



ENVIRONMENTAL REVIEW COMMISSION

February 10, 2016

Room 643

The Environmental Review Commission (ERC or Commission) met on Wednesday, February 10, 2016 at 9:00 AM. The meeting was held in Room 643 of the Legislative Office Building. Members present were: Co-Chairman Senator Trudy Wade, Co-Chairman Representative Jimmy Dixon, Co-Chairman Chuck McGrady, five Senators, Representative Rick Caitlin, Representative Pricey Harrison, Representative Bob Steinburg, Representative Larry Yarborough, and Representative Mike Hager.

Senator Trudy Wade presided.

Senator Wade called the meeting to order and recognized the Sergeant-at-Arms for the meeting as Young Bae, Billy Jones, and Jim Morton from the House, and Donna Blake, and Hal Roach from the Senate. Senator Wade recognized Co-Chairman Representative Chuck McGrady, and Co-Chairman Jimmy Dixon.

Senator Wade read the first item on the agenda as a discussion of the disposal of solar panels, and invited remarks from Representative Dixon.

Representative Dixon gave a brief history of two stakeholder meetings that were previously held on the topic of solar panel disposal. Attending these meetings were members of the League of Municipalities, Association of County Commissioners, Duke Energy, Strata Solar, FLS Energy, NC Sustainable Energy, NC Farm Bureau, House Speakers' Office, Waste Industry, NC Grange, NC Department of Agriculture, and others. The discussion was about the end of the life cycle for solar facilities, and the current and future plans to dispose of the solar panels.

PRESENTATION 1 - Discussion of the disposal of solar panels – Mr. Tom Reeder, Assistant Secretary, Department of Environmental Quality (DEQ), (**Attachment 1**).

Senator Wade introduced Mr. Reeder. Mr. Reeder began with a status report on the solar industry in North Carolina, which as of 2015, ranked fourth in the nation in solar generation, installed capacity (1300 MW), and first in the nation in growth. Mr. Reeder described a 1,400 acre solar installation in Edgecombe County that is the largest facility east of the Mississippi. Mr. Reeder noted that although we have a large number of solar installations in North Carolina, there is very little regulation for the solar industry in North Carolina. The only permit currently required for most installations is a sedimentation and erosion control permit. There is currently no requirement for an environmental impact study, a disposal plan, or a restoration plan, which are required in most states and in Europe. Mr. Reeder pointed out that there is no plan for the collection, transport or recycling of the 250 million pounds of photovoltaic panels that exist in



North Carolina, when they are no longer useful. Mr. Reeder's presentation (Attachment 1) is attached at the end of these minutes.

PRESENTATION 2 - Discussion of the disposal of solar panels - Mr. James McLawhorn, Director, Electric Division, Public Staff, Utilities Commission, (**Attachment 2**).

Senator Wade introduced Mr. McLawhorn. Mr. McLawhorn explained that the Public Staff of the Utilities Commission represents the "using and consuming" public served by North Carolina public utilities, and is comprised of a staff of engineers, accountants, attorneys, economists, and complaint analysts. The Public Staff of the Utilities Commission is responsible for the issuance of a certificate of Public Convenience and Necessity for any solar facility of 2 mW or greater before construction can begin. Mr. McLawhorn explained this process in great detail and pointed out that the trend for applications peaked in March of 2015, and that there are 114 applications currently pending approval. Mr. McLawhorn explained the Interconnection Queue Process, in detail, citing examples of Duke Energy's average length of time, from initial application, until process completion. Mr. McLawhorn's presentation (Attachment 2) is attached at the end of these minutes.

PRESENTATION 3 - Discussion of the disposal of solar panels – Ms. Maggie Clark, Interim Director, Government Affairs, North Carolina Sustainable Energy Association (**Attachment 3**).

Senator Wade introduced Ms. Clark. Ms. Clark began by explaining that the North Carolina Sustainable Energy Association is a non-profit which seeks to provide affordable, accessible, clean energy that benefits all North Carolinians. She pointed out that North Carolina has 1,700 mW of installed solar energy capacity. Ms. Clark stated that local governments have regulated all of these projects through permits and zoning. Additionally, several of the solar companies provided decommissioning language to local governments. Also, Ms. Clark spoke about the quality control issues regarding the solar panels. Ms. Clark's presentation (Attachment 3) is attached at the end of these minutes.

PRESENTATION 4 - Discussion of the disposal of solar panels – Dr. Ricky Sinha, Director of Sustainable Development, First Solar (**Attachment 4**).

Senator Wade introduced Dr. Sinha. Dr. Sinha stated that First Solar is the largest manufacturer and recycler of solar panels by revenue. They began recycling solar panels in 2005. The recycling process involves the use of hammer mills to crush the panels, then the application of acids and peroxide to clean the small pieces, so that the glass and semiconductor product may be reused. Dr. Sinha indicated that they are currently in their third generation of recycling and use a continuous line. This technique has reduced the overall cost to recycle the solar panels by one fifth of the original cost. Dr. Sinha mentioned that the newest solar panels may be recycled without any toxicity because the film is very thin and is considered non-toxic. Dr. Sinha's presentation (Attachment 4) is attached at the end of these minutes.

Senator Wade opened the floor for any questions or comments.



Representative Dixon asked Mr. Reeder if the Department of Environmental Quality has any handouts on the relative toxicity and the degree of problems with solar panels. Mr. Reeder responded that there are many types of solar panels and they would have to do some research to provide that information. Representative Dixon asked if discussions had ever been held before in North Carolina on this topic. Mr. Reeder responded that to his knowledge this was the first discussion other than the Committee meeting during last session.

Representative Dixon asked Mr. McLawhorn if he could provide data showing the number of acres required to produce a megawatt, and the number of pounds of panels on an acre of land. Mr. McLawhorn was did not have that information available. Representative Dixon asked the same question of Ms. Clark. Ms. Clark answered that it would take four to six acres of land to produce one megawatt. Ms. Clark was unable to answer the question about the number of pounds of panels to produce a megawatt.

Representative Dixon suggested to Ms. Clark that more information was needed in this area. Representative Dixon asked Dr. Sinha if he considered his small scale recycling process a potential model, for the future of large scale solar facilities. Dr. Sinha stated that the next generation of their process will be a mobile version, and it would be moved from project to project, increasing efficiency and lowering cost.

Representative Dixon asked Frank Marshall with FLS Energy, about the decommissioning language in all the contracts regarding disposal of the material in the panels. Mr. Marshall indicated that their decommissioning language agrees to bring the land back to its original condition prior to the project, and their business plan counts on the recycling of the panels as future income. Representative Dixon stated that he was generally pleased with the protection for the landowner but is not sure that all the costs of clean up are known, especially in the event of a sudden drop in the market for recycled metals. Who would pay to clean the project up if there were a significant cost for cleanup? Mr. Marshall stated that their goal is to create a long term relationship with the property owner. Recent events demonstrated that, despite the current depressed market for metals, damaged panels were still recycled. Representative Dixon stated that he was pleased with the discussion today, and the previous stakeholder meeting, for the decommissioning of solar panels.

Representative Hager asked Mr. Reeder whether DEQ had done any evaluation of the toxicity of cadmium and tellurium products in these panels? Mr. Reeder stated that DEQ had not done any investigation in those products. Representative Hager stated his concern was due to their toxicity, which ranks sixth, on the list of most toxic materials to humans. Representative Hager urged DEQ to look at this situation. Representative Hager asked Mr. Reeder if this was also connected to the issue of people discarding old electronic devices. Mr. Reeder stated that it was a disconnect to make people discard old electronics in a lined landfill, but not require 250 million pounds of solar panels to have any disposal plan.



Representative Hager asked Ms. Clark about the requirement, in the sample decommissioning contract, to restore the land to its original state including trees and plants. Ms. Clark suggested that this be addressed to each individual solar company because the contracts varied from company to company.

Representative Hager asked if anyone knew what would happen, in 15 to 25 years, if a solar company had issues and could not meet their financial responsibility. Mr. Reeder stated that this was a very real concern, and out west on federal land, a bond was required for financial guarantee. Mr. Reeder believes that land in eastern North Carolina is just as valuable as land out west, and therefore, a bond should be necessary. Representative Hager asked Mr. Reeder if the property owner would become legally obligated to clean up the solar panels, if the solar company went out of business? Mr. Reeder was unable to answer the question. Senator Wade asked Mr. Reeder to investigate this issue and bring recommendations back to this Commission.

Senator Rabin asked Mr. McLawhorn if an application is received, processed, and approved at the state Utilities Commission, what authority does the local government have to approve or disapprove the application? Mr. McLawhorn stated that local governments had some authority for zoning these projects but he was not an expert in this area.

Senator Rabin asked Ms. Clark if the solar company had an idea of the original land condition, so that when the project was no longer in operation, the company had the knowledge necessary to restore the property to that original condition? Ms. Clark stated that this would vary according to each solar company. However, she was familiar with one company that hires a scientist to document original land condition at project inception. Senator Rabin encouraged the Commission to look at this issue more closely and asked Mr. Reeder if the State should suspend future permits until some of these questions are answered? Mr. Reeder pointed out that it was not his decision, but in light of recent issues, it may be better to be proactive rather than reactive.

Representative McGrady asked Mr. Reeder why he would call for more regulation, in light of the fact that local governments regulate solar panels, to some extent, through this model solar contract template. Mr. Reeder suggested that most issues such as this are not seen by the State until they become large problems, such as coal ash. By that time, a local government would expect the State to handle the problem.

Representative McGrady asked Ms. Clark to comment on the use by local governments of the model solar template. Ms. Clark mentioned that she and her office had discussed the template with each county and had spoken with several local governments regarding zoning and permits. Representative McGrady also said that in the recent stakeholder meeting both, the League of Municipalities, and the Association of County Commissioners indicated no problems with the solar template. Representative McGrady disagreed on the comparison of coal ash to the decommissioning of solar panels because the panels have value after their useful life.

Senator Brent Jackson stated that the question by Representative Hager regarding the failure of a solar company to meet its financial obligations was a good one. Senator Jackson asked if one



of the solar companies would share their perspective on that subject. Mr. Marshall with FLS Energy spoke about the solar projects as recurring revenue assets with many investors and financing through large financial institutions. Mr. Marshall indicated that even if a company failed it was still an extremely valuable recurring revenue asset and the bank that provided financing would assume ownership.

Senator Jackson asked Mr. Reeder what toxins were they most concerned about coming from these solar panels. Mr. Reeder named cadmium and tellurium, crystalline silicon, and copper indium diselenide. Mr. Reeder admitted that more research was needed to understand the threat to the environment for each of these materials.

Senator Jackson mentioned that some of the metals in the solar panels had great value at the end of their usable life as a solar panel.

Senator Alexander asked Dr. Sinha what was the average life of a solar panel? Dr Sinha responded that the warranty for solar panels is 25 years. Senator Alexander asked how there could be much recycling with solar panels lasting so long. Dr. Sinha agreed that there was not much, “end of life” recycling, however, there is a great amount of scrap recycling from the manufacture of new solar panels. Senator Alexander asked if a tornado damaged a solar complex could the panels be recycled? Dr. Sinha answered yes and pointed to the experience described by Mr. Marshall as an example.

Representative Yarborough asked Mr. McLawhorn if the Utilities Commission tracked the solar installations under 2 mW? Mr. McLawhorn answered that they do have that information, but did not bring it to the meeting today. Representative Yarborough pointed out that the map showing the county ordinances clearly shows that the counties without regulation of solar projects, have the most solar installations. Representative Yarborough felt this system of regulation is not very sophisticated and cited Granville County as an example where they wrote an ordinance based on appearance because a solar farm was built beside a current county officials’ farm.

Representative Harrison agreed with comments made by Representative McGrady, and Senator Jackson, regarding the inappropriate comparison of solar panel toxicity to the abundance of coal ash waste. Representative Harrison noted that last year the General Assembly repealed the [State Environmental Policy Act](#) which may have provided more review of solar applications than are being called for today. Representative Harrison also pointed out that there were several very poor counties that benefit today by having solar projects.

She asked Mr. McLawhorn, what is the number of solar panel project applications never completed? Mr. McLawhorn, stated that the number is less than 50 percent. Representative Harrison asked if someone from Duke Energy could speak to their process for decommissioning solar projects. Mr. Ken Jennings, with Duke Energy spoke to the process of decommissioning on all of their solar projects. Mr. Jennings briefly described the process from application, and



project plan, to disconnection, removal of all equipment and panels, recycling the metal and panels, and the biological restoration of the original plants and animals.

Senator Rabin commented that we should also address what happens with people buying solar panels for their homes and how this should be handled at the “end of life” for those panels.

Representative Hager commented that we have heard today how valuable the leftover materials are when the solar panel is complete. Why would requiring recycling of those materials be considered a burden?

Senator Smith commented that she represents the two counties most affected by these regulations, and she wanted everyone to know how construction and leasing the land is an important economic impact for these counties. She also echoed the comments of Senator Jackson and Representative McGrady that we not go too far too quickly in regulating this industry.

Senator Wade asked Mr. Reeder to comment on her opinion that his analogy to the coal ash situation may have been taken out of context. She felt Mr. Reeder was trying to be proactive and we are expecting DEQ to do the necessary testing to see if these solar panels have toxicity and what we should do about them. Mr. Reeder offered an apology to Representative McGrady and Representative Harrison if he had offended them. No one thought coal ash was a problem in the 1950s, the 1970s, the 1980s, up to as recently as 2013. Mr. Reeder wants to be proactive on solar panels so that his predecessor does not have to deal with a problem 25 years from now.

Senator Wade asked if there were any audience members wishing to speak to this item. Hearing none, she asked for closing comments on this item from the Commission members.

Senator Jackson asked Dr. Sinha where his company got the 140,000 metric tons of material to be recycled? Dr. Sinha responded that the business began 15 years ago in Europe where they were the first to see “end of life” recycling. As they are a very large manufacturer of solar panels, the manufacturing process produces a large amount of waste that can be recycled.

Senator Jackson asked what problems with toxic materials they have in the recycling process. Dr. Sinha described extensive controls for dust generated in the crushing of the panels, on-site control for wastewater treatment, and metals.

Representative Dixon commented that the discussion on the issue of “end of life” solar panel disposal has been excellent and disciplined. There are some questions that we do not know the answers to but we must be proactive as we plan for the future.

PRESENTATION 5 - Discussion of whether post-construction stormwater management measures are necessary outside of certain areas – Mr. Tom Reeder, Assistant Secretary, DEQ, (Attachment 5).



Senator Wade introduced Mr. Reeder. Mr. Reeder explained that runoff comes from rainwater on roofs, driveways, roads, and parking lots. Runoff contains certain pollutants such as nutrients, heavy metals, and oils and grease. Mr. Reeder explained the process of control and treatment of stormwater runoff in post-construction areas, sensitive water areas, nutrient sensitive management strategies, and development density. Infiltration devices are required such as wet ponds, and bioretention cells to soak stormwater into the ground to address pollution and flooding issues.

Mr. Reeder discussed 401 Certification by the federal government for any impacts to streams or wetlands. Mr. Reeder indicated that there are questions moving forward as they regulate stormwater runoff compared to other states and the costs associated with stormwater management. Mr. Reeder's presentation (Attachment 5) is attached at the end of these minutes. Senator Wade asked if there were any comments or questions of Mr. Reeder?

Representative Yarborough asked if these requirements are due immediately following construction, required when you get your permits, or going back on developments in place for many years? Mr. Reeder explained that they do not go back on existing development unless it is part of a nutrient sensitive strategy in a specific area. If you develop more than an acre, you must develop a sedimentation and erosion control plan that regulates the stormwater runoff, while you build your facility, with temporary controls. Once you complete construction, you then have post construction controls that treat your runoff forever. All of the controls are permitted and designed before construction begins. Mr. Reeder clarified for Representative Yarborough that the 401 Certification was a rule and not a statute.

PRESENTATION 6 - Discussion of reduction or elimination of riparian buffer requirements in intermittent streams – Mr. Tom Reeder, Assistant Secretary for the Environment, Department of Environmental Quality (**Attachment 6**).

Senator Wade introduced Mr. Reeder. Mr. Reeder began by explaining that riparian buffers have been his most controversial issue. A riparian buffer is a strip of forested or vegetated land bordering a body of water. Buffer zones are usually 50 feet with the first 30 feet adjacent to the stream, composed of undisturbed forest vegetation, and the remaining 20 feet composed of managed vegetation. Mr. Reeder explained that buffers serve to stabilize the landscape trapping nutrients and sediments before entering the stream or pond. They also serve a thermal function by shading the stream. Mr. Reeder described the management strategy for buffers on the Tar-Pamlico river basin and the Neuse river basin. Since the early 1990s land was legally mandated to be taken from private landowners in these basins to manage nitrogen and phosphorous in stormwater runoff in these nutrient sensitive basins. A total of 98 square miles of land was taken in the Tar-Pamlico river basin, and 137 square miles in the Neuse river basin. Mr. Reeder said based on the 2013 scientific results of nitrogen flow in both the Neuse river basin measured at Fort Barnwell, and the Tar-Pamlico river basin measured at Grimesland; there is not a decrease in overall nitrogen level. Mr. Reeder asked is this still worth regulating? Mr. Reeder's presentation (**Attachment 6**) is attached at the end of these minutes. Senator Wade asked if there were any comments or questions of Mr. Reeder?



Representative Harrison stated that she had been trying to keep up with these buffer protections for the last two decades and believe we rolled back some of the protections in the [Regulatory Reform Act of 2015](#) (HB 765). Mr. Reeder pointed out that more stringent rules were passed in 2008, for the coastal areas. HB 765 only authorized the study of those rules and their net improvement of the coastal biology. HB 765 called for mitigation only if the federal government called for it. Under federal rules, there are only important or unimportant streams which closely follow our state system. The net effect is very little difference. Representative Harrison said she still remembered fish kills around New Bern and she hoped we remember other issues like reduction of sediment and shade for the reduction of the thermal effect, in evaluating the success of buffers; not just nitrogen reduction.

Representative Yarborough said when he was in the woods and observed a stream with exposed dirt beside the water, does the buffer keep the dirt out of the lake or pond? Mr. Reeder said that the theory is that heavy vegetation in a buffer is the ideal method, however, he wants this to work or we should not take private property to do this. Other states do not do this and so we need to make sure this system works.

Representative Dixon pointed out that the estimated total land taken for buffers in these two basins represents by his calculation 150,000 acres. He also mentioned that unless we do something about the beaver infestation east of Interstate 95, there will be an environmental disaster. Representative Dixon asked Mr. Reeder if he knew of the "[Waters of the United States](#)" plan? Mr. Reeder said that he understood if that plan were enacted in North Carolina, all property east of Interstate 95 would be considered federal land, and under federal jurisdiction.

Senator Smith asked Mr. Reeder if DEQ intended to come back with additional studies of what was discussed here today? Mr. Reeder answered yes.

PRESENTATION 7 - Discussion of nutrient management in reservoirs, Falls Lake Rules, Mr. Forrest R. Westall, Sr. Executive Director Upper Neuse River Basin Association, and Mr. Jim Wrenn, representing the stormwater utility of Granville County, Person County, Town of Butner, Town of Stem, City of Creedmoor (**Attachment 7**).

Senator Wade introduced Mr. Westall, who introduced Mr. Wrenn. Mr. Wrenn began by giving a brief history on the formation of the Upper Neuse River Basin Association (UNRBA). The UNRBA was formed in 1996 due to concerns about the future water quality of Falls Lake. Over time the association changed from a small group concerned about the lake, to a multi-jurisdictional group concerned about the entire basin. The original goal was to lower nitrogen levels by 20%, and phosphorous levels by 40% in Falls Lake. The UNRBA is considered one of the strictest water regulatory associations in North Carolina. Through cooperative regulations and enforcement, the UNRBA provides the primary source of water for one jurisdiction, provides water quality management, set goals for development nutrient reductions, enforces Stage 1 and Stage 2 requirements, and offers a forum for consensus principles among the members. Mr. Westall began his presentation by describing Falls Lake as a “drowned river”,



created to provide flood control but forced into serving as the primary source of drinking water for the City of Raleigh.

Mr. Westall described other features of the lake and upper basin and spoke to the expense and technology necessary to control the nutrient sensitive basin. Mr. Westall said the UNRBA has evolved over time, to become more than just a forum for concerned residents and jurisdictions. Mr. Westall said the UNRBA is about a balanced, cost effective, economic, reasonable approach to improve water quality in the lake. The financial burden to achieve these goals is \$1 billion and must be based on good science, and reasonable actions. Mr. Westall's and Mr. Wrenn's presentation (Attachment 7) is attached at the end of these minutes. Senator Wade called on Mr. Reeder for his presentation.

PRESENTATION 8 - Effectiveness of nutrient management measures in reservoirs, Mr. Tom Reeder, Assistant Secretary, Department of Environmental Quality (Attachment 8).

Mr. Reeder began his remarks by pointing out that local governments are on a course to spend \$1 billion for Falls Lake and \$1 billion for Jordan Lake because there is too much algae in the water. Mr. Reeder pointed out that both of these lakes were manmade, and everyone from the federal government, the state government, the local government, and everyone else knew that these lakes would always have high rates of algae in them. But they were built anyway to provide drinking water for the growth and economic development in these areas.

Mr. Reeder said he hopes that these billion dollar plans will work to reduce algae, but the science does not support this plan. Mr. Reeder continued with a discussion about nutrient management, including total maximum daily load (TMDL), point source and non-point source pollution, and the success rate for TMDLs in the U.S. Mr. Reeder explained in some detail the latest findings from a study of nitrogen and phosphorus levels from 1990 to 2013 in the Neuse and Tar-Pamlico River basins. Mr. Reeder's conclusion from the data is that there is little difference in the result of regulation during the period; and no improvement. Based on this study in North Carolina and the fact that few if any other states are seeing improved nutrient levels through regulation, the science is not there to support this high cost of regulation. Mr. Reeder's presentation (Attachment 8) is attached at the end of these minutes. Senator Wade opened the floor for comments and questions.

Representative Harrison stated that she appreciates the information but we are not having the fish kills so it seems something is working on the Neuse River. I know years of data and stakeholder meetings must have been used to develop the current strategies. Were we wrong? Mr. Reeder replied that this is debated all the time, by staff, and the conclusion is that what seems to work in theory on a small scale, is not working on a macro basis due to many factors.

Representative Harrison continued by asking if the delay in implementing the Falls Lake or Jordan Lake rules will cause a problem with the federal Clean Water Act (U.S. EPA). Mr. Reeder said that the Clean Water Act is based on the TMDLs which are not working anywhere, so he doubts that the federal government could do anything anyway. Mr. Reeder welcomed the



U.S. EPA to show us how to reduce the algae in Falls or Jordan Lakes and he would do it. Unfortunately, the problem is that the U.S. EPA doesn't know what to do either.

Representative Harrison asked if changing the non-point source requirements or point source requirements would do any good? Mr. Reeder said we are at the limit of technology and he did not believe there was anything else we can do.

Representative Yarborough asked about the state chlorophyll a standard which exceeds the federal Clean Water Act. Does this mean that because we exceed a state level we are considered "impaired" at the federal level? Mr. Reeder answered that is correct. North Carolina cannot increase that standard. Representative Yarborough commented that the \$1 billion needed for Falls Lake, a lot of which comes from the special stormwater tax, was put on these local governments at the same time we destroyed the value of the land they needed to tax and develop, in order to raise that money. So it is a big catch-22 that doesn't seem to be working.

Representative McGrady asked Mr. Westall to comment on Mr. Reeder's presentation. Mr. Westall stated that he had worked with Mr. Reeder for many years. Mr. Westall believes that buffers are a very charged issue. If buffers can be done without removing the use of property, they are a very common sense thing to do. Mr. Westall ended by saying that buffers do have impacts and costs, and more research is needed to strike the proper balance between property rights and protection of the streams.

Representative Dixon pointed out that there had been great success in eastern North Carolina where livestock agriculture had proper size and location of buffers. Mr. Reeder echoed those comments by saying that a United States Geological Survey study determined that livestock operations were not in violation of standards, and where buffers were used, the water downstream appeared cleaner with buffers than without, in agricultural areas.

Representative Yarborough said that Mr. Westall talked about developing nutrient credits and increasing the tool box of best management practices (BMPs). How much progress is being made, and are there smaller examples like running your gutters into the yard rather than the street? Mr. Westall responded that the result of a lot of small impacts is a large impact. They have been pleased by the increase in participation from homeowners, homebuilders, green infrastructure, and smaller basins. Representative Yarborough asked if there was good cooperation with his association and the State. Mr. Westall answered yes. They recently received \$50,000 from the State and have asked for another \$20,000. The State participates in their association meetings on a regular basis.

Senator Wade opened the floor for two to five people, for two minutes each, to speak if they would like to address the Commission at this time.

Mr. Tom Bean, representing the Environmental Defense Fund and the North Carolina Wildlife Federation, began by sharing the history of buffers in the Neuse estuary. He pointed out that it was an effort to include everyone in a solution that considered the costs, the politics, and to share



the pain equally: city wastewater treatment improvements, landowner buffers, and agriculture goals. Mr. Bean encouraged the State to take careful consideration before making any changes solely for cost benefits.

Mr. Matthew Starr, Upper Neuse Riverkeeper, stated that buffers on intermittent streams are very efficient at removing nitrogen from the streams. He believes that the data from the Fort Barnwell study was grossly inaccurate and that science overwhelmingly shows that buffers are key to reducing nitrogen. He believes we should keep the buffers.

Mr. Don O'Toole, Senior City Attorney, City of Durham, stated that Durham is a member of the UNRBA and the Falls Lake rules have not been delayed as was mentioned earlier. Stage 1 rules are in effect and waste water upgrades have been made by the member governments. He stated that the one element of the rules concerning existing development was delayed as officials determine how best to do this. Durham has spent millions on wastewater improvements, rain water measures for private homes, and building a regional BMP. Falls Lake is moving ahead.

Ms. Jennifer Dean, Wake Up Wake County, says she represents 7,000 members that are concerned about growth issues in Wake County. If the water in Jordan and Falls Lakes is not clean they will have to pay more for drinking water.

Representative McGrady commented that there is a lot to think about on buffers. What is DEQ thinking about for the Falls and Jordan Lakes, aside from the money saved by removing buffers? Mr. Reeder stated that if these non-point source controls are not working they do not provide any benefit for the lake anyway. Eventually, we may find out that it will be more expensive for Raleigh or Cary to treat their drinking water, but I do not believe that their water ever gets to where it is unusable. One billion dollars for each lake is a lot to spend with no results.

Representative McGrady asked if there was anything else DEQ would do to maintain the lakes for drinking water? Mr. Reeder said it may never be possible to comply with state or federal law. These lakes were built knowing that they would always have an algae problem and are in violation like so many lakes in the U.S. As regulators and leaders in North Carolina, we have a responsibility to our citizens to make sure what we are doing is the right thing overall. There is no sense in doing a lot of controls that do not work and cost lots of money.

Representative Dixon commented on the good meeting and thanked the chair for running such a good meeting.



Senator Wade thanked the staff and visitors and reminded the Commission that the next meeting would be March 9th at 9:00am. In the Legislative Office Building, room 643.

There being no further business, the meeting adjourned at 11:56am.

Senator Trudy Wade
Presiding

Robert Mays, Committee Clerk