of coal. Some questions were raised yesterday about what data we have on these mercury emissions as well as their performance for these units. In part of our requirements the facilities were to measure emissions before and after their scrubbers for their plants for each, Duke and Progress Energy. So this shows the seven that were given and you can see this red line here shows what the EGU MATS emission limit is, which is like 1.2 pounds per trillion BTU. Behind the FGD there are the stack emission levels. You can see for all of those they are well below the MAT emission limit, and that's based on specific measurements, site specific measurements at those facilities as required by our rules. But they also get a better handle. It shows what the efficiencies are and what the range of the emissions are coming into the FGD units.

Ms. Stecker might have talked a little bit about the different forms of mercury, but anyway there are three different types of mercury species and this table helps identify the characteristics of them. I think it is key just to focus on the element and oxidized mercury. The particle-bound mercury only accounts for a very small percentage of the mercury, but you all know on oxidized mercury, those forms have pretty contrasting properties and characteristics. But the elemental is very volatile. It's not water soluble and it's atmospheric transported will go for weeks or months after being released before it gets deposited. Because it's a gas, it's virtually uncontrolled by the types of controls that we have here in North Carolina. The only way to control it is with activated carbon, however the SCRs that are in place can oxidize a small portion of that elemental mercury to oxidized mercury. So even though it's a NOx control, it contributes to the collectability of mercury for the type of coal that's burned in North Carolina. There's the oxidized mercury so it's likewise gaseous, but it's very reactive and very water soluble. So it is easily collected in the scrubbers. It's transport time is really in hours or days. A little bit can get collected in the ESPs. Less gets collected by the hot-side ESPs which is just a few of them in the state. But 50-90% gets collected by the FGD scrubbers and a similar level of performance from activated carbon. Again, this is some actual data from the Roxboro Two unit where it really shows what the speciation profile is across that whole system. This first set of data here is before the SCRs, basically coming out of the boiler and so this top line shows what the total mercury levels are. This blue line here then shows what the oxidized mercury levels are, but you can see for basically all of these there's a gradual, if not significant reduction in concentrations as it goes, coming out of the boiler, goes through the ESP and then finally through the FGD. Again, the emission standard is at 1.2 and so the total here is well below 1, again another indication showing that these regularly rather have a safe margin of being able to comply with the rules. This is based on actual measurements; not a emission factor.

For the deposition modeling, let me be brief here. EPA is part of that EGU MATS rule. They perform deposition modeling. They basically did three different scenarios, before and after the rule and then with or without the EGU emissions in 2016. So their information indicated that basically the EGUs contributed 5% of the deposition in 2005. But because of the lower emissions after the rule takes affect they would contribute only 2% on average nationwide. Basically, what we did then was take their approach and their model, and then just apply it toward North Carolina. We got similar results just by looking at these deposition models and their results were again, before and after the EPA rule becomes effective. It showed that the deposition in North Carolina should decrease by 10% between 2005 and 2016. The key point is that the modeling again, like Kathy said this morning that 16% of the North Carolina deposition comes from North Carolina sources. So 84% roughly 85% comes from outside the state. That should decrease. Because of the emission reductions we expect to have a different percentage at

some point in the future. So after 90% by 2016 would be coming from outside of the state. This graph shows the top line edits; shows what the deposition projections are for 2005 with the EGUs, 2016 again with the EGUs so you see a slight drop from roughly 10,000 to 9,000 pounds. But then without the EGUs you get another slight reduction on how much is being deposited in North Carolina. But on the same graph I wanted to illustrate the difference between how much is getting deposited and how much is being emitted in North Carolina, so we're on the short end of the stick. For the health facts, the mercury level in fish, DWQ has done an analysis for the past, over 20 years on fish tissues for mercury. There are over 300 sites with rivers and lakes. A couple of years ago we asked them to look at…we noticed at all their sites, very few of them were near the EGUs. So we asked them if they could include some sites near them so they came up with 13 that they were willing to add to their list. Recently when they looked at the results, since then the results showed there was no statistically, significant change in mercury levels, say in largemouth bass, nor in fish tissue levels statewide, nor at sites near the EGUs. This shows again the picture of where their sites are so there are 13 of them. You can see that most of them are relatively close, if not right next to where these power plants are located across the state. There was another study done, at least it was reported back in 2007 but it was the Center for Disease Control collaborated with our own state Health and Human Services people to do a study on locally with people on locally caught fish. One of the worst case areas was down in southeastern North Carolina, in Columbus and Brunswick counties who had elevated mercury levels for not only for fish tissue. But then the modeling indicates that those would be the higher levels for deposition of mercury and the water people have known for years that those conditions are conducive for methylation of mercury. They found like 100 people to participate and those results showed that (this is a very limited study) no child bearing age limit had unsafe levels of mercury in their blood, and they didn't find any correlation between blood levels and the amount of fish eaten. This was just a pilot study and it's very limited. This is supposed to be the first of a series of studies, but there was no other study done because of budgeting constraints.

So in summary, we've got over 70% reduction in mercury emissions since 2002 as a result of the Clean Smokestack Act. Then we expect to achieve 76% reduction by 2018 and over 80% reduction by 2025. That EPA MATS rule requires 90% control of mercury emissions and then as validated by continuous emission monitors. Our recommendation is that there be no new mercury control rules for existing facilities in North Carolina. We believe that additional controls beyond those already required by the CSA and the EPA MATS rule offer limited opportunities and benefits to further reduce mercury emissions from coal fired EGUs. EPA's rule required only 50% control and that would provide room for more opportunity for a state rule to come in and reduce emissions, since their rule requires roughly 90% and that's the minimum requirement. So they have to do 93 or 95% in order to meet that and have the safe cushion. We see that as a limited opportunity. For the benefits the fact that most of this that only roughly 15% of what's deposited is contributed to North Carolina, then we're on a diminishing return program for any further emission reductions. That's why we believe we're recommending that no new mercury controls for existing facilities be required. As part of that under this, still under our rules that in the future there needs to be some similar reports as to this report be done in 2018 and 2023 with virtually the same type of key items to be reported on. That concludes my talk.

If you have any questions, I'll be glad to answer them.

Mr. Hall: Where there are power plants located on your map, is any study to tell where those mercury emissions are deposited? Can you identify where the hotspots might be, because you have a stack here at this location, within a radius of 50 miles or 10 miles or what?

Steve Schliesser: If you look at those maps that are in the report because they show there are some deposition maps that are color coded, you can see the gradient in those colors that are associated with the location of where these plants are located. The modeling does indicate hard deposition nearby those units than the other locations in the state. We understand about using those, deposition model, that CMAQ model that is yet to be fully refined and completely validated. That's the best tool that's available, but it's not a perfect tool at this time.

Ms. Holman: Chairman Smith, can I interject? When the Clean Smokestack Act passed and when the EMC worked on the mercury rule that we're providing a report back on today, one of the questions was whether or not DWQ was actually collecting fish tissue in those areas where deposition was likely to occur. At that time we had some of our modeling staff do point source, we talked about the two different models today, the CMAQ model vs Air Mod. We weren't using Air Mod back then but we were using a similar type model to indicate where most of the deposition would occur from those power plants and we used that to help guide DWQ, and where they would be collecting the fish and studying the fish tissue samples in the future.

Ms. Deerhake: With the 2015 implementation of the continuous emission monitoring program, when do you think the earliest would be that data would be available to be to the Commission? I certainly would hope that you would have by the 2018 report, but how long will it take you to process the first year of data, for example?

Ms. Holman: I'm assuming that data will be treated similar to the existing CM data, and so being provided to EPA. Normally we get that data just a few months after the close of a quarter. So we could, I think even start reporting earlier than the 2018 report as to what the data is showing.

Steve Schliesser: I'd like to add to that, that those EPA requirements, those emission levels must be met. They're motivated. The utilities or any of the topics are subject to those rules are highly motivated to meet those because if they don't meet them, they would have to pay a penalty. Then they would have to be at some later time. So virtually all of them understand that it's more effective for them to meet them in the beginning than it is to get hammered on the head and with a big fine, and then come back and meet them at a later time.

Mr. Cavanaugh: Are we still doing some fish sampling? I'm inched up in the Blues Lake area. Are you still collecting samples as an ongoing thing?

Steve Schliesser: Yes. Those results are in the report. You'll see that Blues is one of the lakes that are being sampled and rather doing an analysis.

Mr. Cecich: When the continuous monitors are in, is there any thought given to revalidating the air modeling?

Steve Schliesser: I believe. They'll continue to help refine the modeling and the relationships of what's known. Other states are interested in those relationships. There was a big study that

was done up in Stuvenville, Ohio several years ago, back in 2002 and 2003, in that time range. It was a real elaborate study, state of the art instrumentation on how much gets deposited, but that was just for the wet deposition. But they are measuring the NOx, the SOx and the CO. Anyway they could get…they could clearly identify what sources the plumes that they were measuring or re-impacted by were coming from. I think whether the landmark studies that have been referenced, but that one showed 70% of the mercury deposited in Stubenville came from coal fired emission sources, but then 50 or a 100 miles from there. But that was just for the wet deposition, not the total amount of mercury deposition. That's somewhat in line. Our modeling indicated that the wet deposition accounted for 30% of the total deposition. So the 70% x the 30% gives a result of about 20% coming from local sources which is somewhat in line with what our modeling indicated at certain locations. It's not statewide but there's somewhat of a reasonable agreement. The coefficients and all the science that they're currently using in the model will be subject for upgrading and refinement in the future.

Chairman Smith: Any other comments or questions? Ms. Holman do you want to add anything?

Ms. Holman: Yes sir. Thank you. I did want to reemphasize that emission factors are not used a lot in the calculation of the mercury emissions. Many of our facilities have actually done stack testing so a lot of the emission estimates are coming from that stack testing information.

Ms. Deerhake: I've gone through and created a number of notes that I'll just share with the Division of Air Quality just to hit a couple of highlights. I think it would be useful to try and overlay the more sensitive waters in the states on the maps where the facilities, EGUs are located or the deposition maps to help doubly understand what the vulnerability of those waters are to bioaccumulation. I know the focus of the report and the charge for the report was on electrical generating units, but you do mention that there are other sources in the state. I think I understand the Divisions are expecting that the industrial boiler standard will be coming out, hopefully soon we'll have an impact on those emissions. But it would be useful for the Commission to be able to track how those sources are performing as well. There are a number of studies, a lot of different types of studies and information in this report that I think it would be beneficial to the Commission, either via the Air Quality Committee or joint meetings of Air Quality and Water Quality invite and hear testimony or information from some of the experts that are cited in these write-ups. I think that would be useful too, because some of the positions or the conclusions drawn could be debatable in the scientific community. Perhaps in the coming months we can see what we can do to afford or arrange for some presentations from some experts.

12-14 Looking Forward from the North Carolina Forum on Nutrient Over-Enrichment

Chairman Smith: In our final information item someone with DWQ suggested that we do a brief report on the Nutrient Over-Enrichment Forum which we had a month or so ago, whenever it was and Mr. Alan Clark is here. He's hoping that I'm going to do this. I'd like for you to chime in but I'll start it out.

For those of you that were there you know it was an excellent two days. For those of you that were not there, the format was that we had four panelists, Mayor Moss, Jackie Gerald, who is the Superintendent of the Environmental Management Division with Charlotte-Mecklenburg Public Utilities, Grady McCallie who is with the North Carolina Conservation Network, and

myself. The presenters came for two days from all over the country. We had a couple of hundred attendees. It was very well attended. Each of the panelists after the two days were asked to give our initial reaction to those two days and where we thought this might go from here. All of this, you understand, was in the context of the EMC receiving information that would inform our next steps, if any, about what to do about nutrient over-enrichment, a step back from having given serious consideration to a proposed rule package that are focused on a chlorophyll-a threshold. I asked Mr. McCallie and Ms. Gerald to send me their notes from that little closing and Mayor Moss was going to do his himself, but I've just asked him as he was walking out to go to his council meeting to give me his notes. I'll just read through these and I'll try to make it as brief as I can.

This is from Jackie Gerald of Charlotte-Mecklenburg Utilities. She said it was very informative. There's a lot to learn from the experience of others. This is a great start. To develop a solid balanced approach in North Carolina the three components for me are flexibility, balance and sound science. There're great models in North Carolina of collaboration in using basin specific approaches. Now we can go forward and enhance what we're doing to ensure that we're establishing the most environmentally, targeted approach in the most cost effective manner. We need to define our goal and incorporate the science in our policy just as other states are doing. We need to look at the science more closely. It's clear that there is not one way to approach nutrients, meaning not a single way. Chlorophyll-a seems to be a good indicator, but I think there may be other good indicators we need to consider. All sources and stakeholders must be included. I'm confident that this is now occurring and going forward we must do this to truly understand impacts, both direct and indirect. Economic impacts are a factor and must be integrated into the nutrient management strategy. We need to leave this forum, think about all we've heard and come back together. I'd like to hear what DENR believes the path forward to be and my hope is that DENR will allow us to work as a partner in developing a strong, sustainable nutrient management plan for North Carolina.

Mr. McCallie said from the presentations that we've heard caused him to reflect on three distinct ongoing conversations. One is numeric nutrient criteria, North Carolina and the EPA have been trapped in a stalemate for a decade over the question of whether the state must adopt nutrient, nitrogen and phosphorous standards. Presentations at this conference have suggested that stalemate be breaking largely thanks to greater EPA flexibility as in Ohio and Maine. He also highlighted two additional questions that need the EMC's future attention. First, judging from comparisons to other states, North Carolina's chlorophyll-a standard at 40 mg/l, cutting edge when it was proposed or adopted, now looks weak. Other states have standards that or equivalents that appear much closer to 20 or 25 mg/l. Second, we need a standards for streams distinct from the chlorophyll-a standard meaning one standard for streams and one standard for other surface waters. His second conversation he heard was that there's considerable concern about proactive or for proactive protections. That is an approach that keeps waterbodies that are currently healthy but facing loads of nutrients from sliding into impairment and expensive cleanups. We heard a lot about the difficulty of nutrients in artificial lakes which is certainly an issue for us. The scientific and financial challenge of cleaning up waterbodies that are grossly overenriched by nutrients is a fundamentally different question than the problem of setting an appropriate water quality standard in other waterbodies. The challenge really is, from his perspective, political and legal rather than one of science and it is how to bring these much abused waters back into a condition that can support the designated uses. Then he recommended that we consider, whether you call it a systems approach or a sustainability approach, many of

the largest environmental problems that we face with nutrients are a result of imbalances in systems driven by human activities, distortion in the carbon cycling and water cycling, and the nitrogen and phosphorous cycles, and in the mercury cycle. A piece of that is someone is going to pay, from a sustainability perspective, the root of our nutrient over-enrichment problems is that we boosted the normal nitrogen and phosphorous cycles. All those nutrients will end up somewhere. Then he encouraged us to work toward a sustainable design. That is, avoiding environmental problems through good design does not have to eliminate complexity, does not eliminate complexity in public policy but moves it away from arguing about thresholds in each system or for each pollutant; to designing products or buildings or services within the minimum footprints of a variety of cycles; meaning that, over the next 30 or 40 or 50 years, we're going to redevelop much of existing development. It is the nature of our progress and he encouraged us to think about emphasizing sustainable design and work at it to head the problem off that way.

Mayor Moss's notes are cryptic. He thought it was a great event. He believes that the principal goal of the forum was totally accomplished,that is to provide state and local leaders, managers and planners with a well balanced review of the science, regulatory issues, economic considerations and other issues relating to nutrient over-enrichment. That's pretty much all I can read.

My comments were very brief. I went back to what had motivated us to plan that nutrient forum that is, when the chlorophyll-a rules came to the Water Quality Committee, the Water Quality Committee decided that we needed to step back and reconsider, and the motion that took that rule package off the table had six pieces – (1) we review alternatives, (2)we explore the underlying science, (3)we work on building understanding; that is developing a broader sense of involvement in each stage of the principal decisions to be made, identifying the problem, identifying options and deciding what to do about it,(4) that we review cost, cost effectiveness and cost savings including the cost of doing nothing, (5) that we consider basing a threshold on something other than chlorophyll-a, and (6) that we consider other indicators of trending and change. That was at the Water Quality Committee 2-1/2 years ago. Then from that idea, DWQ designed this excellent two day forum. My comments about where we go from here were (1)looking in more detail to what is working in other areas, particularly Florida,Vermont, Ohio, the Chesapeake Bay and what is working in North Carolina. We heard really good presentations about what other states are doing. (2) Identify our specific targets; that is what environmental indicators should be our focus. (3) How do we recognize impairment? How do we define that? (4) We should do separate considerations of streams, lakes and estuaries. They all operate differently from a nutrient perspective, the extent to which we stay with a site specific approach. (5) Everybody emphasizes stakeholder involvement. I also reminded the people of the obvious; that is, being heard is not the same as getting what you want. (6) Then, that we are, I thought, approaching the time that it was time to make decisions. We weren't there yet but we've been talking about this and looking at this for a long time. In the meantime the nutrient over-enrichment problem increases. From an EMC perspective, one possibility was rulemaking, another possibility maybe on parallel tracks, was an EMC report and recommendation to the General Assembly and the Governor. So that's where we left it.

It was an outstanding two days and I appreciate the opportunity to have been there. Everybody that was involved in it, you heard them named before, did a great job.

Alan Clark: I will just add that, and I think I said this earlier but we'll be coming out with a proceedings here before too long. It will have copies of the powerpoint presentations throughout the presenters. We've actually got a recording of almost the entire session. I think we missed

one of the sessions there. Really the two days, we got recordings of that. We'll have transcripts from the Q&A sessions, from the chart that Dr. Peterson presented as well as the moderators' presentations and some write-up to that. It will be a good accounting of it and people that were not there will be able to listen in and go through the materials and gather a lot from it. As a reminder staff will be coming back to the Commission this Fall on several issues. One of which is this revised nutrient criteria implementation plan that EPA is calling for. We'll be presenting that to you for your information and for feedback to staff in directing us how you would suggest that we proceed on that. We'll probably be coming back to you late in the Fall, possibly with some suggestions on an approach to go forward with the High Rock Lake, a nutrient management strategy and revisit this idea of being proactive in terms of preventing nutrient impairment in other waters with the threshold discussions earlier. We're going in that direction. But not necessarily coming back with thresholds again, but something to address that. That was it. Thank you.

Mr. Tedder: I just wanted to comment. I mean a conference like that is only as good as the quality of the speakers and the knowledge that they're presenting. I think staff did an outstanding job and I appreciate Mr. Sauber probably cashing in every blue chip he owns to get the speakers in that he did, because it was excellent.

III. Status Reports

A. Water Allocation Committee — Jeff Morse, Reporting

Mr. Chairman, Mayor Moss asked me to also interpret his cryptic writing. The Water Allocation Committee met. We had one informational item, validation of the Broad River model process that monitors water quality. We are in a 60 day comment period. The Water Allocation Committee will consider in September and full EMC in November.

B. Water Quality Committee — Dr. Charles H. Peterson, Chair

The Water Quality Committee met yesterday. We heard the item that also appeared before this full Commission today. That is the approval of the accounting tools and the baseline load applications for Falls Lake watershed. You all got more than a summary of that one. We acted on two major variances from the Neuse River riparian protection rules. One for a single family residence in Raleigh and we approved it. One for multi-family set of residences in Cary and we disapproved it. The consequences of that different in vote is likely to be subject of some further discussion because we recognized that we have five criteria that by our own actions we are required to meet to approve a major variance. We recognized that we may not wish to always have those five and we may wish to have some discussion. We, on the other hand, may wish to have all those five so that we each do a little more soul searching on that topic.

C. Groundwater Committee — Kevin Martin, Chair

The Groundwater Committee met. We just had one information item which was related to the Director's establishment of an Interim Maximum Allowable Concentration for propylene glycol and that was effective July 16, 2012. For those of you not familiar with the IMAC, basically a request is made for a substance when there is no standard. The Director adopts said standard and then we, as a Commission will deal with that along with other items in the Triennial Review where it will go through the normal rulemaking process. That was all we had.

D. Air Quality Committee Marion Deerhake, Chair

The Air Quality Committee met. We did not have any action items, however we did hear a concept on preventive significant deterioration rule for PM2.5 particulates, which is to update the increment as a result of an EPA action. That is at the 15 mg per cubic meter standard. However, we heard later on as an information item that EPA is in the process of amending that rule to somewhere between 12 and 13 mg per cubic meter. But that's down the road. So right now we're just functioning with the 15 rule. We also had a report on the air toxics legislation that you heard about today and the Director informed us about the Croatan National Forest fire that occurred recently and the air quality resulting from that as well as proposed Portland Cement maximum achievable control technologies standard revisions, the greenhouse gas court ruling, which was a DC federal circuit ruling that greenhouse gases. They upheld the endangerment position of the USEPA and what the outcome of all of that will be. Then we also heard about the inspection and maintenance exemption rule that we learned about earlier today. If I could just take one minute, let me, instead of closing remarks I will just thank the chairman for organizing the event for Dr. Moreau. It was very nice and I know how much he really appreciated it. Thank you.

IV. Concluding Remarks

Chairman Smith: Other comments by Commission members?

Dr. Larkin: I have a couple. One has to do with what we've learned over the course of the day about mercury and the preceding day where we were trying to pore over all the paperwork. Specifically, the relationship between the atmospheric mercury and the surface water, and how we are able to look at a water quality issue and use that to help us control air quality or do something about the air quality. I wondered if there are other toxins that have that same sort of phenomena. Nitrogen certainly comes to mind and I'm not sure what else. I just wonder if it might be worth, Marion you spoke of a joint water quality, air quality meeting asking for some more exploration of those subjects of that relationship between the atmospheric and surface water that might be beneficial.

Chairman Smith: That's an excellent suggestion. Let's both DAQ and DWQ to give some thought to what other substances there are that are subject to that same problem. At least in one limited area we dealt with ammonia, but others. Let's talk about it and consider a joint meeting with a presentation from the two of you.

Mr. Crawley: Just for your edification, in September you'll have two contested cases. The chairman spoke to those and we're trying to get the record to you in plenty of time because it will be a voluminous one again. So be on the lookout for the two records. The House of Raeford case is a civil penalty water case, and then PCS Phosphate near Aurora. It's a 401 water quality certification case. Jill Weese and I went to Superior Court for Howard Manning Jr. in Alamance County last month and we presented our arguments on the judicial review of the EMC's declaratory ruling for the South Atlantic matter as you recall. The Commission entered a declaratory ruling that certain information provided South Atlantic provided to the DAQ staff was emission data, and under the federal regulation and state authority. Emission data is not subject to being held confidential under the Statute and Public Records Law. Judge Manning on judicial review said, "Reduced to essentials the court agrees with the EMC declaratory ruling

regarding the 2012 determination relating to emission data not being entitled to confidential treatment." So you win on that one. But he went on to say that portion of the declaratory ruling that requires the ambient monitoring report and supporting data to be made available to the public for review as unenforceable that he gave within the eight page ruling which the effort of it was he found that South Atlantic provided the information and relied upon the first action by the Division stating that it would be held confidential and didn't ask for it to be returned and that 55 months passed before anyone sought disclosure of the information. For those two basic reasons the reliance and the passing of time he felt that it was inappropriate to change the ruling and say now that, because there was emissions data it ought to be disclosed. So he has ordered that the material be returned to South Atlantic and the Commission being party to it, I put the question to you through the Chairman whether or not you want to direct our office to file an appeal of Judge Manning's order or comply with the order.

Chairman Smith: Mr. Crawley what's your recommendation?

Mr. Crawley: My recommendation is because it upholds the essential position of both this Commission and the Division with respect to in the future emissions data not being subject to being held confidential that we comply with the order. I think that the fact that Judge Manning has entered an order that the materials be returned to South Atlantic that any question whether or not that would be in violation of public records law or the law on returning public records, that we would be covered because the Superior Court Judge has directed the agency to act in that fashion.

Ms. Weese: I concur with what Mr. Crawley has just spoke.

Chairman Smith: And I do, too.

Upon motion by Mr. Morse and second by Dr. Peden, the Commission voted unanimously to not pursue an appeal of this order for the reasons stated by Mr. Crawley.
(The meeting adjourned at 4:00 p.m.)

NOTE: Attachments are on file in the Division of Water Quality with the Official Minutes.

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Lois C. Thomas, Recording Clerk

By Commission Members
By Directors
By Counsel
By Chairman

Adjournment AG07-12-12