

**MEETING OF THE NORTH CAROLINA  
ENVIRONMENTAL MANAGEMENT COMMISSION**

**Raleigh, North Carolina  
November 18, 2010  
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:**

Donnie Brewer	Tom Ellis	Jeffrey V. Morse	J. Dickson Phillips III
Thomas F. Cecich	William L. Hall	Mayor Darryl D. Moss	Stephen Smith
Stan L. Crowe	Dr. Ernest W. Larkin	Dr. David B. Peden	Forrest R. Westall, Sr.
John S. Curry	Kevin Martin	Thomas H. Percival	
Marion E. Deerhake	Dr. David H. Moreau	Dr. Charles H. Peterson	

**DIVISION OF WATER QUALITY:**

Bradley Bennett	Mike Templeton	Tom Reeder	Jon Risgaard
Ted Bush	Bethany Georgoulas	Coleen Sullins	Diane Reid
Kevin Bowden	Connie Brower	Lois Thomas	Jeff Manning
Frances Candelaria	Gary Kreiser	Julie Ventaloro	Susan Massengale
Alan Clark	Matt Matthews	Adriene Weaver	
Matthew Faerber	Sandra Moore	Chuck Wakild	
John Huisman	Rob Krebs	Elizabeth Kountis	

**DIVISION OF AIR QUALITY:**

Sheila Holman  
Joelle Burleson

**ATTORNEY GENERAL'S OFFICE:**

Frank Crawley  
Jane Oliver  
Brenda Menard

**Chairman Smith:** called the November 18, 2010 meeting to order at 9:05 a.m.

Before we begin our business there's one thing I need to tell you about. A long time DENR employee, Steve Tedder is retiring after 37 years and Steve is with us today. Many of you may not know the extent to which and the impacts Steve's had on the department and its policy and procedure over the last 37 years. He has truly been an innovator and in a lot of ways a visionary. I am going to call on Chuck to tell us some about Steve's career and then I'm told although I haven't had a chance to confirm this with Forrest. Forrest may want to make a comment as well.

**Chuck Wakild:** Thank you Mr. Chairman. Steve Tedder has announced his retirement from the division after 37 years. I've had the personal pleasure and opportunity to have worked with Steve. He was a friend of mine for almost all of those years but I think as the chairman said his lasting legacy is going to be the innovation that he has brought to this organization. Back when he started it was primarily what I would call an old fashioned sanitary engineering kind of organization. We were focused on building waste treatment plants, I'd say and not much real environmental kind of follow up to those kinds of things in terms of what's happening in water quality. Steve was really the starter of the biological programs here, aquatic toxicity and biological monitoring. He got those programs started, developed them and they have been recognized nationally for the quality of the programs and the innovation that has taken place with them, and also the basinwide permitting program that we are kind of all used to right now. That was started under Steve's leadership. He served in a variety of roles within the division over his career. Probably the longest stint may have been as water quality section chief in the nineties and just had a truly outstanding career in the sense of making the programs better over time. I know many of you have known Steve for a lot of years and we're certainly going to miss his constant kind of "we can do this better if we did it this way" kind of thing. We'd like to recognize Steve for those accomplishments and let him know that we will miss him, and we will all keep on.

**Forrest Westall:** I have also had the pleasure to work with Steve for over 35 years in one capacity or the other at some point and time. Steve worked for me and then I worked for him. I do appreciate all that he has done. He was also, in addition to being an innovator he was a trailblazer. He was the first non engineer to be over the water quality section so he blazed the trail in that regard. Steve was also a person that got things done. He worked in the budget and personnel department, got people hired and got things done. As many people know Steve worked in the background. You never knew he was there. You can basically say Tedder was an outspoken and very aggressive person in getting the program moved ahead. He was also very supportive of his staff. Thank you Steve.

**Chairman Smith:** Mr. Tedder will you stand so that folks can see you there. You are welcome to speak to us if you would like or have anything you want to say.

One other thing I need to say is that **Ms. Bailey** won't be with us. She was absent yesterday and she will be absent today due to a death in the family. She asked that we excuse her absence.

With that we will move to a consideration of the minutes and an approval of the minutes from the prior meeting.

## **I. Preliminary Matters**

He then read the Ethics General Statute § 138A-15, which mandates that the Chairman inquire as to whether any member knew of any known conflict of interest or 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.

**Mayor Moss:** I will be recusing myself from item number 10 which is proposed nutrient rules for Falls Lake. The State Ethics Commission has ruled that in my role as mayor and because Creedmoor is in the affected area that I really need to do that. It was a position that quite honestly I disagreed with but out of respect for the laws of this great state and for this great body I will definitely follow their opinion. We know that the rules will affect our community so I will definitely step back. But I have the utmost confidence in my colleagues that they will do what is needed to be done. Thank you.

**Chairman Smith:** Thank you. As I have said to you before I was surprised by that ruling. It was not what I expected as well but that was the ruling and we have accepted it. I commend you for not only stepping aside but staying true to that.

**Donnie Brewer:** I'm going to recuse myself from item 10-42 the IBT request for Greenville Utilities Commission. This is an appearance of conflict.

**Dr. Peterson:** I wonder as a payer into Greenville Utilities because of being a property owner in their district whether that represents real or a possible conflict of interest on that item for myself.

**Frank Crawley:** Based on your description in your position just as a property owner along with thousands of others I don't believe you've got even the appearance of a conflict of interest.

**Dr. Peterson:** Thank you.

**Chairman Smith:** Well all of us that are here today if we drink out of the water fountain, we're drinking Falls Lake water.

**John Curry:** This is a question on another matter. I just want to be sure asking the technical folks that are here if when we get to some of these larger files and we all try to download them at the same time, is that going to present a problem? Is there anything that we can anticipate that we might do or they might do that would help us?

**Chairman Smith:** Does anybody have an answer to that question? They stepped out of the room but I guess we will find out soon enough, and we will deal with it. Any other recusals? Then let's lead to the minutes.

**Dr. Peterson:** I move approval of the minutes as presented. **Mayor Moss** seconded. After no discussion the motion passed.

## II. Action Items

### 10-42 Request for Approval, with Conditions, of the Interbasin Transfer Certificate for Greenville Utilities Commission, Town of Farmville, Town of Winterville, and Greene County

**Summary (Mayor Moss):** Yesterday the Water Allocation Committee considered this item from the Greenville Utilities Commission, the Town of Farmville, the Town of Winterville, and Greene County. We have asked Toya Ogallo to come today to make the presentation to the full EMC. After which I will be making a motion on this item.

**Toya Ogallo:** Just to review some background information, the Greenville Utilities Commission or GUC has taken the responsibility for pursuing a certificate on behalf of Farmville, Winterville and Greene County. Each of these petitioners is subject to the Central Coastal Plain Capacity Use Area rules. This IBT petition falls under an exemption to the IBT statutes that allows systems in the Capacity Use Area to pursue a certificate under the .22I statutes which are an older version of our IBT statutes.

The petitioners have requested a certificate to transfer 8.3 MGD from the Tar River Basin to the Contentnea Creek Basin and up to 4.0 MGD from the Tar River Basin to the Neuse River Basin. As a quick reminder in interbasin transfer we actually have 38 river basins defined by statute as opposed to the more widely known 17 major river basins. The Contentnea Creek Basin is a sub-watershed of the Neuse River Basin. The petitioners have also requested the ability to transfer an additional 1 MGD in an emergency from the Tar to the Contentnea and an additional 200,000 gpd in an emergency from the Tar to the Neuse.

The petitioners developed an environmental assessment in support of their petition which received a Finding Of No Significant Impact in October 2008. The petition itself was submitted in April of 2009 and the EMC held a public hearing on the petition in November of 2009. The public hearing was held at Pitt Community College with Kevin Martin and Stan Crowe serving as hearing officers. There were 37 attendees and 10 speakers at the hearing. The attendees included the City of Rocky Mount, the Town of LaGrange, the Neuse Regional Water and Sewer Authority, the Tar-Pamlico Riverkeeper and members from the local Sierra Club. Common themes that we heard at the public hearing included the idea that a limited water supply is a regional problem and it needs to be handled with a regional solution. We heard comments that the environmental assessment misses the growth issue. We also heard comments that core principles of the 2007 law which we refer to as the new IBT statute should apply: principles such as an emphasis on conservation.

After the public comment period closed the hearing officers requested some additional information from the petitioners to address the main issues raised during the comment period. In response the petitioners developed technical memorandums on topics such as conservation, mitigation, impacts to the Tar River and alternatives to the transfer. The hearing officers have included this information as part of the record and used this record to make recommendations on each of the following Findings of Fact.

The EMC is required by statute to make these Findings of Fact in determining whether to grant the petition in whole, in part, or deny the petition. The findings are:

1. the necessity, reasonableness, beneficial effects of the transfer,
2. the detrimental effects on the source basin,

3. the cumulative effect on the source river basin,
4. detrimental effects on the receiving basin,
5. alternatives to the transfer, and
6. any other facts that the Commission deems necessary to carry out the law.

There are also two findings on the use of impounded storage and water storage allocation but those do not apply to this project.

With respect to the requirement to evaluate the necessity and reasonableness of the transfer, the hearing officers made the following three findings of fact. First, they determined that the IBT request is consistent with the amount of water lost due to the Central Coastal Plain Capacity Use Area Rule reductions. Second, they determined that the water needs will be met with existing infrastructure by use of an IBT management strategy. And lastly, they determined that existing regulations already set forth the requirements for obtaining authorization to make an emergency transfer.

An important point for the hearing officers in determining the reasonableness of the “amount of” requests were determining how much the Capacity Use Area rules “turned off the tap” so to speak. The answer to that question is that it depends. This graphic is one used by the capacity use program in illustrating the Approved Base Rates and the reduction requirements that are required as part of the rule. The Approved Base Rate is based on flows prior to the year 2000. The rules came into effect in 2002 and water systems are required to make a 25% reduction from that approved base rate by 2008, 50% reduction in total from the approved base rate by 2013 and 75% total reduction from that approved base rate by 2018.

Two important points to make about this graphic: One is that for any system subject to the capacity use area rules, the water shortage that they face will increase every year. It will increase as the allowable pumping rate goes down and it will increase as they continue to experience established growth trends. So in answering a question of how much water is lost to the reduction: it depends. If you look at the year 2002 the amount of water that you determine may be lost would be different than if you look at 2013 or 2020, etc. In this case the petitioner’s IBT request is consistent with the amount of water that they will have lost due to the Capacity Use Area Rules through 2030. The second point to make about this graphic is that any water system subject to these rules would need an alternative water source even if there were no growth. Even if growth remained at historic levels they would still need an alternative water source to make up this deficit.

It’s based on this information that the hearing officers were able to determine that the amount of the IBT request is necessary and reasonable.

The second finding with respect to the reasonableness of the transfer is that the water needs will be met with existing infrastructure by use of an IBT Management Strategy. A management strategy is necessary because the Greenville Utilities Commission operates an existing 22.5 MGD water treatment plant on the Tar River. They propose to sell their excess capacity to Farmville, Winterville and Green County. This excess capacity will be sufficient to meet those community’s needs through 2030.

In order to illustrate the projected demands that will be faced at the water plant the petitioner put together a graphic. To develop this graphic they looked at 5-10 years of actual daily water use. They projected this use pattern onto the expected future water demand through 2030. So this figure shows what happens when you cumulatively add each of the demands for and each of the systems. What you can see is that most of the time the plant’s excess capacity is

sufficient to meet all the demands. What happens around 2018 is that you have peaks where the plant is not able to meet max day capacity. The petitions expect to rely upon banked groundwater during this time. Water banking is a concept that is used by water systems in the capacity use area and one that's supported by the Division. What it means is essentially that systems pump less than they are required to during the early stages so that they build up a bank of allowable groundwater. Then later when the restrictions increase, they have a cushion. It is literally like a savings account where you may put away more resources for times when you have them. Then you have those resources to fall back on when needed

Based on the purchase agreements between GUC and the Petitioners, curtailment of purchased surface water would happen no more than ten percent of the time.

As a result of the management that will be required to maintain compliance with the Central Coastal Plain Capacity Use Area rules and the conditions of the certificate, the hearing officers have determined that the certificate must include compliance and monitoring plan.

Lastly, the final finding pertaining to the necessity and reasonableness has to do with the emergency condition. As I mentioned, the petitioners have requested the ability to transfer an additional 1 MGD into the Contentnea Creek Basin and 200,000 gallons into the Neuse Basin during an emergency. However the IBT statutes contain a provision for how a water system should go about requesting an emergency transfer. What the hearing officers have determined is that if the petitioners do need an emergency transfer of water that they need to follow the procedure that's presented in the statute.

Next with respect to the findings on the detrimental impacts to the source basin, the hearing officers have made the following findings. 1) No significant impacts of the Tar River are expected, 2) the EMC may open the certificate if the studies reveal additional impacts, and 3) a drought management plan is required to protect the source basin during drought.

With respect to the first finding on the detrimental impacts to the Tar River, in support of the petition the petitioners performed a hydrological analysis to evaluate the impacts of the interbasin transfer on the Tar River. The analysis included the development of a long term flow record at Greenville, the generation of flow statistics on the Tar River. and a spreadsheet based hydrologic accounting model. The model basically simulates the water going into the system minus the water coming out. Any discharge or withdrawal over 100,000 gpd was factored into the analysis.

We have a chart that shows the current scenario, meaning existing withdrawals and discharges from the Tar River that are going on right now. We have information here for the "no IBT" and "max day" IBT scenarios. We also have future 2030 scenarios which represent withdrawals and discharges to the Tar River in 2030 with "no IBT" and "max IBT". One thing significant about the interbasin transfer program is that it regulates transfers on a max day basis rather than the average day basis that you may have with other programs.

You can see with the "no IBT" current scenario the Tar River would be expected to drop below 7Q10 1.3% of the time without the IBT and that changes to 1.8% of the time with the max day sustained IBT. In the future this analysis predicts that it will be 1.4% of the time with no IBT and you would get below 7Q10 at 1.8% of the time with the max IBT. That translates in days per year to 4.7 days per year without the IBT to 6.4 days per year with the max IBT. In 2030 we have 5 days per year without the IBT to 6.5 days per year with the IBT.

One comment that the hearing officers received during the comment period is that the analysis as described does not take into account the timing of low flow events. What that means is basically that analysis just looks at average data and estimates what would happen on average.

The question is what would happen during the year where you're seeing a number of low flow events, more so than usual. To address that issue Greenville put together another analysis that tries to predict what would happen during typical low flow events. What they did is gather together data on twenty five actual historic low flow events occurring between 1932 and 2007. They chose events where the flow in the Tar River dropped below 300 cfs (the 7Q10 is 109 cfs) for at least forty days within a 60 day period. They took the data from those events and then factored in a max day IBT to look at what would have happened if there had been a max day IBT during these events. Here, the results describe the average change in duration and the maximum change in duration. For example if you had a historic event where the stream flow dropped below 300 CFS for sixty days, within that period you also might have had flows of less than 109 CFS for maybe twenty days and then maybe flows less than 27 CFS for ten days that is what the diagram is attempting to show. In summary, the average change in duration for these events was less than five days.

Although each of the analyses done to predict the impacts on the Tar River Basin showed that there were some difference between the IBT and non IBT scenarios, the hearing officers determined that it is reasonable to categorize these as insignificant for the following reasons. One was that the modeling analysis was very conservative. DWR asked the petitioner to develop a worst case scenario that used a number of very conservative assumptions. One of those is using a sustained max day IBT that's consistent and doesn't fluctuate. Another assumption was to remove the contribution of GUC's existing wastewater plant which is located on the Tar River downstream of the water plant intake. These analyses removed the total volume of that wastewater plant contribution. The second factor that speaks to the fact that these differences are insignificant is that IBT and state regulations require a drought management plan. The drought management plans have specific triggers and specific responses that are required in various stages of drought to ensure that these source waters are protected as much as possible. When water systems are facing drought conditions the hearing officers have recommended again that the certificate included drought management plan that has these identifiable triggers and specific responses. Thirdly, the model did not take into account tidal effects. This location on the Tar River is tidally influenced. The salt water intrusion actually creates a dam like effect and backs the fresh water up over the WTP intake. The model did not take this factor into account. The damming effect also mitigates impacts to aquatic life and ensures that GUC's intake continues to have access to freshwater even during low flows. And lastly- The IBT request will be met with existing infrastructure. Again this is an existing water plant that's permitted for 22.5 MGD.

However due to the hearing officer's concerns that future studies may reveal additional impacts to the Tar River Basin, they've recommended that a reopener be added to the certificate. The reopener states that if the Commission determines that the record is in error or if new information becomes available then they can reopen the certificate.

With respect to the finding on detrimental effects to the receiving basin the hearing officers made the following four findings. One was that no wastewater plants will be expanded as a result of the interbasin transfer. Second, the IBT would not spur growth. These are rural communities requesting a replacement water supply to support historical growth patterns. Thirdly, all recipients of IBT water already fall under requirements of the Neuse and Tar-Pamlico nutrient management strategies and any local government that's currently exempt from the stormwater management program requirements the hearing officers recommended that they be required to implement Phase II post construction controls. With respect to the nutrient and Tar-Pam nutrient management strategies again all the communities in these basins are already

subject to nutrient management strategies that have requirements for wastewater discharges, agriculture, buffers and stormwater and all those with the exception of stormwater are applicable in the basinwide basis. The stormwater program requirements do apply to Greenville and Winterville. They do not apply to Farmville and Green County because of their size and rural nature.

The hearing officers have determined that it is reasonable that some portion of the IBT request is used to sustain growth therefore the impacts due to that growth need to be mitigated. Therefore they have determined that implementing post construction stormwater controls would put the most impactful control measures in place while not being overly burdensome.

With respect to the finding on alternatives to the proposed transfer the petitioners have evaluated the following alternatives. The option of returning wastewaters to the source basin was evaluated in the environmental assessment and petition and was determined to be technically infeasible due to the fact that Green County does not have a centralized wastewater collection system. The reservoir alternatives were determined to have the greatest environmental and economic impact and it was also determined that it would be unlikely to be able to permit a reservoir in Green County. The groundwater alternatives were identified as potentially not being sustainable due to the possibility that the EMC could designate additional capacity use areas in the future. Therefore the three remaining alternatives were purchase options from the Neuse Regional Water and Sewer Authority, the City of Wilson and the Greenville Utilities Commission. All of these options would have used existing plant capacity, they would all have comparable environmental impacts, and all of them would have required at least one petitioner receive an interbasin transfer certificate. Of these options, purchase from Greenville Utilities Commission was identified as being the most economically practicable.

As I mentioned before there is one last finding of fact that allows the hearing officers and the EMC to consider any other information that they deem necessary. In this case the hearing officers felt that since the requirements of the capacity use area program were such a significant factor in the request, that particularly the conservation requirements required by that rule must be met by any person wishing to get water under this IBT. The capacity use area rules list six different specific conservation measures that range from the adoption of a conservation based to rate structure to the implementation of water loss reduction programs to retrofit programs that make fixtures available to users. The hearing officers have asked that each of the petitioners be required to implement all those requirements before they may receive IBT water.

Based on these findings the hearing officers and the Water Allocation Committee recommend that the certificate be granted in part (being the 8.3 MGD from the Tar River Basin to the Contentnea River Basin and 4 MGD from the Tar River Basin to the Neuse River Basin) and denied in part (meaning the emergency condition that they do not recommend be granted) with the conditions that we discussed.

**Kevin Martin:** I have just got one comment to make. I appreciate you appointing me as a hearing officer. I remember you telling me that this was a non controversial IBT and I didn't believe there was such a thing. Stan and I wanted to make sure that was clear. The only thing in our mind that was left a little unclear and we discussed this in the Water Allocation Committee meeting on yesterday was the reopener clause. That clause is consistent with what the Commission has used in other situations but we just wanted to make the comment for the record to make it clear that it is our intent as hearing officers that the reopener condition in the certificate would allow any significant water user in the source or receiving river basin to submit

relevant new information to the Commission and request the certificate be reopened and modified if data supported that modification. By saying this I'm not limiting to just users. I'm just saying that we definitely wanted to make it clear that there wouldn't have to be some long expensive, protracted legal battle just to even make the request to the EMC. That's all I have to say.

**Stan Crowe:** Can we make that a part of the motion, Mayor Moss?

**Mayor Moss:** I move that we grant the IBT request with conditions in the hearing officer's report and the final details that Mr. Martin just laid out for us. Mr. Crowe seconded.

**Chairman Smith:** Questions or discussion?

**Dr. Peterson:** I'd like to commend the hearing officers for a terrifically thoughtful and probing analysis of the issues including examining the EA for what it did and did not include, and to move thoughtfully to address issues that they thought were important. This is a really fine document and an exhaustive and thoughtful record. I have one question. Why not include the flow of treated wastewater that goes into the river? That surely return of water that we have borrowed. That seems like an odd decision and I just wondered the logics.

**Tom Reeder:** The reason we do that is we make an analysis ultra conservative and the idea is because we don't know what's going to happen with nutrients in the future. Remember in a lot of places we are limiting dischargers like in the Neuse and Tar-Pam because we're trying to get a better control of nutrient over-enrichment in the water basins. Theoretically there could be some point and time where Greenville finds it more economically feasible or something like that to switch to land application. Going over to compensate for that possible decision in the future and make our analysis as conservative as possible we take back the wastewater discharge.

**Dr. Moreau:** By doing that though you actually show a reversal of flow in the analysis that probably could have been otherwise avoided.

**Kevin Martin:** If we would have added it in we would have been at the question of what happens if you take it out. So I agree with Tom. I'm not much of an expert at surface water modeling but I know a little bit about groundwater, and it's not an exact science. The way we usually do it is we start out with the absolutely most conservative approach and then start backing in if we feel like we need too and if the findings are significant to start with. But there's also a kind of reversal of flow naturally due to the tidal effect as Toya pointed out. That wasn't considered either so there's already naturally a reversal of flow to some degree. It wasn't our decision to do it. It was the petitioners but I understood and didn't disagree with their approach. Probably if they had done the other I would have asked what happens if you take it out.

**Chairman Smith:** Any more comments or discussion? The vote was unanimous and the motion passed. I want to also commend **Mr. Crowe** and **Mr. Martin** for an excellent job. Thank you very much.

**Kevin Martin:** I think you're giving us too much credit. Tom and everybody over in their staff really carried the load on this more than us.

**Chairman Smith:** Then I echo that as well. Thank you very much.

#### **10-43 Hearing Officer's Report on Hospital, Medical, Infectious Waste Incinerator Rule Amendments**

**Summary (John Curry):** I want to express appreciation to the staff that has been as they always are very instrumental in educating the hearing officers. That would be Joelle Burlison, Patrick Knowlson and Gary Saunders. First of all I am going to make the motion to adopt these rules when I finish my presentation. Let me tell you briefly about the nature of the medical waste collection and disposal business. There are two facilities in North Carolina, two incinerators. One is in Haw River between Burlington and Mebane which is two large incinerator units owned by Stericycle. The other is a unit in Matthews, in Mecklenburg County, which is owned by BMWMC. Waste is delivered to both of those facilities from points as far north as Massachusetts. The waste comes in by the tractor trailer load. The purpose of course of waste incineration is to kill infectious agents and pathological disease, possible disease forming organisms, from organic material body parts all items that are used in hospitals and medical facilities that might contain infectious materials or pathological waste. I thought to myself as I was going through this that if we just separate the bugs from all of the other materials we could probably get all the bugs in one tractor trailer and deliver and incinerate them once a year. But unfortunately, you can imagine all of the materials that contain these dangerous organisms that include plastics, metal, paper, any organic material and everything from hospitals and medical facilities that need to have the dangerous infectious organisms destroyed. This has really been the movement in the management of these infectious items in the market. It has been from many, many thousands, in fact of medical facilities having their own incinerator in the last 25 years. Most of those have been closed and there are 57 or so larger incinerators commercially operated in the country and most of the waste is being taken to either those incinerators or auto claves, which operate at much lower temperatures of 300°, roughly 290. They effectively destroy the organisms. There are other materials and organisms which, for various reasons that I won't go into, need to be incinerated. So the waste comes to the waste management company marked incinerate only. Most of the waste goes to auto claves but a significant portion, 15 or 20% of the regulated waste is incinerated. The implication from North Carolina is that as there are fewer and fewer incinerators more and more of the waste is going to come to the units in North Carolina. So it is a significant issue for us. Of course, these rules have to do with air emissions from the incineration units. On the inside of the Stericycle facility you can see the cardboard boxes which contain the medical waste being fed into incinerator units. The units are roughly the size of small locomotives if you include the air pollution equipment that is on the other end from the input end. They operate 24 hours per day and down roughly a month per year for maintenance. These are large facilities that have significant amounts of air emissions in terms of volume and they have significant air pollution control equipment on a much smaller scale equivalent to a coal fired power plant in some ways. That's the set up. When you go down I-85 and look over on the south side of Haw River you can see this facility. The other facility in Matthews is in a little bit more isolated setting but nonetheless both of them are in populated areas.

This is really the heart of the matter. This is where the rules are going on the various control pollutants. You've got particulate matter, carbon dioxide, dioxin/furan which is a significant one, hydrogen chloride, sulfur dioxide, nitrogen or NOX, lead, cadmium and mercury, and all of those are being substantially reduced in these rules. The percentages from five years or earlier these new rules reduce the emission levels. So it's a substantial reduction. None of the public commenters and the operators have objected to these levels. That being the heart of the matter seems to me we're making substantial progress here.

A public hearing was held in Greensboro and the issues that were mentioned by the commenters who were primarily members of the public included the compliance date, which is really the biggest issue that we're arguing about here or is somewhat contested. The earlier date that would have been allowed by the EPA rules was October. To finish the improvements that will be necessary for the operators to meet these new rules, they will have to spend several million dollars and install new air pollution equipment. So the effective date of the rules has been a big question. The earliest date would have been October of 2012 and the latest date would have been 2014. The date that I am recommending is July 1, 2013 which gives the operators approximately 2-1/2 years to do all the work that's necessary. I am going to ask Gary to come up real quickly and justify the timeline that he came up with because that was the basis on which I am making my recommendation as to the effective date.

**Gary Saunders:** What we did was during a public hearing we were provided with a timeline from one of the facilities in terms of what they believe it would take. We've looked at those numbers and a period of time. This is a sequential series of events that we believe are required to go through this process. We inquired within our permitting group on how long they thought it would take to go through the entire permitting process to construct and get the permit through public comment and hearing. We're looking at on the front end here approximately another 11 months from the effective date or what we anticipate as the effective date of this rule to go through and make final selection of the control equipment options. Both facilities discussed this at some length with us. The rest of it is fairly sequential in terms of contracting and running through the permit process, then actually installing the control equipment, shaking it down and making sure that it works correctly ending up with a compliance test at the end. One thing that we noted was left out of the timeline that was provided to us is it takes about a month or so to get the test results back to us for them to report those. So we included that. At the end in terms of demonstrating compliance all that's really required is that once they've provided the test it demonstrates compliance with us by the deadline date, we'll review it but they will have met the requirement of the rule. So they have to submit that to us but this is the basic timeline that we put forward and it comes out to be approximately 30 months.

**John Curry:** That's the basis for my recommendation on that. I will tell you that at the public hearing there were other issues raised having to do with greater segregation of waste which would drive more of it to the autoclave and away from the incinerator. The possibility of more continuous emission monitors, reviewing the ambient air levels, increased number of inspections and bypass events. The bypass has been a contested matter in this entire area of operating this type of incinerator. Basically what the new rules do is make any bypass event where they have to open a bypass which circumvents all the air pollution equipment which means that the emissions are going directly away uncontrolled from the facility. That will be considered a violation of the permit which has not necessarily been the case in the past. Those are some of the

issues that were raised in the public hearings. Following my motion I do have a couple of other requests that will deal with some of those issues that the public has raised. So with that I'm making my motion to adopt the version of the rules that is contained in the package, the Hospital Medical Infectious Incinerator rules. **Ms. Deerhake** seconded.

**Chairman Smith:** Before we go into any further discussion let me say this. This is the first rule package that has come to us for consideration since the Governor issued Executive Order 70. As you all know partly from what I said yesterday and partly from emails that went out to you earlier, the attorney general's office and counsel for the DENR have concurred that in the wording of Executive Order 70 when there are references to the agency head for purposes of the Environmental Management Commission and the Coastal Resources Commission at least the agency heads for those two Commissions are their chairs, since those two Commission don't fall in the DENR chain of command that are created by independent statutory authority. There are a number of things that agency head must certify before a new rule package advances. So a collective effort has resulted in a certification template for the agency heads of the EMC, that being me presently, and the agency head of the Coastal Resources Commission which is its' chair, Bob Emory. I sent you that template and you all have had an opportunity to look at that. For this rule package if we approve it, I'm prepared to sign it and send forward the certification. These are the things that have to be complied with to comply with Executive Order 70. First the attached rules are necessary because the rules are required by federal law, required by state law or deemed necessary by the agency to serve the public interest. This rule package is required by federal law and we sight that particular federal division in the code of federal regulations. Secondly, the rules are based on sound reasonably available scientific, technical, economic and other relevant information that can be found in the rulemaking record, and we sight where those materials are available. Third the fiscal impacts of the rule have been analyzed and appropriate action taken as follows. The two alternatives there are that determination that no fiscal note was required under 150B-21.4. That's not the case in this rule. In this one fiscal note has been prepared and approved by the Office of State Budget Management and according to 150B-21.4. A copy of the fiscal note can be found in the site place. Fourth the rule meets all other requirements of Executive Order 70. Based on that I am prepared to certify that this rule package is in compliance with Executive Order 70. With that we have a motion and a second.

**John Curry:** If I might just add to my motion that this is 15A NCAC 02D .1206 that we're amending in this vote. **Ms. Deerhake** accepted the amendment and stated that it was Chapter 2 of the hearing record.

**Chairman Smith:** asked for further discussion. There being no further discussion the motion passed.

**John Curry:** I'd like to make one more quick motion with two parts relating to what we just voted on. That is as the hearing officer in this matter I developed at least two concerns. Both really based on the fact that a substantial amount of the medical waste from the middle Atlantic area on the east coast and possibly even larger in the future is going to be coming to these facilities that we just discussed. So it seems to me that North Carolina has a special interest in determining that the health and safety of the general public is protected and the environment is protected. Toward that end I would suggest that the EMC request that the Division of Waste

Management prepare a report, deliver it to us that reports on the overlapping jurisdiction in the collection of medical waste and the regulation thereof. Also that in general they give us a report on the effectiveness of the collection of medical waste to an extent to which “incinerator only” waste is actually that. Because it is in North Carolina’s interest to have the amount of incinerator only waste reduced and have the waste go to auto clave destruction instead of incineration because the less incineration there is the fewer air emissions there are from these facilities. Secondly I did receive an email on Tuesday that included a study that was done by a Blue Ridge Environment which reports or at least suggests that there may be either ongoing or future violation of the AALs at the Matthews Facility in Mecklenburg County. I have not read the report but I do think that we ought to react to it even though it came in well past the deadline for comments on this matter. I think we should ask the Division of Air Quality staff to give us a report on that study and also explain to us the method of operation of what is called parametric monitoring. That is the means of monitoring this facility and I think it would be helpful to us and the public to have a better understanding of the reliability of this kind of monitoring as opposed to continuous emissions monitoring which was requested in the public comments. I move that the EMC request of the Division of Air Quality and the Division of Waste Management that those two reports be delivered to us at our next meeting or at a future date as soon as possible. **Ms. Deerhake** seconded.

**Chairman Smith:** asked for discussion.

**Dr. Peterson:** I was somewhat surprised not to see workers in the plants with masks, gloves and protective clothing. If I were working there and handling medical waste, although packaged that issue would arise. I wonder if your motion contemplates at all issues of public health including the workers or whether that’s handled adequately.

**John Curry:** There are many overlapping jurisdictions of regulatory agencies in this area and OSHA has rules for which I presume are adequate to protect the workers. Those rules so we were told are followed. One of the outcomes of that is the containers of waste which may be plastic bags or may be solid plastic containers or any number of things are themselves placed in a cardboard box, which the inner box is sealed and the outer box is sealed at the generating point and they are never opened until they are put into the incinerator. So in fact they are never open which is an issue about knowing the contents of those containers but that’s something we can address later. My understanding is that your concern is addressed by the OSHA regulations.

**Chairman Smith:** There was no other discussion and the motion passed. I want to commend **Mr. Curry** as well. He visited both of these facilities which I think was an important part of understanding these issues but certainly was not required as far as his hearing officer duties. Commendable work. Thank you sir.

**Dr. Larkin:** I thought the summary in the hearing officer’s report was a very helpful background to really understand what was going on. Thank you.

**Chairman Smith:** I agree with that. I thought it was a well written hearing officer’s report.

#### **10-45 Hearing Officer's Report on Amendments to Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NA NSR) Rules to Include PM2.5.**

**Summary (Les Hall):** I am going to go through some of the comments we received in my presentation and the response to those comments. We've seen this several times and we are prepared to make a presentation in powerpoint if we need to. I think we can cover this without that. Basically EPA has a set of rules that has determined that for PM2.5, sulfur dioxide is a precursor. The rules also allow states to determine whether they say that oxide and nitrogen are presumed to be precursors to formation of PM2.5. In their rules they allow the states to determine if it's not a precursor, oxide and nitrogen, they cannot regulate those. If they are presumed to be precursor EPA suggests they be regulated as threshold above 40 tons per year.

**Chairman Smith:** Let me interrupt you. Do you want to do both of these rule packages together?

**Les Hall:** Just in sequence. Could I do the PM2.5 first then?

**Chairman Smith:** We will switch the order. We will put aside 10-44 and we will do the 10-45 first.

**Les Hall:** As I was saying what is unclear in the federal regulations is whether it is a yes or no situation. You either don't consider the outside natural precursor or you do. It's not clear in their regulations that we can change the threshold. That is currently being evaluated by EPA. That was one of their comments. Their threshold for oxide and nitrogen is 40 tpy. Our data shows that we think it should be, in North Carolina, 140 tpy, a factor of 3.5 times the threshold for sulfur dioxide. In discussions with them that issue has not totally been cleared but we feel that it will be by the time EPA gets around to approving our rules. At this point we have suggested that no change in what we are proposing. We are still proposing a threshold for oxide and nitrogen to be regulated above a threshold of 140 tpy. That was one of the issues that was raised by EPA in their comments. Another issue in all our rules we say that volatile organic compounds and ammonia are not precursors. In EPA rules they use a little bit less definitive comments and they say that these compounds are presumed to not be precursors. The data we have shows that in North Carolina we don't say they are so we plan to stick by our comments and by our regulations that say that they are not precursors. A question raised by a couple of fellow agencies, and EPA about whether regulations regarding notification and communication with the Federal Land Management Agencies complied with their rules and regulations. We did tweak the comments our regulations seek to clarify. We felt that it was appropriate before but now it's much clearer and more definitive so that poses a small change made. All that is in regard to Class I visibility area. With those things and questions, which I think, have been clarified very well by the staff in the regulations, we think they are ready to be submitted and processed.

**Motion:** My motion is to approve the amendments as presented for new source review program rules 15A NCAC 02D .0530 prevention of significant deterioration and .0531 of sources in nonattainment areas. **Donnie Brewer** seconded.

**Ms. Deerhake:** I appreciate Mr. Hall and the staff's efforts to examine this and go through the extensive analysis to arrive at the value of 240 tpy. I will say that there was a great deal of discussion in the Air Quality Committee as this was getting ready to go to public comment and then yesterday too. The staff and Mr. Hall had strong rationales for the various responses that they made to EPA and to the Department of Interior on the substantive comments that both agencies made. I did have one question yesterday that the division was going to look into. Mr. Hall determined administratively complete and I was just curious if they looked at the schedule that I believe the Department of Interior wanted to clarify the definition of that. This was in regard to when an application comes in the language says that the application is administratively complete, and then the notice will be sent out to the Federal Land Managers.

**Joelle Burleson:** That's correct. You may recall that before we proceeded to public hearing and notice that there was language added regarding the notification procedures. We already have in the rule in the second paragraph. I think it is 530(t), for instance the requirement that meets the federal requirement for notification for applications that may affect visibility in a Class I area. In addition at the request of the Commission we added an additional paragraph that says we would notice the FLM for any applications we received under this rule. It's in that paragraph where the administratively complete language is 530(t)(1) and a similar paragraph in 531. Typically that language that we have received includes all the pertinent pieces of the application. We've received the fees and that sort of thing so that we have all the components an application needed.

**Marion Deerhake:** I believe the Federal Land Manager and the Department of Interior, in this case was wanting to note when the application was received and at that point, not after any additional evaluation.

**Joelle Burleson:** I believe the timing that we specified in our rules within 60 days of receipt of an administratively complete application.

**Marion Deerhake:** Do you feel strongly that the term administratively complete is the definition of that application being administratively complete as necessary as opposed to just saying an application?

**Joelle Burleson:** I don't know that it is absolutely necessary but I will defer to my director on that.

**Sheila Holman:** I think I would point out first that paragraph 2 in the rule talks about when we do believe there's going to be a possibility of an impact. The language there is within 30 days of receiving the permit application or within 30 days of receiving advance notification of an application. So when we believe there's going to be a visibility issue the notification happens much more quickly. I think we could live with just receipt of an application and striking administratively complete.

**Marion Deerhake:** Will the hearing officers be willing to amend that statement to remove administratively complete and just say an application?

**Les Hall:** Yes. Ms. **Deerhake** thanked him.

**Chairman Smith:** And **Mr. Brewer** do you agree as a second to that motion? **Mr. Brewer** agreed. Thank you **Ms. Deerhake**. Then with those modifications, is there other discussion? The vote was unanimous and the motion passed. I neglected to tell you that as far as the Executive Order 70 certification all of the various other provisions that I spoke to earlier apply here. I won't go through those each time but these rules are necessary because the rules are required by federal law and recite the federal statute.

#### **10-44 Hearing Officer's Report on Adoption of Prevention of Significant Deterioration (PSD) Requirements to Incorporate Greenhouse Gas (GHG) Tailoring Provisions**

**Summary (Les Hall):** In this particular set of rules we had a public hearing on August 31, 2010 and one person in attendance. That person spoke and also submitted written comments primarily in favor of the rules as presented. I just wanted to make sure that the biomass fuels were not exempt and it is clear that they are not exempt if they exceed a threshold that was in the rule. That has been cleared up. There were a few editorial changes dealing with dates that had been established by EPA. Those dates have been put into the rules. There was comment about whether or not that we should proceed with these rules in the light of some national concerns about regulation of greenhouse gases. Keep in mind that this is a tailoring rule with primary purpose to make sure the major sources are regulated but not to have the thousands and thousands of sources to come in the rules of regulations if it was not passed. EPA has been determined to have the right to regulate greenhouse gases from a health standpoint. So that's the change that should not be a problem. If it should change and on a national level then we still have our rules in place and we would have to decide at that time what to do with them. That is a potential issue but not one that I think would prevent us from proceeding with the current rules as proposed. The other comments are pretty much in favor of what we have proposed. There were minor comments in my opinion of what we had and with that I would propose that we move ahead and adopt the rules for the greenhouse gas regulations. **Ms. Deerhake** seconded.

**Chairman Smith:** Before I ask for any discussion, on the Executive Order 70 certification the necessary provision of that deals with these rules are deemed necessary by the agency to serve the public interest. Let me read to you the paragraph that I propose as a statement of these rules being necessary to serve the public interest.

“The purpose of this rule is to avoid unnecessary burden on the regulated community and the permitting agency which otherwise would stem from the interplay of recently amended federal regulations with existing state regulations. Recent changes in federal regulations bring greenhouse gases under the existing prevention of significant deterioration permitting program. At present emitting sources are required to undergo PSD review on reaching emission thresholds of 100 or 200 tpy. These permitting thresholds are unworkable for greenhouse gases which are permitted in far greater mass than pollutants traditionally regulated by the PSD program at the 100 and 250 tpy levels. This rule will adjust upwards significantly the PSD permitting threshold for greenhouse gases to incorporate federal greenhouse gas tailoring provisions into the state program, to allow for proficient and effective implementation of the PSD permitting program. Absent this state rule change numerous additional emitting sources would be required to seek

permits under the PSD program creating an unnecessary burden on the regulated community and the overwhelming the permitting agencies.”

So with that we have a motion and a second and is there discussion. There was no discussion and the motion passed. Thank you Mr. Hall for your good service on these two very technical but important rule changes.

The next two items on our originally published agenda which are **10-46 and 10-47 Request to Proceed to Hearing on Amendments to Ambient Standards for Nitrogen Dioxide (NO<sub>2</sub>) and Sulfur Dioxide (SO<sub>2</sub>)** have been removed from our agenda. They will probably come back in January. They were not ready for Executive Order 70 certification on those two items.

#### **10-48 Request to Proceed to Public Hearing on Proposed Revision of Injection Well Rules (15A NCAC 02C .0200)**

**Chairman Smith:** We’re going to have a presentation on this but we are not going to vote on sending this out to public hearing. It is not fully ready for Executive Order 70 certification but I thought it was important for us to get a review of what this presently proposed rule package looks like so that you all would be better prepared in January when this comes back before us. Now the hearing officers on this have not been appointed yet.

**Summary (Thomas Slusser):** I am pleased to present to you all today recommended revisions to the state’s injection well rules, which were last amended in 1997. Our rulemaking activities have been going on for about a year and well before Executive Order 70 was signed, we’ve had a rulemaking process that already incorporated the regulatory principles outlined in the executive order.

What I will go over today will just be a very brief description of the Injection Well Program and some of the reasons why we took the initiative to go ahead and revise these rules. I will go over some of the conditions that the Groundwater Committee included in their motion for us to proceed to this meeting today as well as what our future rulemaking plans are. Basically an injection well is any excavation that is deeper than it is wide and is used to emplace fluids or solids into the subsurface. That contrasts to a water supply well or a monitoring well where you are withdrawing water out of the subsurface. These injection wells are used to put fluids and other things into the subsurface such as to clean up contaminated groundwater. The Injection Well Program has its context in the Federal Safe Drinking Water Act and in the North Carolina Well Construction Act. In the state’s administrative code the well construction standards are in Title 15A, Subchapter 2C Section 0200 and those in turn are related to the groundwater standards, also in Title 15A, Subchapter 2L. The basic fundamental concept of the Injection Well Program is the protection of the groundwater resources so that wells cannot be constructed or used in such a way that they would contribute to the migration of contamination such as might occur by a well connecting a pristine and a contaminated aquifer, or if injection activities caused contamination to move into some previously uncontaminated portion of the aquifer.

We have taken initiative to revise these rules for various reasons and reorganized the existing rule content by combining similar types of information. We are proposing to have specific rule sections for each allowable well type, incorporating some technological changes that have occurred in the various injection well industries since the rules were previously adopted

in 1997, incorporating some EPA comments and some of their rule changes, and also to expand the use of permitting by rule for specific types of injection activities that pose little to no environmental risk. Even if we had not taken the initiative to do this on our own the recently passed Executive Order 70 requires agencies to review and revise rules as needed. So we are well ahead of the game in that regard. The only thing we had not done to date with regards to Executive Order 70 was incorporate some of the fiscal analysis into the rulemaking process and fully flush that out. We are kind of caught in between the old and new process but once the Executive Order 70 went out we prepared a very preliminary assessment of fiscal impacts here. Lois Thomas is now passing out a correction to this slide and specifically the correction is regarding the expenses column for the groundwater remediation row. The first number of the range should be \$0 - \$5,100. These numbers on the screen have some nuances and caveats to them. It's a preliminary assessment based on a range of values that we obtained from various sources and they are kind of normalized per application. The savings are primarily savings in staff time to review applications for injection activities that we are proposing to be permitted by rule, as well as savings to the regulated community in preparing permit applications and not having a permit before they can start constructing wells and making progress on the project. In the expense column beginning with the geothermal well type, that number reflects a variety of common practices that are not in the current rule. So we would expect that the real cost to the industry people on the ground would be much closer to zero than that estimated number there because a lot of practices that we are proposing to put into the rule are common practices such as grouting the entire well length, recording as-built locations of wells and any underground associated piping, things like that. The expense for ground remediation has a range of \$0-\$5,100 simply because it includes an option as a remedial strategy that permit applicants can choose. Obviously if they choose not to use that option there will be no expense. If they choose that option then there are certain regulatory requirements that would accompany that. For aquifer storage and recovery well type that number definitely needs some refinement. It's a combination of some current practices in the industry nationwide as well as some of our current rule requirements. The information that we got for that section we weren't able to separate out some of that information, so that will need some refinement as well.

In their September meeting the Groundwater Committee had some comments, also in the spirit of the Executive Order 70 before that was even signed; they had some recommended changes to the proposed rules to further clarify the proposed rule language. These are all explained in more detail and how we address them in the summary document that you had received along with a copy of the proposed rules. One of those was to make it explicitly clear which types of stormwater injection wells we're proposing to be allowed. Currently there is a bit of a potential discrepancy between what was the injection well type as described versus the specific rule details. We took initiative to apply that to all of the well types by moving the well description to the beginning of the proposed rule section for that specific well. In other words, the rules that are unique to each injection well type begin with a description of what that well type is and what it is used for. A second condition was to make sure that injection wells are protected from flooding. The original language was changed to mimic the flooding protection language in the well construction standards for water supply wells and other wells. That's one of several changes that we did to refer to the 2C 100 rules such as grouting and other types of activities. A third change or clarification was to make it clear that aquifer storage and recovery injection wells require a permit. We took initiative to apply that change to all injection well types that require a permit to each of the unique rule sections for each well type to begin with a

statement that says, “These types of injection wells require a permit.” The last clarification was to get some more input about when a variance was desirable rather than not just technically feasible. In the public hearing process we can get some more information on that but, in the meantime, we just decided to go ahead and change the specific language to eliminate that “desirable” word and replace it with phrasing that would require any well construction variance to be equal or more protective than the rules as they are written. If a well construction requirement is not technically feasible they can propose something that, even though it might be technically feasible, that is different but more protective, or just as protective as the rule. We think that captures the real intent of the “desirable” factor and does not have some of the problems that the Groundwater Committee had expressed with that language. Looking forward, we are beginning a more robust fiscal analysis of the proposed rules that we are recommending. We are working on that through the winter and, later into 2011, have a public comment period and report back to the EMC by the fall of 2011, and would possibly have the rules being effective in the winter of 2011. This is a summary of what we have been up to with revising the injection well rules, and if you have any questions we can take those at this time.

**Chairman Smith:** I appreciate you and staff tending to the matters that we raised back in September.

**Dr. Peterson:** I’ve got one question which is a traditional one that I’ve been asking recently. You’ve got a provision where you want to ensure that some sorts of wells are not in areas subject to flooding. Making that principle operational do you account for changes that are climatic as a consequence of global warming in the sense of having flooding be perhaps more frequent now and perhaps covering broader areas than traditionally would be contemplated by the one in a hundred year lines that we’ve operated on in the past?

**Thomas Slusser:** The current rules buffer the injection well rules and the existing water supply well rules as well as the rules that we’re proposing don’t really have any language that would tie that requirement to any sort of climate changes.

**Dr. Peterson:** Upon just getting at how you operationalize that. It’s nice to have principle but what do you do to put it into affect?

**Thomas Slusser:** The language that’s in the current 2C 100 rules that we are referring over to describe types of landscapes that would be subject to flooding and so if you meet those conditions then a well cannot be located in those types of areas.

**Dr. Peterson:** So it’s not something based upon elevation necessarily or flood maps necessarily?

**Thomas Slusser:** Right. Like a ditch would be a good example or a low-lying area next to the river or something. Yes, it’s not tied to flood maps or elevations or anything like that. The criteria are pretty well spelled out in the rule.

## **10-49 Request for Adoption of Hearing Officers' Recommendations on Reclaimed Water Rule Revisions**

**Jon Risgaard:** I will be giving the first part an overview of the efforts that have gone into the reclaimed water rulemaking effort to date, go over some of the goals of this effort and talk about some of the changes that have been made or proposed to be made as a result of the public process.

The goals of this effort were threefold. First, was to satisfy the requirements of General Statute 143-355.5 which is part of the 2008 session law. This statute directs the Commission to encourage and promote safe and beneficial reuse of treated wastewater as an alternative to surface water dischargers and specifically directs the Commission to adopt the rules that identify acceptable uses of reclaimed water, facilitate permitting and establish standards that are specific to the intended uses of the reclaimed water. In addition to satisfying the General Statute it was the goal of this rulemaking effort to provide appropriate protection of public health and the environment and to maintain a balance between the increased flexibility in the rules in order to facilitate its use and the appropriate regulatory requirements for its safe use. As part of this effort significant effort has been put in by staff and multiple people in evaluating the existing rules and any potential rules that we would bring forward to the Commission to ensure that the proposed rules are relevant and up-to-date. Specifically the rulemaking process started around 2007 when the DWQ sponsored a workgroup. This was a stakeholder effort which included members from the division, the Division of Environmental Health, the Division of Water Resources as well as people from professional organizations like North Carolina's Special Engineer Board, League of Municipalities, potential permittees, and representatives of Academia and at the time one EMC member. There was also this workgroup where proposed rules were brought before the Commission in September 2008 and approved for public hearing. Upon approval of the fiscal note that was approved by the Office of State Budget Management in November 2008 that showed approximately ten million dollars in savings over the first five years or potential for ten million dollars in savings over the first five years, the life of these rules. These rules were published in the North Carolina Register in February 2010 and the public hearing process began. March of this year three separate hearings were held across the state. One was in Greenville, Raleigh and Asheville and numerous comments were received as part of that process. The division staff along with two hearing officers reviewed each and every one of those comments and additional recommended changes were incorporated in the rules that we have before you today. The division feels that the steps taken in preparing these rule revisions meet the recent rule requirements established in Executive Order 70 and resulted in rules that serve the interest of the citizens of North Carolina.

This rule change was intended to better identify reclaimed waters as a resource, expand the use of reclaimed water and remove unintended restrictions while providing the necessary regulatory requirements to protect the environment. In order to facilitate or to better identify reclaimed water as a resource these proposed rules seek to remove the existing reclaimed water rules in subchapter 2T of which addresses waste not discharged to surface waters and move this rule section to a new rule subchapter 02U. In addition to moving the rules there's also proposed modifications to these rules which include clarification of the existing rules, additional definitions, grammatical changes and other fairly insignificant changes just to add clarity and to

make the rule easier to understand. In addition they facilitated permitting by expanding the permitting by regulation rules, again to reduce the permitting requirements for users of reclaimed water and move their responsibility more to the generator of the reclaimed water. These rules revisions included established standards, a Type I and Type II reclaimed water which better match the needs for the approved uses of the reclaimed water. Finally the rule revisions identify additional acceptable uses in food chain crop irrigation and wetland augmentation. These rule changes meet the expectations that were established in the General Statute.

Some general clarifications on these rules; the proposed rules do not allow for aquifer storage and recovery of reclaimed water. The injection of waste to North Carolina's aquifers is prohibited by General Statute 143-214.2 and there is really no need to address that here in the rule since it is already established in a statute. Any NPDES requirements must still be met for the discharge of reclaimed waters to a surface water. Local program approval for reclaimed water programs shall not be granted to non-conjunctive users. A non-conjunctive user would be a user for which the treatment plan is depending on reclaimed water for the disposal of their wastewater. It's tied to the capacity of the treatment plant. Therefore we didn't feel it was appropriate to allow municipalities or wastewater treatment plants to self permit their own disposal capacity. Any type of approval would have to come through the division for that. Some of the specific changes that have been incorporated since the public hearing process are the permitted by regulation section has been modified, incidental discharges to MS-IV collection systems has been added provided that no water quality standards are violated. This is consistent with existing stormwater rules. MS-IV collection system is a stormwater system run by municipalities. It is not a combined sewer and not part of the publicly owned treatment works. The second change is to add conjunctive commercial irrigation systems and multifamily irrigation in less than one acre in size to the deemed permitted regulations. Again trying to reduce the permitting requirements for what we feel are low risk users and placing responsibility for oversight on the municipality or the reclaimed water provider. Those responsibilities are already part of their permit and requirements. This is the additional addendum some of you may have received an email today or last night on this. It is the attachment that was handed out along with the presentation. There have been some adjustments to the submittal requirements for residential irrigation systems. The original hearing officers' recommendations were to require these facilities to record their irrigation system in their property deed. But there's been some comments received from professional organizations on this feeling that it was overly burdensome. The language that you have before you recommends that site plans showing that the reclaimed water requirements for setbacks are met be submitted to the reclaimed water provider which would generally be the municipality. Some additional changes that were made as part of the hearing officers' process was to increase the flexibility of the rule and to help allow for future expansion. The effluent standard section-originally came before you with Class A and Class B rule standards that was changed to Type I and Type II. Type I is the Class B standard or the current reclaimed water standards. The Type II is the more highly treated reclaimed water which would be synonymous with the Class A. A second change was in the pathogen monitoring requirements. A change was made to allow for monitoring of E Coli or fecal coliform. This would allow for municipalities to match their NPDES permit or other types of discharge or non-discharge permits, to not have to do multiple sampling for pathogens and still give a good assurance that they are meeting the pathogen requirements to distribute the

reclaimed water safety. In the utilization section we have removed specific examples of utilization to allow more flexibility instead of listing specific uses. The proposed rules group it as irrigation or non irrigation type uses and lists specific requirements for each. The proposed rules remove the prohibition of using reclaimed water for street washing, and to clarify that non irrigation type activities no aerosol exposure will be allowed. In the distribution system section clarifications have been made to allow for other locking mechanisms or may be used in addition to underground vaults for hose bibs for control of access to the distribution point at residential irrigation or other types of distribution points. Also, an allowance for dual check valve assemblies for residential and commercial sites where the reclaimed water system is separated from the potable water system when they would be joined or when potable would supplement a reclaimed water system, an air gap rpz, more testable or reliable devices are required. Again this is consistent with the requirements for public water supply. I will now turn it over to our two hearing officers who will discuss more of the hearing process and the results of the public comment.

**Forrest Westall:** We had an effective public hearing and got a lot of interest. This was tremendously important issue for local governments and providing reclaimed water requirements for meeting the requirements of controlling the use of water, limiting the use of water, being more efficient in the process. What we heard from the public hearing were a lot of very excellent comments. A tremendous amount of comments are included in the report. We had folks writing us a lot of technical and excellent comments about the issues. The main points that were made on the side of requiring more use of this was that it should be expanded because it will allow more efficient use of the water system. It is technically possible there is a precedent for it; and on the other side of the issue there were concerns about potential public impact, impact to the environment and public health. I think these rules represent a reasonable balance between the different viewpoints and provides compliance with the statute and also makes a large movement forward in the safe reuse of wastewater. I believe that they represent a good compromise between different positions that were there. Also **Stan** and I think we worked very hard to get all the comments in and there was a lot of back and forth. I thank Lori Montgomery and Jon for being patient with us because we had several rewrites and comments that we made and changes. Even the change we made that was given to you today, we believe, is justified and will provide protection but yet will make it easier to permit the use of this water for residential irrigation. I think that represents a good effort to compromise all those different viewpoints. At this point I will make a motion to approve the rules as presented to the Commission with the revision that was provided today. **Mr. Crowe** seconded the motion.

**Chairman Smith:** **Mr. Crowe** do you want to add anything?

**Stan Crowe:** I think **Mr. Westall** did an excellent job and Jon. We did struggle with balancing this to ensure that public health was considered while at the same time being as flexible as possible encouraging use of this and following the statute that we were guided under. I think this is a good balance and I believe in the future rules review we might be able to go further. But I believe this was a great place to start.

**Chairman Smith:** By way of the Executive Order 70 certification each of the provisions of this Executive Order 70 are met here or appear to be met here. As to the necessity of these rules we

cite two of the three provisions, one required by state law which is 143-355.5 and then being necessary by the agency to serve the public interest and the description of that is these rule amendments facilitate the expanded use of reclaimed water by simplifying the permitting process for reclaimed water systems, and reducing the compliance burden on the regulated community. Is there further discussion?

**Ms. Deerhake:** It caught my attention about the aerosol component of that? Could you just explain what is not land application that would not be permitted? The first thing that comes to mind is would this prevent power washing, car washing using reclaimed water because they generate aerosols.

**Jon Risgaard:** That certainly is not the intent. The intent is to limit it in industrial settings and commercial settings wherein an employee would be exposed to a aerosol for a period of time.

**Ms. Deerhake:** I would see that a power washer would generate a lot of aerosol.

**Jon Risgaard:** Yes.

**Ms. Deerhake:** So that might be something you will need to think about because that's not land application. So they could be exposed to aerosols.

**Jon Risgaard:** That is true.

**Les Hall:** I just wanted to commend them on the progress being made and also encourage everyone to consider....I heard the word wastewater mentioned a couple of times during the presentation. We need to get to the point where we consider reclaimed water a resource, not a waste, and I think we need to continue to be flexible and look for ways we can optimize the use of reclaimed water. Because as we get a little forward in the future in the state we're going to have more and more need to have clean water. Regardless of where we are discharging the streams is much cleaner than the water in the stream.

**Chairman Smith:** Other comments? The motion passed.

Thanks to **Mr. Westall** and **Mr. Crowe** for good work as hearing officers on this package.

#### **10-50 Request for Adoption of Hearing Officers' Recommendations on Revisions to Wastewater Pretreatment Rule under 2H .0900**

**Chairman Smith** The next item on our agenda has been removed and is coming back in January. If I remember correctly that also was not ready for Executive Order 70 certification.

#### **10-51 Request to Adopt Hearing Officers' Recommendations on Proposed Nutrient Rules for Falls Reservoir**

**Summary (Tom Cecich):** We would like to present the hearing officer's recommendation for the proposed nutrient rules for the Falls reservoir. We did as a Commission pass these draft rules

at our March 2010 meeting to take to public hearing and to the public comment period. As a reminder we are under Legislative mandate for this rule from Session Law 2005-190 which required EMC to adopt the nutrient strategy for Falls Lake. Further to that there was additional action by the General Assembly in Session Law 2009-486 which in addition to reiterating that we adopt a strategy and set a timeline that we would adopt this strategy by January 15, 2011. It further indicated that we would adopt not only a permanent rule but also a temporary rule so the rule could go into effect as of January 15, 2011. The chair appointed me, Ms. Deerhake and Mr. Phillips as hearing officers and we conducted two public hearings. One was on June 30<sup>th</sup> and another on July 1<sup>st</sup>. There were 109 attendees at the first meeting and 108 at the second. There were 39 registered speakers at the first meeting and 37 speakers the second. The comment period ran from June 15 to August 16, 2010. Over the ensuing several months following the August 16<sup>th</sup> deadline the hearing officers met seven times face to face with staff, a minimum of three and a maximum of eight. By my count there was a total of 40 hours of face to face meetings to discuss the comments on the rule. What we would like to do with the hearing officer's report, we're going to ask John Huisman to go through each of the rules in the overall strategy and share with you some of the decisions we've made. This rule was a complex rule partially because of the unprecedented degree of nutrient reductions that were required in the Falls Lake. It was complicated by the Neuse strategy because in the Neuse strategy some of the low hanging fruit was already picked so this was over and above the reductions needed over and above what was already taken into account in the Neuse strategy. It was also realized that many of the reductions required were really pushing the edge of science and technology, and also would impose significant cost on a number of stakeholders. As a result we did have the original proposal call for a staged and adaptive approach over two stages to address the nutrient levels in the lake. Because all these challenges are in the proposed rule that was sent out for public comment a number of questions were asked from which we selected we were seeking public input. As a result the proposed rule that we approved for public comment back in March we had to make decisions on that for each of the individual rules. I'd like to ask John to come up and share with the Commission on a rule by rule basis the key points that the key decisions were made. I should note continuing the hearing officer's report at the conclusion of Mr. Huisman's summation of the rule changes we'd like to ask for comments from the other two hearing officers at which point the hearing officers are prepared to make the two motions, one for a permanent rule and then the other for a temporary rule.

**John Huisman:** I will give a very brief history. You were just handed a bulleted list of three rules that were revised since you received the EMC package based on further deliberations of the comments and some clarification points. I will point those revisions out as I go through the presentation. In Falls Lake we're talking about this 700 square mile watershed in upper Neuse River Basin. Falls Lake serves as the primary drinking water source for 450,000 residents in Wake County. It encompasses six counties that are Durham, Wake, Franklin, Orange, Granville and Person counties. Falls Lake is listed as impaired for the chlorophyll-a water quality standards throughout the lake. As was mentioned by Mr. Cecich we have the session law that directs the EMC to adopt the nutrient management strategy by January 15, 2011. A quick recap of the process that has led us to this date is following that session law, a modeling and a study was done on the lake along with additional water quality sampling. Modeling was done for a watershed model and a lake model. A Technical Advisory Committee that was made up of a subset of stakeholders met between 2005 and 2009 for a total of 15 times to provide input on a

data collection and the model development. Stakeholder process for input on the rule development spans two years from 2008 – 2010. We had nine individual stakeholder meetings, 12 additional subcommittee meetings where we met with groups on specific rule issues. The fiscal note for the Falls Lake rules was approved by the Office of State Budget and Management in June 2010. As Mr. Cecich pointed out capping things off we had two public hearings in June and July and the public comment period ran from June until August. There were a total of seven hearing officer meetings over the past two months. As it was pointed out earlier this strategy represents some unique challenges. First and foremost is the fact that we're talking about unprecedented reductions for Falls Lake. The reductions that we're calling for to achieve the water quality standards the overall reductions do push the challenges of the current available technology that we have out there now. There is also a consideration that there's this existing new strategy for the estuary that's already achieved reductions from some sources. So this is a strategy that overlays that existing new strategy. With those considerations in mind we are proposing a staged and adaptive approach where we break the implementation into two stages with Stage I calling for reductions watershed wide and Stage II calling for additional reductions in the upper watershed. The upper watershed that is shown (slides on website) that we are referring to is the area in green which is the area of the watershed that drains to the portion of the lake located above NC 50 which bisects the lake. So recognizing those challenges with the stage and adaptive implementation approach within the adaptive implementation we have provision to consider additional information, new data as we do implementation over time, commit to coming back to the EMC every five years to report on new information that's available and consider making any necessary rule revisions. There's a very important element in the goals rule where we commit to coming back in 2025 to provide a report to the EMC that provides an evaluation of the full implementation of Stage I and the implications for Stage II.

Real quickly I want to summarize the general tone of the comments that came in during the public hearing public comment process. In general the various lake users and environmental groups were supportive of the strategy that we are proposing. They did note that they preferred shortened timeframes for the different stages for achieving water quality standards in the lake. Local governments and their comments were largely described as a conditional support were in general were agreeable with our Stage I objectives. There were some concerns with Stage II and they expressed those in a local government consensus principles document they signed on to; where they essentially agreed to what we were calling for in Stage I and wanted to see some additional considerations in Stage II that we considered on delivery and making their revisions to the rule. There was general agreement with the Stage I requirements. Their desire to see a reevaluation going into Stage II, and to consider the achievability of the overall reduction goals considering available technology limits, and also in that evaluation considering the cost of implementation and considering the ability to look at alternative regulatory action and meeting the standards.

These are the eight proposed rules that I will quickly go over basically the requirements that went out to public comment and the changes that came out of the comments that were delivered in the hearing officer's recommendations. Essentially these eight rules fall for both point and non-point sources in the watershed. There are also two Neuse rule amendments that I will briefly touch on at the end that also went out to comment. The purpose of scope rule is basically the backbone of the strategy and sets the framework for the rules. This is where it establishes that staged implementation approach where Stage I calling for reductions watershed wide to achieve the water quality standards in the lower lake. Stage II calls for additional

reductions. That Stage II overall reduction goal is 40 percent reduction in nitrogen and 77 percent reduction in phosphorous. The goals rule recognizing those large reduction needs sets up that adaptive management approach again where we commit to coming back to the EMC every five years with additional reports and that reevaluation in 2025. Some of the changes that came out from the hearing officers deliberation of comments in which we had posed a question to the stakeholders about how long Stage I should be, ten years vs. seven. The hearing officers decided to keep Stage I at ten years recognizing the reductions that needed to be achieved and the planning and cost going to those reductions. We also added that 2025 report. That actually came out of the comments that were submitted to us during the public comment period where after Stage I is fully implemented and going into Stage II we provide this evaluation of success of Stage I and implications for Stage II.

The highlights in yellow are some of the revisions that were made after the package was sent out to the EMC that I want to point out in this bulleted list. Under the purpose and scope rule I point you to the section lined in the rule where these changes were made. But essentially what we've done here is initially when we added the 2025 reevaluation we had a trigger in there where essentially affected party had to request this reevaluation. After further consideration it seemed to make sense to make that reevaluation automatically in 2025. We also added one element to consider in that reevaluation where we list six different things that will be considered in that report and to the EMC where we look at the feasibility of achieving Stage II and the cost and benefits. An additional bullet was added that we will take a look at alternative methodologies for establishing compliance in lakes. The first change for the trigger is in line 5 on page 7 and adding those alternative methods to establish compliances in line 18 on page 7 as well.

The new development stormwater rule essentially calls for post construction runoff for new development to meet nitrogen and phosphorous rate targets. It also establishes the nutrient off site options where someone can pay into EEP or private mitigation bank or some other offsite offset. Some of the changes that were made to the rule based on the comments, with the land disturbance threshold are basically how much land you are disturbing that will trigger your being applicable to this rule and the amount of onsite treatment that's required before you can do an offsite offset. The hearing officers reviewing the comments lowered the land disturbance threshold highlighted in yellow which is a slight revision of what went out in the EMC package. In the package we had a blanket ¼ acre land disturbance threshold but in further review of the comments that were submitted and the case that was made for the concerns over that low threshold and in consideration of the entire landscape of regulations that are out there, that local governments have to deal with, it made sense to adjust these disturbance thresholds to not create an administrative burden on their part. But we do feel these captures the vast majority of new development projects that will occur. The threshold for residential was established at a ½ acre and the threshold for commercial was established at 12,000 sq. ft. threshold. Similarly we have also taken comments from the stakeholders about the amount of onsite treatment that will be required. We put out for comment a fifty percent or sixty percent reduction onsite and there were significant comments to that. In deliberating those it was made clear that the fifty percent of the total reduction was not something that would be possible without doing more than two BMPs on site and will have significant impact. So we changed the wording of the rule to require being a fifty percent reduction of the reduction needed. That makes it a little more flexible on how much they have to achieve onsite. In recognition of the lowered land disturbance thresholds we created a new category where between ½ acre to an acre residential you'd have to achieve a

thirty percent reduction before going offsite and for commercial between 12,000 sq. ft. in an acre you get a thirty percent reduction before going offsite. In recognition of the challenges faced by downtown redevelopment projects we have a thirty percent reduction onsite needed before redevelopment can get the rest of the reduction offsite. There's also an existing development stormwater rule. This rule essentially calls for local governments to implement load reducing activities on all their existing developed lands. In Stage I local governments have to get reductions back to the 2006 baseline that's established for them. In Stage II they have to get the overall forties and seventy-seven percent reduction.

Based on the comments that were submitted the hearing officers revised in Stage II the initial plan that a local government has to submit for Stage II will be based on their level of effort in Stage I. This was done out of consideration that we have that 2025 reevaluation in the rule and the Stage I ends in 2021, so local governments wanted to basically get some interim measures in place, keep things moving forward into Stage II but wait until that 2025 reevaluation is done before they include how they're going to get the full reductions in Stage II, because the target could possibly change based on that reevaluation. So the Stage II initial plan will be based on a level of effort that they implement in Stage I keeping reductions moving forward into Stage II. The hearing officers also included based on the comments submitted the revised approval standard for the EMC and what they consider an approvable Stage II plan. The comments that came in wanted this language that was proposed and adopted in Jordan legislation that set the criteria for the EMC for approval of Stage II plans and also included language where the EMC would essentially approve a plan unless they could point out that there were other reasonable and cost effective measures that should be included. That Jordan legislation was also added.

The wastewater reduction rule obviously called for a reduction from the point sources in the watershed in which they set reduction mass limits for the three large facilities in the upper watershed. The Stage I mass limits are based on a twenty percent reduction in nitrogen and forty percent in phosphorous from the aggregate. The Stage II reductions are based on the forty and seventy-seven percent. There are concentration limits set for the two smaller facilities in the lower watershed. The hearing officer's recommendations based on the comments, in order to create a more equitable Stage I allocation we revised the Stage I allocations to address concerns raised by Hillsborough. Overall the Stage I allocations still achieve the 20%/40% reduction called for in Stage I. We also added a provision in submitting the Stage II plan for getting the reductions, a discharger proposed how they will meet the Stage II limits by 2036 and they have the ability to propose alternative limits of technology if they don't think that under current technology that they're going to be able to meet the total reductions by 2036. Some additional revisions that are highlighted in yellow were made since the EMC package was sent out we revised the Stage II plan submittal date to 2027. Initially we had it at 2021 and again this was just made to make agreement with that 2025 reevaluation that's done under the goals rule. This way the point sources would be submitting their Stage II plan after that reevaluation is done. Their permits come up for renewal in 2028 which would allow the plans to be considered in setting the limits in those 2028 permits. Also removed from what we sent out was the requirement that the point sources estimate when they could achieve the Stage II limits because there's concern if the technology doesn't exist at the time it is going to be hard for them to make their concrete prediction of when they can get those reductions. Under the rule we require them to tell us what they can get by 2036 and come back every five years with revised plans as they work toward those overall reduction goals. Agriculture: is set up largely like we have in the Neuse and Tar-Pamlico where this is a collective compliance approach from agriculture. In

Stage I Ag as a whole has to get a 20%/40% reduction. In Stage II they have to get the 40%/77%. We also have requirements where land application has to use the realistic yield expectation rates, the RYE N rates and meet the phosphorous needs. In Stage II we include a provision for individual buffer and exclusion of Ag lands is conditional, basically if they don't meet their Stage I reductions by the time Stage II starts there would be this clause that would kick in all streams be buffered and excluded on row crop and pasture land. But that's a conditional provision in the rule. Based on the comments that were submitted the hearing officers recommended changes by adding some clarification for when, if that provision for buffering and exclusion kicks in, how long of a timeframe Ag has to meet that provision and there was added a five year timeframe from the beginning of Stage II to achieve individual compliance. The hearing officers also recommend clarifying the minimum buffer width that would be required. Again this is only if that provision kicks in if Ag did not achieve its Stage I reductions. Based on comments submitted from several local governments about concerns over what was required of municipal residual land application and the fact that the phosphorous loss accounting tool, the PLAT tool isn't defensible to use for them we had to take a closer look at the requirement, of meeting PLAT, and in consideration scale back the P requirements for biosolids and replace those application limits with a reporting requirement. Essentially the local governments' land application operators would have to submit their soil testing and P loading rates. That information could be used toward developing an appropriate tool for them down the road to use to make sure that they're meeting the P needs for the land application sites.

The state and federal entities rule is essentially a stormwater rule for state and federal lands. The requirements here for non DOT projects are similar to the requirements I already went over for the new development and existing development requirements for the local governments. The DOT requirements differ slightly in that new DOT road projects are required to meet the buffer requirements in the watershed. Under existing development, DOT has to work toward getting the overall reduction goals and has the option of implementing at least six stormwater BMP retrofits per year. Any changes that were made to this rule were made to parallel the changes that were made in the local government stormwater and existing development rules.

The trading rule provides flexibility between the sources to identify potentially more cost effective options to sell and buy credits across the different sources. In response to the comments that were submitted the hearing officers recommended adding clarification that any nutrient offsets meet the requirements of the .0240 rule which is the nutrient offset rule that's in place. That just establishes the process for setting up nutrient offset banks and the fees that are charged by EEP and private mitigation banks. We also added provisions to this trading rule that allow the Agriculture Watershed Oversight Committee, the WOC to submit a trading program to DWQ for approval.

The fertilizer management rule that was sent out to public comment was essentially and largely an educational tool that required training for fertilizer applicators that have the option of either developing a nutrient management plan for their site or take a required training as an alternate option. This rule was removed from the rule package based on comments that were submitted during the public comment period from technical experts. The main point that was made by these technical experts, in particular from the Ag community and from N. C. State Soil Science Department was the fact that applicators in the Falls watershed have largely already been trained under the existing Neuse fertilizer management rule. So most of the applicators, if not all, have already been trained under that existing rule. Also, they point to the fact that in the

Falls watershed a large majority of agricultural land is pasture land and it's passively managed where they're under applying fertilizer, and if we required them to use a fertilizer management plan it may encourage them to actually increase the amount of fertilizer that they apply. Ultimately weighing the fact that it could create this increase and that there's this existing rule for the Neuse river basin that already requires training, it just didn't seem like the resources needed for this rule outweighed the benefits. It was decided by the hearing officers that this rule would be removed from the Falls Lake package.

The Neuse rule amendments are largely administrative. This new stormwater requirement rule that went out for comment was just making it clear that the Falls Lake requirements superseded that of the Neuse rule requirements for local governments located in the Falls Lake watershed. We didn't receive any comments to any significant change. In the Neuse River Basin rule the .0315 simply recognizes that there's a few little pockets within the Falls watershed that weren't classified as water supply and through this amendment will just be reclassified to WS-V, and designate the Falls watershed as a critical water supply. This simply just allows those local governments to enact these different requirements that we're calling for under the rules. There is no new buffer requirement under the Falls Lake rules. The existing Neuse buffer rules are in place. There's no hearing officer recommended changes to these propose rule amendments.

Before I take any questions I wanted to thank the hearing officers for their hard work and deliberation of all the comments and the stakeholders for submitting those comments. I will turn back over to **Mr. Cecich** and I will be happy to answer any question.

**Tom Cecich:** In turn I will ask **Mr. Phillips** and **Ms. Deerhake** for any comments that they may have as part of the hearing officer's report.

**Ms. Deerhake:** Thank you Mr. Chairman, my thanks to the Division of Water Quality staff and to the other two hearing officers. It was a pleasure working with you all. I will say that I support the package in total. There was extensive review, analysis and consideration of public comment. I compliment the stakeholders on their willingness to work together in what they accomplished. That made the hearing officers work much more informed and manageable. Water quality is essential in this growing state and this package represents the regional cooperation needed to allow this state to grow by protecting the water quality and the role of our waters in this state which is a very important role that they play. Thank you very much.

**Dickson Phillips:** I'll pick up on the theme of balance that was used in reference to the reclaimed water rules. I think this set of rules does represent a lot of hard work to achieve a balance between applying clearly the requirements of current policy and standards against the recognition of the extraordinary reductions needed to have this lake meet that standard. That standard being the chlorophyll-a, which under the percentage of the modeling, then renders these extraordinary reduction requirements. I mention that nobody has referred to the modeling. Unlike in Jordan I don't think there was any significant question raised about the modeling. There were questions raised about the area of the lake that was chosen to drive the goals, the point being made that if a point lower down the lake had been chosen then a very different set of goals might have been developed that would have been more easily achieved. But of course the requirement that would just drive the goals and the requirement is that the lake meets the standards. That then brings focus on the proposition that this lake does perform very differently

in its different areas. The lower lake does perform differently than the upper lake and these rules reflect in the Stage I requirements in getting back to the 2006 baseline expected by everyone to bring the lower lake into compliance. Clearly significant and substantial questions were raised about whether the standards could ever be achieved in the upper lake and strong arguments. I think clearly with the foundation of concerns that perhaps different standards should apply in the upper lake. The rules that you have presented here that we submit to you accommodate both of those realities. That is that the Stage I goals are certainly achievable and they in themselves represent a fairly significant, maybe arguably the most stringent requirements in the state alone. Then we call for the mandatory review in 2025 that we will readdress the entire strategy and will address the best management strategy. Then I would suggest that certainly that review and consideration and let the best management strategy not really wait until 2025 but should be something that will be ongoing in looking at what the best strategy is with respect to this upper lake and perhaps other water supply reservoirs in the state that have similar features. We certainly made some changes and adjustments in the original package which I think improved it. In terms of the big picture they are really just adjustments. So we submit them for your consideration.

**Tom Cecich:** On behalf of the hearing officers I'd like to make a motion that the EMC adopt the Falls Lake nutrient rules and as amended by the items that were distributed to you today. Again those items on the sheet were summarized by Mr. Huisman and the highlighted part on his slides. **Mr. Phillips** seconded.

**Chairman Smith:** By way of Executive Order 70 I am comfortable saying that we're able to certify each of the provision of the Executive Order 70 and particularly as to the necessity of this rule. They are required by state law under Session Law 2005-190 and then Session Law 2009-486 that being the General Assembly's legislation last session that requires a report on these rules back to the General Assembly by January 15, 2011. With a motion and a second on the floor I will open it for discussion and questions.

**Dr. Moreau:** Let me start by thanking the hearing officers for some very long hours and staff particularly, John for working on this and working through some very difficult issues. The way I read these are at Stage I is a pretty reasonable step and it's got a ten year implementation period. Model results indicate that it will protect existing uses in the lower end of the lake. Stage I will push the limits of technology and will not meet water quality standards throughout the lake. Stage II is very likely to push us beyond certain technology that we have today. Hopefully there is better technology when that comes in but even then I think that it raises the spectre of trying to achieve these standards at very high costs. There are several ways that it is pretty apparent, although the hearing officer's report does not explicitly address how the standards would ever be achieved what would be necessary to achieve the standards in all parts of the lake. It's pretty clear from reading between those lines that there are serious questions as to whether or not we could ever meet those standards in all parts of the lake, particularly above Interstate 85. There are several ways we can do that. We've got one option in the motion before us which is simply push up implementation for 15 years and let somebody else worry about it. That is one strategy we can follow. These are very uncertain projections of what may be required 15 years from now. There are alternatives that can be pursued and I'm not going to suggest here that we modify the motion on the floor. But simply to point out that in dealing with this long term

problem there are alternatives that have been explored and used in the Chesapeake Bay where the original 5 mg per liter dissolved oxygen standard that was applied to the entire Chesapeake Bay could not be achieved. There are alternatives discussed in EPA's proposal on the nutrient standards for a fluorid. These involve going back and looking at refining the uses that are designated for these water bodies. In fact in some cases, in the case of Chesapeake going back and instead of using one standard and finding the entire bay as one use went back and refined that criteria to five different uses recognizing that different parts of the bay were used for different purposes and that different criteria may be appropriate for different parts of the water body. There are a number of difficulties that are raised again by this particular proposal and it's been partially addressed by the hearing officers. Is the chlorophyll-a standard the most appropriate standard criterion to be used for protection of aquatic life? Does the upper end of the reservoir support aquatic life, even though it may not satisfy the 40 mg per liter chlorophyll-a standard? I think that's something that's worthy of further exploration. Should the entire lake be classified as one use? Different parts of a lake are used for different purposes. There seems to be these are questions that we might want to begin to explore within this ten year time frame that you have proposed, and rather than put those off until ten years from now or 15 years from now may be how we read the reg. I would like to see us come back and begin to address these questions at an earlier timeframe. This is not the only reservoir where those questions have been raised. There's not going to be any short term answer to those questions. But rather than simply push it off and forget about it I would like to see us take up those issues in a timely manner. Maybe after this Legislative session if we're still in existence and it's still a department right after this Legislative session which is going to be very demanding on the staff because of budget issues. There are alternatives to simply deferring this for consideration. I'm comfortable with adoption of what has been proposed but I'm uncomfortable with sort of pushing this off indefinitely into the future, even though it might be more convenient for my time. So I would like to suggest and I don't know if we need to do it formerly but suggest that we adopt this with some notion that we're going to come back sooner than later to address the underlined issues that this raises.

**Chairman Smith:** I certainly agree with a great bulk of what you had to say and maybe everything. I don't think you, I, or anybody on this Commission is going to have the luxury of pushing those questions off to be decided 15 years from now or whenever. As you and I discussed yesterday my preference would be that not be a portion of the motion that deals with Falls Lake but that we commit that we're going to move toward addressing those various questions not only at Falls Lake but statewide. I started to say like the Supreme Court said in *Brown vs. the Board of Education* with all due deliberate speed but all deliberate speed but I hope that we will be able to do it quicker than that.

**Dr. Moreau:** I'd use the term timely manner.

**John Curry:** I just have a quick question following Dr. Moreau's comments and **Mr. Phillip's** comments. Perhaps I am operating under a misunderstanding but it sounds like Stage I is ten years and then the reassessment that's going to take place is in fifteen years according to the rules. Why was that timing not lined up?

**Tom Cecich:** The intent was some of these items in the first ten years will take ten years to implement. So we won't start necessarily seeing the benefits until after the ten years plus some of these reports and sampling data may take several years to get. So that's why even though Stage I is over in ten years the results of that are likely not to be seen for some period after that as well as the necessary time to actually prepare the report. John do you care to add more to that?

**Chairman Smith:** Before you do John I think **Mr. Curry** has got a follow up questions and you can deal with both at the same time.

**John Curry:** Nonetheless there're requirements that were included in the rules that will begin in the second stage after the ten years when the first stage finishes. So I understand the practical difficulties of data gathering and proving performance but on the other hand are you not making, especially the folks in the upper half begin to take action without having done this reassessment?

**John Huisman:** Just to build on what **Mr. Cecich** said which is absolutely correct the intent with the 2025 is in large part to allow time to see the full effects of implementation Stage I which runs between 2021 so you are going to see some delay. The idea of having it in 2025 and not right at 2021 allows that time to see the effects. It also prevents this issue of having like a full stop, just implementing Stage I and just stopping waiting to see what the results are and after a couple of years say, oh you know what, it's not enough. We have to keep going and losing that time. It is important to recognize a couple of points. Stage I reductions are to achieve the water quality standards in the lower lake. The lower lake is that area below NC 50. That 10 and 40 percent reduction in Stage I is shown through testing the model that we've achieved the standards in the lower lake. It's pretty clear that more is needed to get reductions to achieve the standards in the upper lake. I'm not just speaking of the upper in terms of above Interstate 85. I'm speaking in terms of everything above NC 50. It is clear that more than Stage I is necessary and we need to keep people implementing past Stage I as that reevaluation is done. But in consideration of the fact that reevaluation is at 2025 we've scaled back the expectations somewhat in those interim years between 2021 and 2025 where existing development plans submitted during that first plan. It doesn't have to be based on 40/77. It is basically set on an interim goal of discontinuing their level of effort from Stage I. Again the point sources are not required to submit their Stage II plan until 2027 now. It will give them time to consider the results of that reevaluation.

**Chairman Smith:** Thank you sir.

**Forrest Westall:** I just want to follow up on a question and then a comment. I think **Dr. Moreau's** comments are important in terms of moving technology and evaluation forward now as opposed to waiting until that time. I guess one of the questions that I have I am not sure that it was explicit in the rules but it may be implicit in the rules that when this reassessment is done that would be an opportunity to look at or certainly propose standards or rather approaches to the Stage II rather than what I would call just to direct controlling runoff from the site, retrofits and that sort. Is that implicit in the rules?

**Dickson Phillips:** Explicit, I would say.

**John Huisman:** Yes it's explicit in the rules.

**Forrest Westall:** I think that's an important concept but also I think that if you wait until that period of time to do those things you are going to have again another delay in looking at those. It's to the advantage just because of the point that John just brought up. It's to the advantage of those affected to start developing those before you get to the assessment period. Because at that point and time you're going to have that period of overlap that you will have to start doing Stage II before the assessment time. That's a critical thing to look at and I as well commend the hearing officers, the staff and also the folks in the watershed. This is an extremely complex difficult problem and so I'm just glad to see that there's provision in there to substitute what I would consider to be the standard view of where we're going to retrofit these areas. There are things to do in the lake and **Dr. Moreau** mentioned those specifically. There are things that can be done to manage this and to look at what is an acceptable level of chlorophyll-a, and nutrients in the upper part of the lake.

**Chairman Smith:** asked for other comments.

**Tom Ellis:** I'd like to agree with **Dr. Moreau** that there are a lot of things that need to be looked at during the progress as this thing moves ahead. One of the things that the agricultural community identified was that the biosolids are not going to be accounted for with PLAT and that's very simple. The science is not there for this type of wastewater to be able to be running the PLAT equation. This could be done relatively shortly with a little bit of money invested in the science so that we could take a look at the phosphorous that's on these biosolid sites. If you remember from the Jordan that's where we had our highest loads of phosphorous. To sort of shuffle them off to the side, I don't think is appropriate but we looked at some items in here where we might provide clarification. Rather than get into making any amendments on this document what I'd like to do is specifically add some PLAT issues to Dr. Moreau's list of items that need to be looked at in the near future. What I'd like to do is suggest that the staff find a way to help get the science going on PLAT so that prior to the end of Phase I we can hopefully have these biosolids being looked at through a proper scientific equation to determine what effect they may be having and address that. Also, I'd like for the staff to monitor biosolid deposition and the information, and let us know whether this is increasing in the basin or it's being moved somewhere else. I'll just leave that at that rather than trying to make any clarifying comments within the document itself just attach this to something that needs to be looked at in the very near future going towards that second stage and how to address these things.

**Chairman Smith:** We have your comments from yesterday with those proposed amendments. We are shifting that over to add that for the upcoming consideration. Other comments, discussion or questions?

**Stan Crowe:** Clarification for a moment. Does the balance of the purchasing of reduction credits stay within the Falls Lake area when that's allowed?

**John Huisman:** Yes. Nutrient offsets have to occur within the Falls Lake watershed and we further restricted in terms of an impact in the lower watershed which can be offset anywhere within the Falls Lake watershed because that can effectively improve the water quality anywhere

in the lake and impact any upper portion of Falls, the offset has to take place in that upper portion.

**Dr. Moreau:** There's one other issue that was brought to my attention. That's this land conservation provision. I think that you did address that. Would you amplify a little bit on how you see that?

**Dickson Phillips:** That was something that we did talk a fair amount about in exploring whether we should provide for the awarding of credit for conserved forest land. The issue of course is that merely preservation does not enter of itself in achieving any reduction. On the other hand there's an argument that if you preserve, if you allow some credit for preservation you could allow credit of preservation of forest land because that would tend to push new development towards lands with greater amounts of absolute reduction would be achieved. That's about where we got in that discussion. Recognition of that had not been worked out so we put that in the category of something that needs to be continued to be looked at. I personally would like to see that in there as an available credit.

**Chairman Smith:** The comment that came in yesterday afternoon which I didn't see until last night came from Reid Wilson who is the executive director of the Conservation Trust Fund of North Carolina in which he said that it was his organization's hope that the determination could be made prior to 2016. I called him back early this morning and left him a message that if he had specific amendment language to email it to us. But I haven't heard. I take your various points on this and we will just continue to look at it.

**Dickson Phillips:** There's no reason that couldn't become part of the administration of this rule earlier than five years. Right John?

**John Huisman:** Yes.

**Dickson Phillips:** I would personally encourage that be done but I don't know that we need to put that in the rule.

**Chairman Smith:** I agree. Other comments? Before we vote I want to say also that I agreed with the various comments that this set of problems and issues here are multifaceted and extremely complicated and conflicting. I have great admiration for the truly heroic levels of work that have been done in the department from Assistant Secretary Smith down, particularly John but not solely John. I could list a dozen people that have done great service to the state and I add the same comment to the three hearing officers. They've put in a tremendous number of hours and great patience. Speaking of patience I need to add John to that category. He is a truly patient man. Personally I thank each of you for all that you've done whatever our vote ends up being. We have a motion and a second. Hearing no further discussion the motion passed.

**Dr. Larkin:** Just one comment about this. I was struck by the massive nature of changes that we're talking about. It may give some indication to some of the discussion that we had yesterday about prevention and thresholds, and the usefulness of that discussion and really trying to work on that.

**Chairman Smith:** Session Law 2009-486 contains this provision section 3. Concurrent with the permanent rulemaking required by Section 3 of Session Law 2005-190 and pursuant to 143-215.8v the Environmental Management Commission shall adopt temporary rules. The Commission shall adopt the temporary rules required by this section by January 15, 2011. So the General Assembly has put that forth. I think compromise for the extension of the deadline to January 15, 2011 that at the same time concurrent with passing the permanent rules. We also pass temporary rules which mean that the implementation date comes immediate rather than after the full process review by the RRC and the 2011 Legislative session.

**Tom Cecich:** On having to make the motion I want to make one clarification. I believe we made the motion effective January 15, 2011 but you just said immediately.

**Chairman Smith:** My mistake. It is January 15, 2011.

**Tom Cecich:** The hearing officers would like to move that we adopt as a temporary rule the permanent rule that for the nutrient rule for the Falls Reservoir that the EMC just approve effective January 15, 2011. **Dickson Phillips** seconded.

**Chairman Smith:** asked for discussion. Hearing none the motion passed.

#### **Administrative Hearings – Contested Cases**

Mr. Frank Crawley, legal counsel to the Commission, noted the Commission was sitting as the final agency decision-maker in their quasi-judicial role and they had before them two contested cases. He advised the Commission that arguments would be presented in the Windy Woods, LLC and Quality built Homes, Inc. contested cases. He noted that the facts and legal issues had been considered by the Administrative Law Judge and that the Commission had received the official record and the ALJ's recommendation. He then reviewed the standards which were applicable.

#### **10-52 Presentation of Administrative Law Judge's Recommended Decision, Windy Woods LLC, v. NCDENR, DWQ 09 EHR 4621**

Gary K. Shipman, Esquire of Wilmington, N.C. represented the Petitioner, Windy Woods, LLC. He presented argument for upholding the decision by the ALJ and adopting it as the final agency decision; the position favored by petitioner which would grant summary judgment to Petitioner and reverse the civil penalty assessment.

Assistant Attorney General Jane L. Oliver represented the Department. She argued that the decision by the ALJ to grant summary judgment to Petitioner should not be adopted because the record shows issues of material fact exist for trial and the decision contained errors of law.

The Chairman allowed both parties to present rebuttal arguments.

A motion was made by **Dr. Peterson** not to adopt the decision by the ALJ for the reasons set forth in Respondent's exceptions and to remand the case for an administrative hearing. Mr. Martin seconded the motion.

**Chairman Smith** called for discussion or questions from Commission members. After further discussion, the Chairman called for a vote on the motion. The motion carried unanimously.

After considering the whole record, written exceptions and arguments by the parties, the Environmental Management Commission, upon duly made motion and unanimous vote, made the decision not to adopt the decision of the Administrative Law Judge, nor all of its findings of fact and conclusions of law, as the agency decision. The Order Remanding For Hearing finds and concludes that it is improper to grant summary judgment under Rule 56 of the Rules of Civil Procedure, N.C.G.S. § 1A-1, Rule 56, to Petitioner for the reason that there exists issues of material fact to be tried in the present case and Petitioner is not entitled to judgment as a matter of law. Therefore, pursuant to N.C.G.S. § 150B-36(d) the contested case is remanded to the Office of Administrative Hearings for an administrative hearing.

(This information is on file in the Division of Water Quality)

**10-53 Presentation of Administrative Law Judge's Recommended Decision, Quality Built Homes Inc. Ron Jackson Petitioner v. NCDENR, DWQ 09 EHR 2650**

Sharon L. Tucker, Esquire of Fayetteville, N.C. represented the Petitioner, Quality built Homes, Inc. She presented argument for not upholding the decision by the ALJ and instead for the reasons noted in the exceptions, adopting the Petitioner's proposed decision as the final agency decision; the position favored by petitioner which would have the Department issue the Approval of 401 Water Quality Certification without the Additional Condition that Petitioner implement a Stormwater Management Plan for its development project.

Assistant Attorney General Brenda E. Menard represented the Department. She argued that the decision by the ALJ should be adopted as the final decision and affirm the Approval of 401 Water Quality Certification with Additional Conditions issued February 18, 2009 to petitioner.

A motion was made to adopt the ALJ's decision as the final agency decision. It received a second. Chairman Smith called for discussion or questions from Commission members. Following discussion by the members, he called for a vote on the motion. The motion carried, with one dissent.

This Final Agency Decision concludes that the Respondent acted appropriately and in accordance with the law and regulations in issuing the Approval of 401 Water Quality Certification with Additional Conditions, including the condition that Petitioner implement a Stormwater Management Plan. Accordingly, the Decision by the Administrative Law Judge is adopted in full and incorporated herein by reference.

(This information is on file in the Division of Water Quality)

### **III. Information Items**

#### **10-08 Report on EPA's Greenhouse Gas Reporting System**

**Sushma Masenmore:** On November 19, 2009, the Environmental Management Commission took no action on an amendment to the NC Annual Emissions Reporting Rule (15A NCAC 02Q .0207). The proposed amendment consisted of adding greenhouse gases to the list of compounds that are reported annually by major (also known as Title V) point sources. The reason for the EMC's action was due to the timeliness and anticipated sufficiency of the EPA's final GHG Reporting Rule. As requested by the EMC, I am here to report on an update of the progress of EPA's Reporting Rule and the sufficiency of the data that the EPA will make available, and whether any actions are needed by the EMC to address additional data needs.

The EPA proposed and promulgated the first Greenhouse Gases Reporting Rule in response to a Congressional Appropriations Act in FY08. Part 98 was published in a federal register on October 30, 2009. This rule became effective on December 29, 2009. The EPA stated that the purpose of the rule is to collect accurate and timely emissions data to inform future policy decisions. The rule affects suppliers of greenhouse gases, manufacturers of vehicles and engines, and facilities that emit greenhouse gases above a certain threshold. The reporting requirements for additional source categories are being added on a regular basis. Most recently the EPA added approximately six source categories that are suppliers of chlorinated gases and the most anticipated the glue and gas industry are reporting requirements. Nationally, EPA estimates that approximately 10,000 facilities will be required to report greenhouse gas emissions under this rule. Following the CERR (Consolidated Emissions Reporting Rule) this is the largest reporting program that EPA has instituted. Collectively about 85% of the nation's stationary sources will be covered by this rule. North Carolina has all of these types of facilities with the exception of those that are related to their natural gas production, processing or refinery in large scale transmission. In general if a facility emits more than 25,000 metric tons of carbon dioxide equivalent per year then they must report annually. For certain types of facilities they must also undergo extensive monitoring and measurement to report their emissions. The first reports are due in March 31, 2011 which is next spring and it will cover the operating year of January 1-31, 2010 which is this year. All data will be directly reported to EPA and there is no delegation or involvement of state agencies. A new online system called e-GGRT like the bird e-GGRT stands for Electronic Greenhouse Gas Reporting Tool is being developed. The system requires all affected facilities to go through a registration process. This is ongoing currently and until the registration process is completed by the end of the year, we will get a better idea of how many of North Carolina's suppliers and manufacturing facilities are affected by this rule. EPA suspects that there are some facilities that are still unaware of the rule and the requirements and is working with states to conduct outreach. EPA expects to release the final data to the public by July 2011. This rule has actually brought forth a contentious issue regarding confidential business information. In July of this year the EPA proposed a determination as to which data elements of this rule are considered confidential and must be kept in that form or which data elements can be released publicly. In general, the emissions data that are collected under the Clean Air Act, Sections 114 and 208 cannot be considered CBI. After consideration of public comments EPA will issue a final action of which data will be available for public use in early next year. Another important note about the system is that EPA is developing an XML Reporting Schema. XML stands for Extensible Markup Language which is a platform that is

used to share data among different types of applications. For this rule states with other reporting programs, similar to what we were trying to do last year, we'll be able to share a facilities data with EPA system itself. So a facility would only report once to the federal government and that same data would be transferrable to the states.

Here is an explanation of a simplified schematic of how the data will flow. In the first step a facility will first register and this is a certification process in which there is, similar to all the emissions inventory that are done, a person who is legally responsible for a company must certify the representation for that company in the emissions data that are reported. That is going on right now. Then the facility must report their emissions and submit them for EPA review. After EPA conducts the quality assurance process and deems the data credible it will release it through interactive dashboard on the website which is very similar to the Clean Air Markets Division which reports a lot of the acid rain program data. Currently the plan is to report them to facility level all the data that are considered non-CBI and they will plan on breaking it down by facility categories. The outbound data what they call the data exchange part of it which is step 5 as to how states like us can retrieve this data will depend on the final outcome of how EPA releases it. But our thoughts are that one outcome will be right on the website which will be through the mandatory reporting schema meaning that everything that is being reported in the system would be available onsite. But there's also a new schema being developed that will integrate the MRR data, the Mandatory Reporting Rule of greenhouse gas data with the CER data which is a Consolidated Emissions Reporting schema data for criteria pollutants. This is really unique and hopefully we think they will be able to do that. It's because for a given facility you would be able to get a complete picture of all of their criteria pollutants and greenhouse gas emissions. To facilitate this process the schemas are being developed through an EPA state GHG Integrated Project Team called the IPT. North Carolina DAQ has been fortunate enough to be among a few states to be participating in this small group. The IPT is examining the capability issues between the two reporting programs. We are also working to refine the list of facilities that are subject to the rule. Through a separate grant to be received by EPA our division will be conducting outreach to North Carolina facilities. In summary we are providing feedback to EPA as it develops the data exchange system. The first year's annual reporting data will be released in the summer of 2011. Final format, the completeness, the usability and the look and the feel of the data will not be known until July 2011. But through our PT we have gotten a glimpse of what it will look like and are able to provide some feedback. In the meantime our DAQ activities continues to promote voluntary reporting of greenhouse gases in 2008 which is the last complete year our inventory data were collected, 117 of about 320 Title V facilities have reported voluntary to us. We are continuing our outreach efforts on the importance of doing reporting or calculating emissions, such that facilities become aware of the emission potentials from their sources, and potential mitigation that could be done on a voluntary basis. Once the first inventory data are available we hope to create a multiple pollutant state level emissions inventory at a facility, statewide or sector level for public use. One thought that comes to mind is that greenhouse gases are not like criteria pollutants or hazardous pollutants where you can measure their downwind concentrations to determine potential reductions over time. So the only way to look at the effectiveness of any programs whether it be regulatory or voluntary is to look at an inventory from a source category or a facility, and that Delta is the only way you can tell whether a reduction in the emissions and greenhouse gases are occurring.

**Chairman Smith:** Thank you Ms. Masemore. Any questions? Very helpful. Thank you Ms. Holman. Next we have a report from Jim McEvoy on the Division of Land Resources Statewide Inventory of Wet Coal Ash Storage Facilities. You will remember back, probably been a year, maybe last fall and early this year when the DLR was here reporting to us on coal ash and they were in the process of doing a statewide inventory of coal ash ponds. So welcome Mr. McEvoy. We appreciate your patience.

### **10-09 Report on Division of Land Resources Statewide Inventory of Wet Coal Ash Storage Facilities**

**Steve McEvoy:** I'm here today to update you on the newly jurisdiction on electric power generation facility dams. You may recall the TVA Kingston Plan Ash Pond Failure in Tennessee. It happened in December of 2008. An 84 acre impoundment released 5.4 million CY-cubic yards of fly ash slurry. The results were extensive damage but thankfully no loss of life. The EPA responded to the Kingston incident. They inventoried ash ponds of local coal fired power plant sites throughout the nation. They launched a nationwide inspection program and retained consultants to perform field inspections and report on findings, and they issued a state by state report card. The EPA spotlighted North Carolina in this effort. You may remember this newspaper headline where it's reported that there are 19 ash ponds in North Carolina, 12 of which are high hazard and the EPA further states that there are more high hazard ash ponds in North Carolina than any other state in the nation. The General Assembly also responded in Senate Bill 1004 become a law in July 2009. It amended the state Dam Safety Law by eliminating the exemption for dams associated with electric generating facilities under jurisdiction of the North Carolina Utilities Commission (NCUC) and it provided exemption for those electric generating facilities dams under jurisdiction of the Nuclear Regulatory Commission which remain under shared jurisdiction with the NCUC. The amendment became effective January 1, 2010. Prior to January 1, 2010 the inventory was 4,544 dams statewide, 1,074 were of high hazard potential dams, and we had a number of different types of dams in our inventory.

In the beginning there were questions as to just how many dams are involved. Initially, what information did we have to go on? Well we had the Utilities Commission's records which indicated 16 non-nuclear power plant sites. They were coal fired plant sites, combustion turbine plant sites, one hydro-power plant site and there were a total number of 14 ash ponds in the state. The EPA came along and reported 19 ash ponds in the state with 12 high hazard. However, in the Fall of 2009 during jurisdiction preparation meetings with the power companies Progress Energy reports that they think that they have 27 dams affected by the amendment. Duke Power reports that they have 23 dams.

We begin asking ourselves what types of dams are involved? Then we started to investigate and found there were ash ponds both active and inactive, cooling pond dams which can be very large dams, saddle dams which are associated with the large cooling pond dams and afterbay dams which are downstream of cooling pond dams and may be used for flow control. There was one non-Federal Energy Regulatory Commission (FERC) hydro-power dam, industrial waste processing dams sometimes built within the inactive ash pond reservoirs and fuel containment dams. We had to have absorption strategy so we developed a plan. The first part of the plan was preparation and our key element and greatest challenge was to establish inventory. LQS (Land Quality Section) held multiple meetings with Progress Energy and Duke

during the Fall of 2009 to obtain aerial photos of the plant sites with labeled dam inventory, obtain historical inspections and studies, establish contact protocol and brief the power companies as to requirements of the North Carolina Dam Safety Law. From this effort, LQS established an initial inventory thought to be 50 dams. The LQS then set up an inspection team for the 16 plant sites. Each team was headed by a regional office senior staff member and a central office senior staff member. The second of the plan was inspection. LQS first performed and initial inspection of the Progress Cape Fear Plant with all senior LQS staff from across the state. This was to establish consistency in inspection procedures, consistency in hazard classification determinations and plant access and safety protocol. LQS then dispatched the designated teams to proceed with inspections to confirm and refine inventory, assess existing dam conditions, establish dam size statistics by abbreviated field survey and establish dam hazard classifications. The final phase of the plan would be to follow up where we would either issue notices, orders or take emergency action. We will define these a little bit later. LQS would then work with Progress Energy and Duke Power to see that any deficiencies noted were corrected.

Well how can we do this? The LQS has 18 full time equivalents in the Dam Safety Program, 8 in the central office and 10 distributed among the remaining 71 staff in seven regional offices. But the key to our capability is the fact that all regional office members are cross trained in the three statutory programs that LQS administers which are Mining, Sediment and Erosion Control and Dam Safety. As a result the inspection teams were able to utilize 41 LQS employees and even the division director to a former dam safety engineer to perform the task in a timely manner. Project completion was reached in June of 2010 and we also were able to do our normal dam inspection requirements for the year. What was the final count after field inspections? There were 16 power plants sites. A search for jurisdictional sites other than those owned and operated by Progress Energy and Duke Power determined that there were none. Sixty seven dams were field identified at the 16 plant sites. Of the 67 dams 57 were jurisdictional and 10 were exempt by size and hazard class. Of the 67 dams 38 were identified as ash pond dams in which 24 were active, 14 being inactive, 1 active and 3 inactive ash ponds were determined to be exempt. The final count left 34 jurisdictional ash pond dams. Of the 67 dams 29 were either cooling pond dams, fuel containment dams, clear water waste processing dams or other clear water pond dams including 1 hydro-power dam. Six were exempt by size and hazard class leaving 23 jurisdictional clear water pond dams. What were the hazard classifications that we found? Of the 57 jurisdictional dams 45 are high hazard, 3 intermediate and 9 are low. Of the 34 jurisdictional ash pond dams within the 57 count 29 are high hazard, 2 are intermediate and 3 are low. High hazard classifications for the ash pond dams were based on potential for loss of life and environmental cleanup cost exceeding an estimated \$200K. That figure is a policy set by LQS. The authority for the environmental concern is Section .0211 of our code where waste treatment, mine tailings dams and hazard classification based on potential environmental damage. Well what size facilities did we find and which was the real surprise? Total length of jurisdictional dams inspected was 184,445 LF or about 35 miles, 9.5 miles for Duke Power and 25.5 miles for Progress Energy. The total length of high hazard jurisdictional dams 127,663 LF or 24.2 miles and that broke down to be 9.3 miles for Duke Power and 14.9 miles for Progress Energy. Active ash pond size ranges reservoirs from 6 to 264 acres surface area and dam length 155 to 12,000 LF in length. Inactive ash pond size ranges in reservoir sizes 13 to 90 acres surface area and dam length 600 to 6,500 LF in length.

Clear water impoundment size ranges in reservoir sizes from 0.5 to nearly 4,000 acres and dam lengths 250 to 20,000 LF.

Let me get back to the follow up. The types of follow up action that we took was either the issuance of notices which included notices of exemption, a letter to the owner when it is determined by inspection and field survey that the dam is exempt, notice of inspection. This is a letter the owner is issued when there are no significant deficiencies, and/or minor maintenance is needed and no significant problems. Notice of deficiency is a letter issued to the owner when deficiencies are found significant enough to warrant further engineering study. Notice of deficiencies always establish a deadline for response.

These are the remaining types of follow up action orders and action itself. The dam safety order is a statutory order to the owner issued when there is not timely response to an NOD, or if conditions are serious enough to warrant a very timely reaction. DSO's require response to include installation of approved repairs or removal within 91 days. They can also take emergency action by Section NCGS 143-215.32 of our statute whereby the EMC to the DLR can take immediate action if a public safety threat is perceived. DLR staff are authorized to enter private property and provide emergency protection including removal of a dam if necessary. The costs are then recovered from the owner by legal action. Well what will we find on numbers? For notices of exemptions 10 were issued; 4 were for Duke Power and 6 for Progress Energy. Notices of inspections issued were 24 for Duke Power and 27 for Progress Energy. Notices of deficiencies issued were 5 for Duke and 1 for Progress Energy. None issued for dam safety orders. No emergency action was required. What was the nature of the significant deficiencies? Excessive embankment seepage, embankment erosion adjacent to rivers or along drainage features and extensive mowing equipment damage in areas of seepage. What was the true workload and how are we going to normalize it? We found that the manpower was much greater than that needed for 67 average size dams. IBEAM, our inventory research indicated that the average length of all dams inspected was approximately 750 LF for a perspective about two and a half football fields. As a result, the equivalent dam unit or EDU was established. The intent to reflect the true inspection workload, the principle every 750 LF of dam inspected equates to one dam. If you adjust the number of dams inspected by the EDU it turns about to be about 245 dams. The breakdown for Duke Power is 66.9 EDU and 179.0 EDU for Progress Energy. The total number of high hazard dams adjusted by EDU was 170 with 65 to Duke Power and 105 to Progress Energy. If you adjust the inventory numbers we found that in essence our workload provides the whole inventory which increased by about 5.4%. For high hazard dams workload increased to slightly under 16% and we picked a few different types of dams to deal with. What did the inspection effort take? Just for the inspection and follow up it was 1,443 man hours, expenses were \$4,500, and the man hours do not include central office management time unless it was related directly to an inspection. It excludes the planning and negotiations in the beginning. How will the future workload be normalized? Session Law 2010-31 provided for a one-time evaluation fee and the fee was set at \$1,100 per EDU for high hazard dams under ownership. The fee is to be paid in 2 even annual installments with the first installment invoiced on October 1, 2010. The dam evaluation fee totaled \$187,242 with the breakdown being \$115,214 for Progress Energy and \$72,028 for Duke Power. The use of the funds will be used for one-time limited, assistant dam safety engineer for a two year period. The position will focus on submittals and other business specific to the electric power dams. The location will be here in the central office and the supervisor will be me. Have we had any incidents since we took jurisdiction on January 1, 2010. Well, yes we have. We had one minor

incident at the Progress Energy Sutton Plant in Wilmington. The incident occurred on the evening of September 27, 2010 and involved a partial breach of a low hazard ash pond. The area had received about 20 inches of rainfall in the preceding 48 to 72 hour period and tropical storm Nichole had just passed through the area. The type of incident was an apparent localized overtopping failure. The local area of depression in an inactive area of the reservoir allowed the rainwater to pool and overtop the dam embankment at a low area near a frequently used vehicular access point. The resultant discharged ash material was contained onsite in a relatively small plume. Progress Energy notified us the next morning September 28, 2010 that they had begun emergency repairs at daybreak. LQS inspectors were onsite within one hour and Progress Energy just submitted permanent plans for repair on yesterday.

**John Curry:** I assume the one that was 20,000 feet was a entire distance around a containment pond. Is that right?

**Steve McEvoy:** Progress Energy had a number of plants concentrated in the eastern part of the state. With the flat topography you can make some very large rain dykes if you have the property.

**John Curry:** It wasn't totally clear to me. The high hazard has a definition but I would assume that a substantial portion of that is based on whether or not the dam is at risk of failure.

**Steve McEvoy:** No sir. Hazard only has to do with the potential downstream for damage in the event of failure. It has nothing to do with the condition of the dam.

**Chairman Smith:** So it can be a brand new dam that is strong and solid as you can possibly have and because of the size of the reservoir, if downstream from that dam there is the potential for loss if it were to be breached. Then you would classify it as a high hazard dam.

**Steve McEvoy:** Absolutely.

**Chairman Smith:** And not a function of its potential for failure?

**John Curry:** So if you have a community downstream that would put it in the high hazard category or....?

**Steve McEvoy:** Community or heavily traveled road.

**John Curry:** I just had another quick follow up. It seems to me your analysis is fundamentally and engineering and topographically analysis no one is currently attempting to analyze the contents of the holding pond and the extent to which the public health could be endangered by either a release or emissions or water quality issues relating to the contents of the holding pond. Is that correct?

**Steve McEvoy:** Yes sir that is correct.

**Chairman Smith:** What I think is significant about what Mr. McEvoy has just reported to us is that it is a very significant step in the right direction. A year ago we really didn't know how many ash ponds there were nor did we know their size. What we now have is what I believe is a reliable credible inventory that tells us we have got 38 ash ponds in the state and it gives us information about the size of the dams which can give us an indication of the size of the ponds. That is the size of the reservoirs. They range between 6 and 260 acres. They are large structures and hold a tremendous amount of material. So that's the first thing which is good information of real significance and a step forward. The second thing is that we now have these dams being inspected by our dam safety office. When there are notices of deficiency or areas of concern and we saw the three principle ones I think that we can fairly assume that Mr. McEvoy and his division are going to see to correction of those areas of deficiency. That seepage, for instance that you noted in several of them comes to an end. Those are real strong steps in the right direction. **Mr. Curry** raised a real good point and it's less for the Division of Land Resources and more for us. That is the contents of the reservoir, what's the chemical makeup of what's inside those ponds and that's not what his division was detailed to try to find out.

**Dr. Peterson:** Another aspect of interest to us is whether there is critical wildlife and endangered species habitat down flow of any of these dams, particularly as it relates to what the materials held in the dam might be. So we could have an important habitat for the dwarf wedge mussel downstream of it. That would put it on some list of concern for the Wildlife Resources Commission and indirectly for us and that we have to think about aquatic and riparian habitats. Not that I am criticizing you but I'm saying that if more money flows, so to speak it would be good to kind of look at what habitats are at risk. Not just whether humans are at risk.

**John Curry:** There was no intention on my part not to commend the Division of Land Resources and the Dam Safety Inspection Program for the great work. It was an interesting report and based on that information I was thinking more about the future and what we might look at than I was in any way commenting about the inadequacy of his work. It was excellent.

**Chairman Smith:** I took it that way and I wanted to make those points before we moved to what the next steps are.

**Dr. Peterson:** And I similarly. The treasure hunt is over. So now you've got this list and the GPS coordinates and the responsible people that own them. So it is not nearly as hard a task for follow ups to ask these other questions.

**Chairman Smith:** Thank you very much. I appreciate you putting your powerpoint online for us so we have access not only to it now but also in the future.

## **10-10 Annual Progress Reports on the Neuse and Tar-Pamlico Agriculture Rules**

**John Huisman:** As you know the Neuse and Tar River Basins both have nutrient management strategies to reduce nutrient loading to the estuaries. Part of those nutrient management strategies is the agricultural rule calling for reductions from agriculture. In the Neuse that agriculture rule went into effect back into 1998 and in the Tar Pam it went into effect back in 2001. The goal of each of those rules is a 30% reduction in nitrogen loading from agriculture relative to baseline. In the Tar Pam it's a 1991 baseline and in the Neuse a 1991-95 baseline.

The Tar Pam has additional requirements of no increase in phosphorous load relative to the baseline. These rules are implemented through this collective approach where agriculture as a whole in those river basins has to achieve that 30% reduction. It's implemented through the formation of the Basin Oversight Committees and 31 local advisory committees that work with the local ag community to achieve these reductions. There's also five river basin technicians funded through 319 funds to help identify reduction opportunities and through outreach and education. These numbers are generated using the NLEW (Nitrogen Loss Estimation Worksheet) program. This is an empirical tool that calculates an estimation of the nitrogen loss from agricultural land and this is done on an aggregate level by county. It takes into account things like number of acres of agriculture, the types of crops that are being grown, the amount of fertilizer that is being applied to those crops and different BMPs that are being used. So those technicians go out each year into these various counties and tally up all this information and use this NLEW tool to calculate the estimated nitrogen loss. It's compared to what the nitrogen loss estimated for the baseline and we come up with this reduction in nitrogen loss estimation. Agriculture in the Neuse continues to exceed their 30% reduction goal. I have the 2008 numbers for comparison. In 2008 they reduced their nitrogen loss by 41% and they were actually doing an even better job in 2009 achieving 44% reduction relative to the baseline. Lenoir County is the lone county that has struggled with achieving its goal. They are one of the few counties to actually see an increase in the amount of agriculture crop they have relative to the baseline. So they've seen some challenges in trying to get the overall reduction but the Division of Soil and Water technicians continue to work with them and the local advisory committee to make an increased effort to get the BMPs on the ground and additional nutrient management to work toward getting that 30% reduction goal. There is a breakout table on the EMC website that shows the various factors that played how those reductions are achieved. Essentially through Best Management Practices that are implemented. A really big one in the Neuse is fertilization management. This is both through education and economics for folks to just put down less fertilizer. Crop shift is shifting from high nitrogen crops like corn to low nitrogen crops like soy beans. Then there's this crop lost to conversion to grass and trees whether through conservation or some sort of mitigation projects and cropland goes idle or it's lost to development. So in the Neuse a large part of the reduction is through fertilizer management followed by BMP implementation and a cropland loss to idle undeveloped land. The Tar Pam continues to exceed their 30% reduction. They actually achieve the same level of reduction in both 2008 and 2009 at 50%. Some of the numbers like in Vance County for instance are considerably high at 76%, and that's largely due to the fact that only a small portion of Vance County is in the Tar Pam. So the reductions that they get are magnified because there's just not that much cropland. It's kind of a small percentage to begin with. Thirteen out of the 14 kinds actually exceed a 40% reduction so they continue to exceed their required reduction level.

Fertilizer management plays the largest role at 20% of the 50% reduction followed by BMP implementation in a crop just at 11% each. As I mentioned earlier the Tar Pam also has the added requirement of no increase in phosphorus relative to the baseline. Due to the unique nature of phosphorous loss which is much different than nitrogen. Back in 2005 a group was formed to try to develop an accounting tool. It was determined at this time that the best methodology was this qualitative approach to track phosphorous loss. That was approved by the EMC in 2005. What this qualitative approach does is look at these nine different factors, the number of animals in the basin and the number of phosphorous pounds generated from the

waste of those animals, the different BMPs, the number of crops, soil test P, and basically assigns a positive or negative in terms of whether it's an increase in the risk of phosphorous loss relative to the baseline. Based on analysis of those nine metrics the BOC found that there's no great increase in phosphorus loss risk relative to the baseline in 2005. The BOC will also continue to monitor these transfer future reports. We have to also note that the PTAC formed this original qualitative tool. We will be meeting in the near future to discuss different sources of animal data that's used because in the past two years there has been some challenges in getting certain animal numbers that are needed to do this PTAC analysis. Some future steps that river basin technicians that work on both on this and Tar Pam and the Division of Soil and Water will continue to encourage BMP implementation throughout those two basins. My power partner from the Division of Soil and Water is very active in meeting with the technicians, the different local advisory committees and the various counties to do outreach and education and identify additional reduction opportunities. Some targeted outreach that will be going on in the next year, probably getting back to my earlier presentation are the Falls Lake Nutrient Strategy that ag calls to get additional reduction so these technicians from Soil and Water will be working with those communities to get them working toward those overall reductions that they need to get. There's going to be some work group meetings to talk about management of the water control structures, looking at some new data about getting different reduction efficiencies based on how the water control structures are managed and that will be reflected in the NLEW once that work is done in the future. Obviously as I pointed out with the case with Lenoir County it will be this increased focus on counties that aren't meeting that 30% goal.

In conclusion I just wanted to acknowledge all the various parties that partake in these reports and the BOCs and particularly the river basin technicians, the Division of Soil and Water, and the others listed.

**Dr. Peterson:** I got a question and a couple of traditional annual annoying comments. The question is when you give the overall basin percent reduction, is that a weighted average weighted by the amount of land mass in each county that falls in the basin or is it a pure average that doesn't really reflect what their flow with a full basin percentage reduction is? You gave tables for Lenore, Wayne, etc. and then down at the bottom percentage reduction on the bottom. You can get that percentage by averaging each of those counties but one of those counties is 82% of the area and so is theirs to be weighted that way compared to the others to get a full basin-wide reduction. So my question is was it weighted or was it not?

**John Huisman:** I am fairly confident that this is a weighted average that we're presenting here. I can verify that.

**Dr. Peterson:** Ok. You raised the issue relevant to Vance County or something in the sense that it did not have much contribution to the total. Then I think it's at best misleading to include in the agriculture reduction land that got turned into development. It's essentially taking out some of the base on which it's computed. So my thought would be that it would be a better number to say if a land is in agriculture what is the percentage reduction in nutrient, nitrogen in that case that's coming off of it or at least give it in both ways.

**Tom Ellis:** So if a city had 100,000 people and 20,000 left you wouldn't give them credit for reducing the nutrients coming out of the wastewater treatment plant?

**Dr. Peterson:** No. If we convert farms into cities I don't give credit for agriculture practices being particularly improved, and it's agricultural fact this is practices we're trying to deal with. My other concern is that we have been an awfully long time awaiting to get some kind of atmospheric deposition of nitrogen into this equation so that we have a better feel for what the true nitrogen loading is that works its way into our watershed, some of which comes from agriculture.

**Tom Ellis:** When the baseline was prepared there was a certain amount of agriculture activity. As that land has been altered in some form or fashion whether it be converted to development or put into permanent grass, trees or other uses, it has reduced the amount of nutrients coming off of that baseline land area and this is what is shown in these. So it is no longer producing nutrients from agriculture.

**Dr. Peterson:** No it's not. Because you've got to add in the nutrients that then come off of development if you're comparing it to that original baseline.

**Tom Ellis:** And that switches over to the development folks who have not prepared a presentation for you.

**Chairman Smith:** We are going to move into what I asked to be particularly brief reports by the committee chairs.

### **III. Status Reports by EMC Committee Chairmen**

#### **A. Water Allocation Committee Mayor Darryl Moss, Chairman**

The Water Allocation Committee met. We had one action item which has already been dealt with today so I will leave it at that.

#### **B. Water Quality Committee Dr. Charles H. Peterson, Chairman**

Bunch of items one of which stood out. The one that stood out was talking about draft rules that have been long, like a year in the making for chlorophyll-a thresholds as a means of trying to preemptively deal with water bodies that were threatened with breaking the standards and then coming on our 303d list for chlorophyll-a. We had a very long and in depth discussion of this and we didn't make much progress with what staff had prepared and really we have to go back to the drawing board on a lot of points. Hopefully we will see that back and be able to get consensus that we need to move forward. It's just a tough issue when there are costs involved to local communities to try to nip problems in the bud. What we don't have, for example are very compelling financial data on whether that will save costs downstream as we actually reach the 303d list and are called impaired. So there were then just summarizing what was an in depth discussion but it was a disappointment to staff and to probably most of us that we simply didn't have in place what we thought would pass review on Main Street. I trust we'll hear more of that but in the near term the directions where we go with that need to be rethought.

**The Groundwater Committee did not meet.**

### **C. Air Quality Committee**

**Marion Deerhake, Chairman**

We heard two of our three air quality hearing officers presentations and we also received an information item on the state's position regarding the amendments to the ozone national ambient quality standards which are expected to be promulgated this summer.

### **D. Renewable Energy Committee**

**Dickson Phillips, Chairman**

We wedged in a meeting of renewable energy between a long running water quality meeting and Falls Lake hearing officer meeting which I was anxious to try to get to so I could get home by my appointed hour. But we heard two information items, basically one from Duke Energy on their poultry waste and swine waste procurement for purposes of the Drex Law. We heard a report from Sam Watson and from the Utilities Commission reporting on the Utilities Commission's decision to interpret renewable energy resource under Senate Bill 3 to include wood harvested as whole trees for the purpose of generating electricity. We agreed that presented back to us the obligation we have under the statute to consider whether there are regulatory requirements that did not currently exist that should be considered to address harvesting of whole wood. We are currently without staff support but when we get the staff support my intention is to bring back to our committee in summary form some of the information developed through the Technical Advisory Group last year so that we can revisit and have it considered within our committee what may be required.

**Ms. Deerhake:** Mr. Chairman, I'm sorry. I need to correct myself. The ozone standards are to be promulgated in December. I said summer.

**The Steering Committee and NPDES Committee did not meet.**

## **IV. Concluding Remarks**

**John Curry:** I have a real quick one in the form of housekeeping and I just wanted to kind of do an open survey here. I wish in these very large contested case records such as we had today that was some other way of indexing the documents. Basically what they are doing is just taking the sheet that is required and checking off. I find it difficult when there are a thousand pages to go back and find the document. Maybe there's a way to do it and I'm missing it. Do others have that same issue? If there were a better indexing system and we wanted to go to "Respondent's Summary Judgment Motion" quickly we could do it.

**Chairman Smith:** I've had the same thought and I appreciate you bringing it up. Usually by this time most of the meetings are over. I let it go aside. I invite you to have a conversation with Mr. Crawley and explore that. I see Frances shaking and nodding her head behind you. We will see what we can do about that.

**Coleen Sullins:** Other than just say thank you for all the hard work on the Falls Lake, I feel that I should state that. I do want to recognize Rich and John in particular. They did a spectacular job, a yeoman's job in a very incredibly tight timeframe, and the hearing officers as well. We did up to eight hours worth of meetings after they had already had a portion of their work day consumed by what they're actually paid to do. I just wanted to express my appreciation for that.

**Sheila Holman:** I only have two quick things. Since our last meeting I think most of you know this but I just wanted to make sure that everyone does. I did make the offer of the Deputy Director position in the division to Mike Abraczinskas and he accepted. He began his new role on October 18<sup>th</sup>. I also wanted to mention that Joelle Burleson's group is still down two engineering positions. I did want to recognize her efforts especially over the last few weeks in dealing with an Executive Order 70 as well as the various rules. I know she was probably the last one out of our building many nights. She's not here in the room right now but I do want to recognize her efforts as well as the staff that she does have. I think they have done a great job. I also wanted to thank our two hearing officers for the work on the three rules that you all have done. I know you all put a lot of work and energy into it so thank you.

**Frank Crawley:** no remarks.

**Chairman Smith:** The only thing I'll say is to thank you all for your presence, commitment and time today in a very full agenda. We got a lot done. I also wish you a safe and happy holiday. Hearing no further comments the meeting adjourned at 4:40 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 AG11-18-10