

Falls Lake Public Hearing – Durham 6/30/2010

Neal Middle School

200 Baptist Road, Durham NC

Question and Answer:

- (1) Frank Thomas, Home Builders Association: Create a document that breaks down cost and benefits by jurisdiction? Currently accounting tools do not exist to breakdown by jurisdiction, but we are working on an accounting tool for the Jordan Rules which can be applied.
- (2) Drew Cummings: Explain logic of NC DOT has a different reduction requirement than the local government jurisdictions? DOT requirements are different than existing development requirements, we have increased BMP retrofits over those in the Jordan Lake (6 minimum). Estimated contributions of DOT we accounted for in the DOT reduction requirements. Andy McDowell with NC DOT clarified: The 0275 rule applies to DOT just as all other local governments, 6 BMP are minimum threshold in the rules. The same reductions have to be met. Over reduction needs are required of DOT just as everyone else.
- (3) Granville County Commissioner: Has this group ever looked at the real problem: lake built in wrong place, poor planning, low holding capacity. Needs another dam at Cheek Rd. If dredged the turbidity problem would be addressed. Will something be done to address the physical problems with the Lake? Great ideas, but the cure is different from what you are planning to do. Muni are 20 years behind in technology. The lakes ability to hold the water is the issue, will it be addressed? That goes beyond the authority of DWQ, local governments have been involved in these talks, but Army Corp of Eng would be required to complete that task.
- (4) Bruce Harris: Turbidity is the question, depth issue above I-85. NH3 atmospheric deposition and its impact, is that something that has been researched? DAQ has been contact on this and there were estimates from air models used. What percentage of wildlife contributes to the impacts? We estimated loading from background sources into the lake, large area is forested so these areas likely captured contributes from wildlife to the lake. We looked at these as non controllable and redistributed the load reductions to those that can be controlled.
- (5) Steve Levitas: I am correct in the original estimate of \$3.2 Billion, wasn't there a discount used in those numbers? That was a very early draft and should not have been distributed. OSBM requires the use of net present value (NPV) and this was not used in the original version that you saw. Issue is methodology, the undiscounted, uninflated numbers are the actual cost to achieve this reduction. The numbers being presented are lower than the actual cost of implementation. Yes, unadjusted cost would be closer to \$3.2 billion. There is uncertainty in all calculations, projection 30 years in future it is difficult to project cost in 25 years. NPV is accounting tool and has no real mobility to these local governments, the actual cost is much closer to original cost.
- (6) Thomas Brown: Army Corp of Engineer. Rumors to dredge Falls Lake are to be dispelled. There will be no dredging of the Lake unless someone will donate land to make a mud mound. The volume of dredge material is too great for this to be feasible. Early 80s the shortfall was taken

into account and the water level capacity was increased. No question was asked – just a comment made.

- (7) Karen S, City of Durham. Where the same fiscal requirements required for Jordan Lake, curious? The emphasis has changed within state government that was required to provide values. Concern is do you think the values/cost are misleading? It seems like implication is that Falls Lake will disappear and no longer be useful to people. We had made it clear that the apparent values to Falls Lake was not additive to Rules of Falls Lake. Inherent value of Falls Lake need to be stated and that was our goal. The inclusion made it confusing.
- (8) Citizen of Durham. Could we do analysis of how development in watershed has benefited Durham verses the cost of this development to the impact to Falls Lake? Specially in critical watershed?
- (9) Planning Commissioner of Durham. Will this be present online. Is your net present value evaluated, it is difficult to compare apples to oranges.
- (10) Have you done any analysis to ag, development, local governments? We did cost to private citizens, local farmer, broken by different parties. So cost benefits, those that benefit the most going to pay the most? Or are those that are in the upper watershed going to pay the most? Creation of funding mechanisms is outside the scope of strategy.

Will recognize additional questions if time remains in the end.

#### Public Comments

- (1) Robert Jordan, Environmental Health Supervisor, Durham County Health Dept. Wastewater treatment and disposal in the county. We have septic tanks and sand filter systems in the county, 8,800 beyond reach of sewer availability. Tax values of 2200 properties that sewer available have tax values of less than \$100,000 and income of less than \$50,000. For those that can be hooked up, would result in a cost of \$50 million dollars. Three scientific research areas specific to soils in Falls Lake watershed is needed, numbers sited can not apply to watershed, limited research in Falls Lake seems to say that the problem from septic may not be there. Questions the science used in Falls Lake modeling process; must use sound science. Before spending millions of dollars which defies common sense, look at using optical brighteners which can id sources and quantify whether the problem is human waste or agricultural waste. Cannot afford this, must be remodel after stage 1.
- (2) Tom Bonfield, City Manager of Durham. Promote regional cooperation in this process. City of Durham has had the second serious nutrient management rule thrust upon them. Durham has already spent a lot of funds to protect Falls Lake, increased stormwater fees. New development rules already in place. These reservoirs were built without Durham's consent but we are shouldering burden. Still paying the bonds for North Durham treatment plan. The City has tight regulations, it just strengthened again N & P export rates, these are the toughest rules in the country. Stage 1 may not be fully based on truth fact and science. Durham has reached a historic consensus agreement and asks that the EMC add rule for re- examination before stage 2 and re-exam all standards of EPA guidelines, look towards Jordan Rules.
- (3) Jim Wrenn, Attorney for Granville Co., Person Co., SGWASA, Butner, & Creedmoor. Thank DWQ we reached a remarkable consensus on stage 1 rules. \$14 million to upgrade plants in counties. Not opposed to stage 1 or 2 rules. However, preliminary research indicates that the required

reductions may not be economically feasible. Will cost \$175million in our county (pt sources only), does address agriculture and other sources. Need third party to bring about feasible of stage 2 before implementation is required, it is essential because of consensus reached by local government. We need to review the consensus principle and allow for a formalized process to include additional input for stage 2 (mandatory review of stage 2). Stage 2 needs to be reasonable; Information today is not available to make these long term decisions.

- (4) Jack Steer, from a nonprofit , Durham citizen group for fiscal local government. Stage 2 issues in the unconscionably high shift in the standards required, this is outrageously bias, no one has ever been required to achieve these reductions. The people economically impacted receive no benefit what so ever, this could eliminate economic development in Durham and halt growth. The EMC need to step back and search for opportunity to protect Falls Lake that is sustainable.
- (5) Amy Poole, Rollingview Marina operator. Thank You. We have been on the lake everyday for the last 25 years, we have worked for 5 years to protect lake from trouble. Rollingview Marina and Falls Lake needs to remain for the future citizens of the area to enjoy. Since 1984 the lake has gone through changes, algal blooms, floods, drought, but beauty and serenity has remained. Lake is still in trouble, I started this fight to protect this lake for future generations, I am fighting to protect this lake for my grandkids. I implore EMC members to do what needs to be done to protect the lake now, carry out these regulations to protect the lake.
- (6) Mike Gering, Town of Hillsborough Commissioner. Hillsborough we honor and celebrate our resources and Eno River is regularly protected in the watershed. We want to protect the lake and watershed. We have serious issues with feasibility and frankly do not think we can implement these rules. 1.) Financial impact will be huge, \$266 dollars a month added to water and sewer bills. 2.) No proven technology exists to treat wastewater to meet reductions required. 3.) Nutrient allocations are not equally distributed across the watershed, Durham's allocation in stage 1 will increase, while Hillsborough will have to make great reductions. Hillsborough will be severely impacted. Needs to be based on technology limits.
- (7) Anne Coan, NC Farm Bureau, Director of Environmental Affairs. I have experience of farmers that I have passed on to DWQ. Keeping agriculture and forestry in this watershed is very important; this limits impervious surfaces. A local farmer from Granville County will be impacted, we strongly support some of the rules, but very concerned about stage 2, we have been highly successful in our past work in Neuse using the collective compliance process. Please work with us to keep us viable.
- (8) David Stancil, Director – Orange County Government. Written commits will be submitted. Orange County proud of history on watershed protection. 30 years our county has implemented standards that are higher than minimum. Treating at the source and meeting the needs if you will. Concerned over the 1 size fits all % reduction goals approach. This will be difficult for Orange County to achieve, Orange County believes that the current loading rates may require them to reduce runoff to below background. Further nutrient reductions will be difficult in our county. Suggested re-examination of stage 2 rules as recommended in the consensus principles. Concern about contributions of septic systems, they may be over estimated in the model, need to be looked at closely. Like to extent comment period to Sept.
- (9) Michelle Woolfolk, City of Durham Stormwater Services. Concerns of nutrient models in the rules. First time state used point based methodology to model watershed and establish reductions. A very large mistake was made to create Stage 2 goals, it is not supported at all in literature. A combination of monitoring goals. If a less restrictive, area approach had been used it would be clear that reduction could not be achieved. The area approach was standard until Falls Lake. Stage 2 calculation indicates a mistake was made because nonliving N and P was used, living N & P was not used therefore significantly inflated the required reductions, they

should be redone. Un-support by NC methods and any methods, a mandatory redo should occur before continuation of these rules.

- (10) Sara Knies, City of Durham Stormwater Services. Status of upper and lower Falls Lake; trend analysis by City of Raleigh's consultant and City of Durham found water quality is deteriorating in the lower segment of the lake near the Raleigh water treatment plant intake while the upper portion of the lake is stable. Stormwater services did not evaluate lower portion. Media states water quality is getting worse, but there is no scientific evidence of this.
- (11) Paul Welbke, City of Durham Stormwater Assistant Manager. Control nutrient at source during development. Durham has most stringent protection rules of the state in place; Water Supply Watershed Protection, NPDES compliance reports adopted in 2009, Jordan Lakes, P limits were also adopted. Impervious areas is dense. Fiscal analysis suggestion new technologies will need to be created before stage 2 implemented. Falls Lake should be reassessed before stage 2.
- (12) John Cox, City of Durham Water Quality Manager. Durham has requirements for new development that were recently passes. What to do about existing development. Development in Durham dates back to 1800s. There are no stormwater controls in old areas, 80% built out. In 2007, Durham started an Ellerbe Creek watershed plan, extensive field work and modeling (SWIM modeling) factoring bioretention and onsite projects, scenario on page 8, update wastewater treatment, total Ellerbe Creek watershed restoration cost estimated to be \$545 - \$600+ million and that would still not meet reductions required by the rules. Durham has included total retrofit cost and LID development, it is going to be expensive. Currently doing atmospheric deposition monitoring. Additional data will be available in the future for this watershed to adequate address issues of concern.
- (13) Karen Singular, City of Durham Attorney. Existing Development - modify Falls Rules to use exact language used in Jordan Lake rules. Existing development needs to be addressed; it is enormously expensive to do retrofits, need to recognize the huge cost and small gains, it will take more to address the issue; it may take as long to reduce the loading from existing development as it did to build the city. Jordan Lake legislation goals are more reasonable than those proposed for Falls Lake. The General Assembly took months to determine the appropriate language and this was not used for Falls Lake. Adopt existing development rule from Jordan, adopt Jordan principles to Falls rules, make changes we set out in the consensus Principles.
- (14) Donald Greeley, City of Durham Water Management Director. 1994 expansion cost \$46 million to address nutrient. It will take \$14 -17 million upgrade the North Durham plan + additional chemical cost to meet stage 1 rules. Increase biosolid disposal has not been included. This will result in an increase of 18% to customers. Stage 2 rules would require Durham to build drinking plant at back end of wastewater treatment plant at a cost of \$ 320 million. Our customers would spend 65-80% more. More robust data must be used for model for stage 2 assessment. Reassessment is required before stage 2. Rule should be reevaluated and not include actual reduction values.
- (15) Katie Kalb, Director of Public Works, City of Durham. Stormwater program uses satellite imagery to evaluate watershed. Will provide watershed assessment for March 10, 2010 to DWQ/EMC. Provided a long list of imagery results. Using GIS and remote sensing software, we included 1 mile buffer around Falls lake. % impervious in Wake County is 8.1%, twice as much as Granville and Durham County (4%). Imagery from March 10, 2010, demonstrate sediment plumes were clearly occurring in the lower portion (wake county) of the lake than the upper portion. This type of data and analysis should be used for stage 2 assessment.
- (16) Steve Levitas, City of Durham, Attorney (Kilpatrick Stocktin). Thanks to DWQ. Durham supports stage 1, but stage 2 needs to be re-examed. Chl-A standard for upper portion of the lake has to be recalculated. There are different chemistry, biotia, different uses. What do we get from

spending \$2 billion on stage 2? What are we protecting? Problem in the lake is the result of constructing the lake where it is. There are reason fish and different species are not present. It would not be possible to construct reservoir like Falls today, water quality certification could not be achieved. Most stringent limits in the state, the lake would not have been built if today. Chl a level were well above standard after building. Develop a site specific standard that can be achieved; Classify lower portion of the lake different in order to achieve goal.

- (17) Drew Cummings, Durham County , Assistant County Manager. Quoted DWQ documents indicating that there wasn't sufficient information for several items; page 67 line on septic loading, "not adequate" data. Measuring livestock and agricultural contributions are also relatively unknown. Meaning cost estimation may not be evaluated accurately. Millions of dollars to reduce P loading, we currently don't have the tools to quantify measured reductions. I am not saying lake does not need help, it does, Durham County has agreed to consensus principles, but billion \$\$ online, jurisdictions have money on the line and cannot afford. It is unfortunate that we have to have stage 1 but understandable, but unconscionable stage 2, we would like revision of stage 2, \$1.5 mandate on citizens, needs to make sure it is as well spent as possible. There are many other social issues that the city must spend funds on. Stage 2 must be reassessed, the rule must mandated reassessment before stage 2 and not have it as an option
- (18) Chris Robert, Durham County, Sediment and Erosion Control Manager. History of watershed water supply. City and County have adopted more stringent rules. Durham has a 1 mile impervious area around Falls lake, Wake County has 5 miles. Water controls and erosion controls adopted in 2009, exceeds the states upper Neuse River basin requirements. Long history of water quality protection. Durham County request rules be based on scientifically sound data.
- (19) Grady McCally, NC Conservation Network, Policy Director. Recommend Stage 1 be no longer than 7 years, it should not take more than 7 years to get back to baseline (2006). Benefits are severely underestimated, but cost are overestimated. Falls Lake cannot be reclassified; removal of uses for the lake is not legal. The Lake already as the lowest classification possible. No need to redo Existing Development rule, already has flexibility for economic feasibility built it. Water must be cleaned up as required by the Clean Water Act.
- (20) Don Yanavjak , Tax payer in Durham. N&O article, golden rule of water. Durham and Wake seem oblivious, Durham's water does not come from Falls lake but from Little River and Lake Michie. Durham is happy to have the state requiring greater restrictions on these watersheds, but downstream Durham's attitude shifts at Falls Lake. We want to protect our watersheds, but develop Wake County's watershed. Concerned that Durham is looking out for their own interest at cost to neighbors. Durham has known about the problems for decades. Durham is like a child stamping feet and refusing to clean up own mess. I speak for 750,000 that want clean water but don't raise our taxes to give developers a break for building. Why can't Durham be a leader here; Durham needs to attract responsible developers. Recommends use of smart growth techniques.
- (21) Tina Motley-Person, Citizen of Durham. There are technologies that will significantly benefit everyone. Treating stormwater onsite. Putting off Stage 2 allows Durham to continue to develop the watershed, which cause more damage to the watershed. How is the lake going to get better with fewer changes and increase development. EMC was to address this in 1990, but no rules were made, simply recommend General Assembly to address. \$150,000 study, above I85 was done and indicated that problems already existed. Steve Levitas was aware of this and Durham commissioned studies in their watershed. June 1980 report on Little River Watershed, 6% impervious surface will impact watershed health, therefore Durham has known for many

years that growth would affect water quality and ignored the issue when developing in the Falls Lake watershed.

- (22) Bruce Haverys. The downstream users should also be responsible for the treatment and protection costs of their water supply. Down river portions of the Neuse will be improved by the rules, water quality requirements should also be implemented downstream. Wake County & Raleigh know of the water quality concerns yet they are allowing growth that is detrimental to water quality to continue in the watershed as well, example Goldston Lumber is being developed in to shopping center and Wake bears some responsibility on this.
- (23) Emily Shaffer, Durham resident, grad student at Duke. Support of Falls Lake Rules, I agree the entire lake needs to be cleaned. Stage 1 and directly follow with stage 2; if anything speed up process of implementation. Increasing impervious surfaces contribute to erosion; new development rules allows for water to leave the site. The rules should address total volume leaving site. Maintain stormwater onsite. Pre-development hydrology would be beneficial and it is possible to design stormwater onsite treatment. 2008 national report determined Stormwater control measures, downspout design, land use planning, can have impact. Big challenge but it is one we can and should meet. Stand firm for these rules.
- (24) Alissa Beirma, Upper Neuse River Keeper. Asks you to keep in mind, the notion that the upper watershed citizens don't use this lake – this is not true. Members of the NR keeper organization live in all counties of Falls Lake. Go to Eno River Festival to see community support for improved water quality and see that all the citizens of the watershed benefit from clean water. We are not talking about pristine water, we are talking about safe water. Polluter pays principle. We have to start cleaning now, no delays along the way. We have a state and federal mandate to keep waters clean, wadeable, fishable, swimmable. People look at this lake as a regional resource and recreational area. What does it means if every time you went to Falls Lake the beaches were closed and your 5 year old could not swim.
- (25) Stephanie Bishop, Neuse Riverkeeper Foundation member. Concerned about drinking and recreational water use. I ask these rules requiring cleaning up of entire lake, it starts now and be completed in 25 years. Legal and moral obligation to clean up Falls Lake. Future generations deserve to use of Falls Lake. Advocates for stormwater treatment on site.
- (26) Tara Steinmetz, Durham Citizen, new resident. Came to Durham because of beauty and natural area. Falls Lake is a beautiful natural resource. I want to be able to take my dog and someday my children to enjoy Falls Lake. We have moral obligation. This happened from poor development practices in the past, but we need to change, moral obligation to clean. Need to clean up lake as quickly as possible. She is willing to spend additional tax dollars to fix the problem.
- (27) Elizabeth Ouzts, Environment NC Director, 2000 members in Falls Lake. Falls Lake is a critical natural resource for 750,000 people that visit every year. Lake is suffering from development and excessive nutrients, several beach closings already occurred this year at Falls Lake. We applaud the rules you have presented and the goal of improving water quality in the lake. Key element of compromise of Jordan lake while included staged approach, it set limits into law and rules to ensure pollution reduction rules be met. We similarly want pollution limits for the entire lake to clean it up, set limits now. Population expected to increase by 25%, stage 1 should be completed in 7 rather 10 years. More detail will be submitted in writing. Must provide clean water for drinking as well as for recreational use now and for the future.
- (28) Talmage Layton, may be the only farmer in attendance, currently on the LAC. We have had public hearings on this lake since 1972, we suggested it told that agriculture would have trouble meeting the needs to keep the water quality up. We have tried to do our part to keep water quality up. Last year only 1 bag of fertilizer was used on my farm, we understand we will have

to do it again. You will put farmers out of business with the regulations that you have come up with. I have cattle and this will put me out of the cattle business. Think of something you can do that would not put all the burden on agriculture. Think outside of the box when evaluating these rules. We will comply with the rules but they make it difficult to make a profit.

- (29)Melissa Norten, Downtown Durham Inc. We support Stage 1 and the request to delay Stage 2 until better science has been evaluated. Thank DWQ for efforts, it maintains DWQ commitment to smart growth. We have suggestions on keeping downtown as a system, keeping treatment onsite and look forward to discussing this in the future.
- (30)Mike Shifett. Citizen in Durham. Experience in the Cohouga River Project in the past Cleveland River that caught on fire. There is hope on cleaning up for Falls Lake. Need to have citizen input and volunteers; cannot depend on municipalities to pay for all this; keeping stormwater onsite, individuals can make impact. Work with nonprofits and citizens and do this on volunteer basis do not depend on governments to do this. Do more enforcement for the current rules and fine violators. Look at a way to dredging Falls Lake, I had opportunity to walk to center of lake during drought, dredge lake and ship sediment like we do trash.
- (31)Ellen Reckhow, Durham County Commissioner, vice chairman. Local governments in Falls Lake Watershed worked hard to reach consensus principles earlier this year. Proposed rules adopted some consensus, but unfortunately not all, this is important. These principles should be consider, it is coming from local government. Shallow reservoirs may never meet natural lake water quality standards. Mandatory review of data after stage 1 before stage 2, consensus do not address regional cost sharing it is something that should be considered going forward. Transfer of cost down and upstream to aid with cost of rules implementation and upgrades. Accused Durham of excessive growth, we have GIS that contradicts that, Durham growth rate was less than 17%, Wake was 6 times higher! Transfer downstream development rights.
- (32)Kevin Davis, Bull City Rising. Water quality is important factor. Development cause vast majority of growth on the fringes of Jordan Lake and Falls Lake. Two lakes, airport, park in the center of business areas. Proceed with stage 1, not stage 2 until reevaluate it. We are limiting our own growth potential. Durham has little incentive; Raleigh has little incentive to care about the effects to Durham. Consider the development of a Regional authority for stormwater and wastewater instead of many individual municipal controls. This would make things even throughout the region. Raleigh pays \$300 million dollars to clean drinking water. Take drinking water, wastewater, stormwater cost out of the counties hand, form a state consensus, one governmental authority to handle the issue.
- (33)Peter Raabe, Citizen of Durham, American Rivers NC Conservation Director. Support rules as written stage 1 and stage 2. Impressed by the City and County of Durham amount of resources \$\$\$ put into increase water quality and watershed protection. There are many subwatershed are on 303(d) impaired, clean those now and we will see a difference in lake now. Wonder when there was a decision made to shift cost to tax payers and not the developers. There are ways to develop and do it environmentally, look towards Philadelphia's environmentally friendly revitalization. Falls Lake need to be cleaned up because of the clean water act not because it benefits Raleigh or Durham
- (34)Marion Lamberth, resident of Durham NC. Here to express concern about Falls project, not only as taxpayer and citizen who gets a water bill every month, but as the last few years working on environmental awareness. I appreciate environmental impact of project, but I have to look at the bottom line and taxpayer cost. I have not heard a definitive cost to citizens for me to tell my neighbors. Worried about people on fixed income when this happens, billion+\$\$\$ will put hardship on lower income citizens when I do not see this as a critical need. I realize that the City

and County of Durham cannot afford this type of bill to clean up Falls Lake, this bothers me and I am not sure how to explain to younger people and the impact this will have on them as well.

- (35) Marilyn Kittle, Rep. of Southern Orange County Farmers and Landowners Coalition. Live outside town or city but within ETJ. We are beyond critical mass and crisis because of this. Point is there are too many people in NC, too many people in research triangle, there are municipalities within Falls and Jordan and are committed to shifting the burden of implementing these rules to the ETJ farms. ETJ - as defined as land up to 3 miles within incorporated land in NC, that means they control our development rights. It is convenient, the EMC has disregarded, denies municipal voting rights to people who live within 3 miles of a municipality. Watershed farms that have been in working these farms for some 254 years in same family. Revisit agricultural rules to fix this situation.
- (36) Gabriell Vires, Durham Resident, home owner and grad student. Came to NC partially because it is a beautiful area. I enjoy using Falls Lake and would like to continue to use Falls Lake and at the rate we are going, I don't think this will continue. Falls Lake was created before I was born so I didn't contribute to problem. But I am willing to bend over backwards to be part of the solution. The whole lake needs to be clean up and now.
- (37) Mike Woodard, Durham City Council. Would like to thank and acknowledge DWQ and EMC's work on this and I feel your pain. Simple formula, questionable science + advent of new technology + toughest new rules in state, +++= exact language in consensus principles.
- (38) Senator Floyd Mckissick, Senator for Durham area. Consensus principles were developed and should be considered. Concerned about existing development, I think if we could set them up similar to Jordan Lake it would be more appropriate way to address existing development. We need to minimize the outset of water quality issues we have today. We are working in the right direction, not everyone will be happy, appropriate values must be taken into account.

#### Comments

- (1) Eddie Culbertson, director of Durham County SWCD. Incorporated a tremendous amount of BMPs in watershed, compare water quality in Lake Michie and Little River and Falls Lake. That would tell us a big story about the impacts of agriculture in the watershed. There are development pressures on agriculture. I ask we get our data so that we can get ready, aim, fire, instead of ready fire then aim. If this goes to stage 2 for agriculture, this will put our farmers out of business because that would buffer crop and pasture making farming not feasible.