TAR-PAMLICO RIVER BASIN REGIONAL COUNCIL

Cedar Lane Recreation Center
2000 Cedar Lane
Greenville, NC
252/830-4567

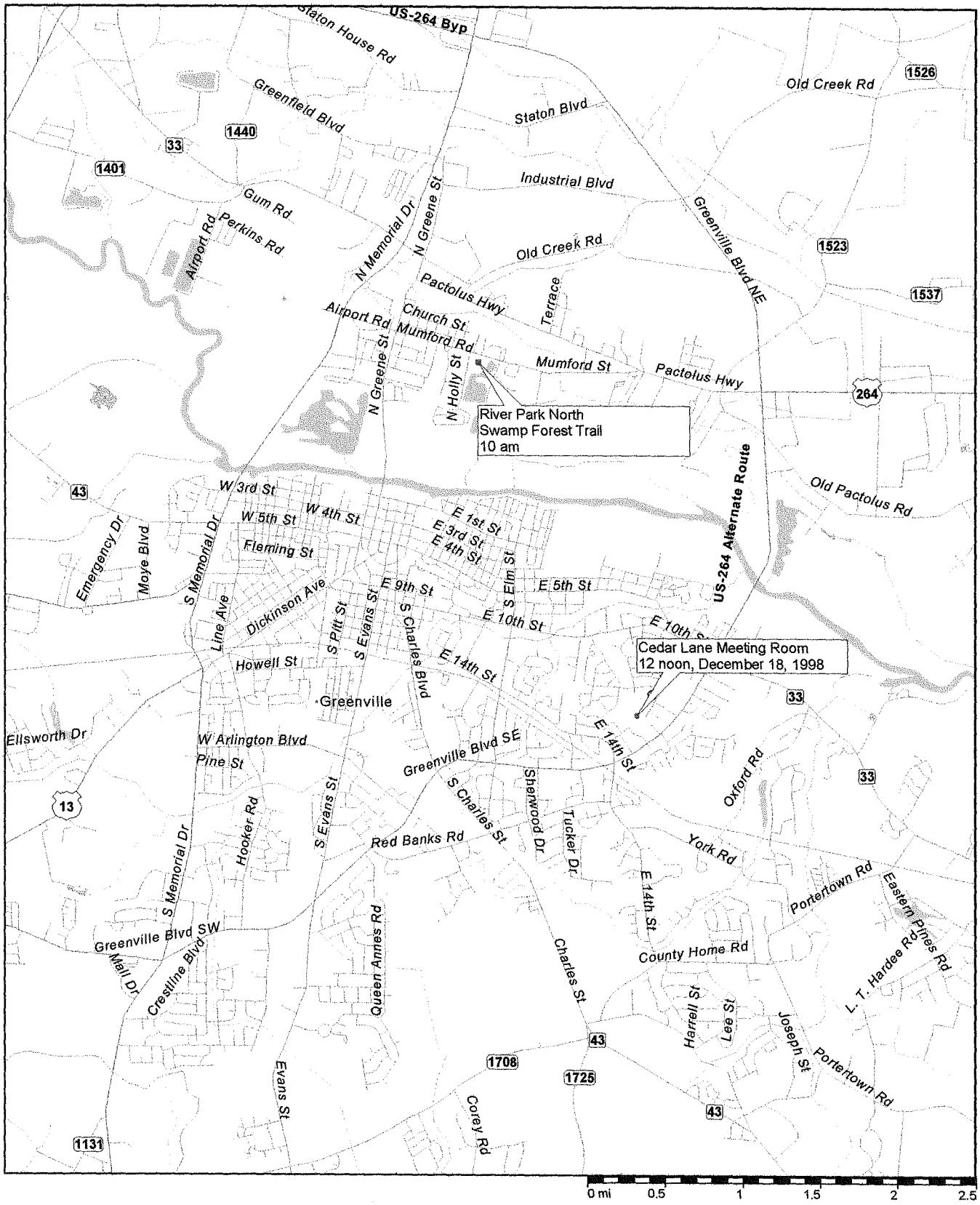
DECEMBER 18, 1998

10:00 *Meet at River Park North for hike along the Swamp Forest Trail

12:00 *Meet at Cedar Lane Recreation Center for **LUNCH** and **MEETING**

AGENDA

1:00	Welcome & Call to Order	Chairman Earl Bell
1:05	Introductions	ALL
1:10	Acceptance of Minutes from 10-23-98 Meeting at Lake Mattamuskeet	Chairman Bell
1:15	A Tar River Canoe Adventure	David Knowles East Carolina University
1:45	Report on the Tar-Pamlico Rule-Making Stakeholder Groups	Jim Stephenson
2:05	Presentation/discussion of Demonstration Projects (During the 10/23/98 meeting, each member was asked to come prepared with ideas for demonstration projects)	ALL
3:05	BREAK	
3:15	Old Business Appointment of task force committees to work on the following: 1- development of consistent reporting methods (summary sheet) 2- development of a demonstration project proposal 3- continued pursuit of the Ag Extension Environmental Education Team	
3:45	New Business 1- Report on APNEP Conference 2- Next Coordinating Council Meeting on 1/15/99 3- Plans for next TPRBRC Meeting in 1999	Chairman Bell
4:00	Adjourn	



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Tar-Pamlico River Basin Advisory Council
Greenville, North Carolina - Friday, December 18, 1998

Tar-Pamlico River Basin Regional Council
Cedar Lane Recreation Center
Greenville, North Carolina

December 18, 1998

The meeting was called to order by Chairman Earl Bell at 1:00 p.m. Self-introductions were made by the 16 members present. Minutes from the last Council meeting at Lake Mattamuskeet were approved.

David Knowles of East Carolina University was first on the agenda and gave an interesting and informative slide presentation on his canoe trip down the Tar River.

Jim Stephenson then gave a report on the Tar-Pamlico rule-making stakeholder groups. This effort was begun by a directive from the Water Quality Committee of the Environmental Management Commission to the Division of Water Quality to develop new rules for the Tar-Pamlico River since progress on the voluntary Phase II NPS reduction was slow. Stakeholder groups were set up to advise a steering committee which will make recommendations to DWQ regarding new rules. The stakeholder groups usually meet twice per month. Jim then listed the stakeholder groups and a brief remark about each one.

1. Atmospheric Emissions - the group has struggled because of a lack of completed research.

2. Agriculture - the largest of the groups

3. Restoration - the group is trying to decide how to spend money in existing programs, where to target and what to focus on, and to use Ron Ferrell's state wetland program as a base.

4. Urban Stormwater - how to move stormwater out of an urban setting and keep it clean.

5. On-Site Wastewater - looking at septic systems and land application of untreated waste, and how much nitrogen leaches out of septic fields.

6. Nutrient Management - have completed their work, want to adopt the Neuse rules with the exception that they want everyone who works with nutrients to be trained.

7. Construction Erosion and Sedimentation Control - the sedimentation control commission sets these rules, so it is unclear whether any rules would go forward to the EMC.

Next was a discussion of potential demonstration projects utilizing the $26,000 approved for a project. Specific guidance regarding projects has not been given to the Regional Councils by the Coordinating Council, however EPA would like to see projects on the ground. The following is a list of ideas that were discussed in a variety of detail:

a. On-site wastewater research project

b. Traveling educational exhibit to set up at fairs, festivals, etc.

c. A driving tour from Roxboro to the Pamlico Sound with information signs at various environmental education centers.

d. Adopt-A-Creek program, creekkeepers, done possibly through civic groups.

e. Conference in the river basin to bring a lot of research together in one place and report on it.

f. Assess the quality of the buffers in the Tar-Pamlico basin.

g. Literature dealing with different aspects of each section of the river.

Other thoughts that were brought up were that 1) there are 6 main areas along the river that the public interfaces with it, and these could be possible locations for educational displays and 2) information programs have been going on for years, and we don't need any more literature out in the malls. This discussion will be continued at the next Regional Council meeting.

Under old business, discussion was held regarding the development of consistent Council meeting reporting methods. Talking points need to be created, usually 1 page of bulleted remarks, and get yourself on your commission's board meeting agendas 2 or 3 times a year. Jeff Furness will highlight 2 or 3 priority issues in the minutes of every Council meeting to be used for this purpose.

Rep. Billy Creech has been contacted again regarding the Ag Extension Environmental Education Team, and a meeting with Rep. Wellons needs to occur in early January to get the bill going again.

In new business, Vince Bellis reported on the Albemarle-Pamlico National Estuary Program conference held in New Bern. Also, the next Coordinating Council meeting is scheduled for January 15, 1999 in River Bend. Vince Bellis and Jeff Furness will try and attend.

The next meeting of the TPRBRC will be on February 26, 1999 in Tarboro.

Paul Blount passed out a handout giving information on the Mississippi River/Gulf of Mexico Hypoxia Task Force.

The meeting was adjourned at 3:45 p.m.

Significant Items and Issues:

* Stakeholder groups are currently meeting to recommend rules for the next round of rule-making for the Tar-Pamlico River. The Environmental Management Commission will be asked to approve the rules for public hearings at their April 1999 meeting.

* Need commissioner and legislator support for the Tar-Pamlico Ag Extension Environmental Education Team.

October 1998

CYPRESS GROUP NEWS

Sierra Club

North Carolina Chapter

Volume 24 Number 2

A Tar River Canoe Adventure

October Meeting
7:30 pm Monday, Oct. 12th,1998
First Presbyterian Church
14th & Elm Streets, Greenville

Speaker: David Knowles

Last May, David Knowles, Cypress Group ExCom Board member and ECU Biologist, undertook a nine-day canoe trip from the headwaters of the Tar River to the majestic town of Washington (at which point the Tar becomes the Pamlico), a166 mile canoe trip.

Starting out on Sunday, May 17th, David began paddling with 250 pounds of gear, including his fly rod and a faithful border collie named "Sadie." It was our good fortune that, while paddling through seven different counties, David witnessed abundant wildlife, everchanging scenery (some lovely, some not-so-lovely), and was able to take some great slides.

Some of the wildlife that David saw included beaver, yellow billed cuckoos, bald eagle, osprey, barred owls, egrets in a rookery, wild turkeys, several different species of snakes, and at least one red-necked suds-sucker (just kidding). In all, David recorded at least 50 different species of birds and several different kinds of mammals. Due to the change in sea level from 600 to 0 feet, David was also able to see considerable plant diversity ranging from plants found only in the Piedmont and mountains (mountain laurel) to coastal plain vegetation (palmetto and tupelo).

Also along the way, David passed by several landings with such unfamiliar names as Barbers Landing, Summit Hill, Tafts Landing, and Avon. Penny Hill, the ancestral home of the Thigpen family since 1730, was once considered the best landing on the upper Tar. It was named for Penelope Hill (1713-1786) the wife of the second owner of the once-famous plantation located there. Penny Hill was a thriving community until the 1880's and was said to have been visited by Blackbeard.

David's adventure received such good reviews at the PTRF Advisory Board meeting this summer, that he was asked to show it again at PTRF's Annual meeting on September 16th. Now, for the first time, you'll be able to see it at our Sierra Club meeting in October. Don't forget to bring a friend.

Congratulations

Congratulations to Lu Livermon for his appointment to the Cypress Group ExCom, filling the unexpired term of Ann Clark. Lu is a dog trainer and owner of Hoffman-Haus Kennels, as well as an avid outdoorsman who is interested in many environmental issues including the permit request of Chevron to do offshore drilling. We welcome Lu and hope that you will have a chance to meet him at the next Cypress Group meeting.

MEMORANDUM

DATE: 11/23/98

TO: URBAN NUTRIENT MANAGEMENT TEAM AND INTERESTED PARTIES

FROM: CHRISTY PERRIN Christy P 515-9602

RE: 11/17/98 MINUTES OF URBAN NUTRIENT MANAGEMENT TAR-PAMLICO STAKEHOLDER TEAM

TAR-PAMLICO RULES COMMITTEE MEETING
November 17, 1998
Urban Nutrient Management Team meeting, 1:30 pm, Holiday Inn, Dortches, NC

Present: Simon Garber and Nan Freeland, facilitators, Derek Smith, Rich Gannon, and Matt Lauffer.

After introductions the participants briefly reviewed the charge to the team, the formal rule making process, the authority of the team and the proposed team charter under which they might operate. Adoption of the team charter was postponed to the next meeting when it is hoped there will be a larger attendance.

Discussion then turned to the team's charge: to reduce nitrogen inputs to the Pamlico Estuary by 30 % while maintaining the phosphorous input at the 1991 level. In order to achieve the desired nutrient reduction the team will be looking at fertilizer use primarily at the following areas: DOT road run-off, golf courses, professional lawn care, home owner lawn care and municipal and county parks.

A general discussion followed in which participants identified needed information to understand the urban nutrient management problem. The following information was identified:

1. Knowledge of any rules, including those implemented for the Neuse River, as well as BMP's that already exist Annette Lucus, (DWQ) was identified as an excellent resource for this type of information..
2. Information from DOT concerning how the Neuse Rules governing nutrient property applications have affected DOT's management practices. Derek Smith form DOT volunteered to find the best resource person in DOT to answer this concern.
3. Knowledge of existing strategic regulatory models directed toward homeowner lawn practices and professional lawn care involving both voluntary and mandatory rules. Dianna Osmond from Cooperative Extension Service was identified as a possible resource person.
4. Knowledge of how the Neuse rules have changed golf course management also is needed. A spokes person from the Turf Grass Council was identified as a possible resource person. Other Cooperative Extension Specialists also were suggested as excellent resource persons.

Discussion then shifted to concern about the low attendance and the need to recontact invited participants by phone; for it is imperative that all the interests affected by the proposed rules be represented in this deliberation, if it is to be successful.

The meeting was adjourned at 3:15 p.m. with the intent to be prepared to focus our attention on the first two items of the list of information needed.

Scheduled meetings for this urban nutrient management stakeholder team meeting will be held in room 4103-5, building D, Nash County Community College, 1:30 - 4:30 p. m. on the following dates:
November 23
December 2
December 15
New attendees follow the signs, Parking, Tar-Pam Meetings, around to the back of the campus. Enter the last building (D) and follow the Tar-Pam signs.

MEMORANDUM

DATE: 11/23/98

TO: ON-SITE WASTEWATER TEAM AND INTERESTED PARTIES

FROM: CHRISTY PERRIN CP (515-9602)

RE: 11/18/98 MINUTES OF ON-SITE WASTEWATER STAKEHOLDER TEAM MEETING

TAR-PAM STAKEHOLDER RULE-MAKING MEETINGS

Nov 18, 1998

ONSITE WASTE WATER TEAM

Stakeholder groups represented:

Industry, environmental, state government, local government

Groups that should be involved:

Additional industry, academics, local government (health departments from affected Counties), soil specialist from the state

Issues with the Charter:

Too big a charge with too narrow a group of stakeholders present
Clarification of Neuse rules as a template for this group
The 3-month accelerated time frame for rule making was too confining
Write to reps from county health departments. Do we need a rep from each county, or just aFew select ones?

Problem areas:

Adequate capacity at wastewater treatment plants to handle septile disposal
- especially high water table areas
- legal alternatives not currently available

General lack of knowledge of where and what kind the septic systems are (latest data 1990)
General public's lack of education about septic systems
Lack of septic system rules for landowners/homeowners
Disclosure at closings regarding type septic system
- need to state this

Unknown status of septic tanks – fissures?
- Compliance with regs?

Unknown age of existing septic systems

Increased demand on septage land application capacity resulting from new septic tank filter rule

Insufficient monitoring of straight piping & lack of funds to repair indigent person's systems

More Info Needed: (for next meeting)

# of septic tanks per county; also location (Martha & Jan)
RTI modeling data (Matt)
Risk analysis of septage systems
- determine if there really is a problem (Dist. Hoover paper – Matt)

Maps of basis area (Matt)
Population stats
- Subdivisions: how they dispose of wastewater & their location (Martha j& Jan)

Soil info (invite Uebler to be present)

Agenda topics for next meeting:
Reports back by various people
Cost and resources associated with solving problem areas

Next meetings:
The On-Site Waste Water Stakeholder Team meetings will be held at 9:30 a.m. on the following dates:

Date	Place
November 24, 1998	Room 4103-05, Building D, Nash County Community College
December 11, 1998	Holiday Inn, Dortches, NC
December 16, 1998	Room 4103-05, Building D, Nash County Community College

The community college is located on US 64, one exit west of the I95-US 64 interchange. Coming east from Raleigh the exit is the next exit after the two exits to Nashville, NC. A community college sigh appears at the exit. Follow the signs to the community college. When entering the campus follow the signs, Parking, Tar-Pam Meetings, around the back of the campus. Enter the last building (D) and follow the Tar-Pam signs.

Holiday Inn, Dortches is located at the first exit north of interchange I95 and US 64.

MEMORANDUM

DATE: 11/18/98

TO: RESTORATION OF WETLANDS TEAM

FROM: CHRISTY PERRIN CP. (515-9602)

RE: 11/17/98 MINUTES OF RESTORATION COMMITTEE

TAR-PAMLICO STAKEHOLDER RULE-MAKING MEETING
November 17, 1998
NOTES - RESTORATION TEAM

Present: Sandy Sweitzer (facilitator, notes), John Stephens (facilitator), Ken Schuster, Steve Coffey, Rich Gannon, David Knowles

1. Introductions and Purpose - participants introduced themselves and the agencies they represented. "The goal of each team is to produce a rule or rules designed to achieve their category's portion of the nutrient loading goals as set forth in the Tar-Pamlico River Nutrient Management Plan for Nonpoint Sources of Pollution. These goals are a 30% decrease in total nitrogen loading to the Pamlico estuary from 1991 conditions and holding total phosphorus loads steady at 1991 conditions." (from the charter) The goal for the restoration team is a 5% reduction of the 30% total.

2. Rule making process - this portion will be addressed at meeting #2 because of low turn-out

3. Team Charter - this portion will be addressed at meeting #2 because of low turn-out

4. Nutrient Sensitive Water Strategy in the Tar-Pamlico River Basin - this portion will be addressed at meeting #2 because of low turn-out

5. Discussion of Specific Nutrient Problem - The following issues/questions were raised to be discussed at the next meetings:

Should the rules be mandatory or should the team set goals?
Who primarily will implement the rules?
What are the funding mechanisms?
Should the team include constructing wetlands as part of the measures?

6. Plans for Communication Logistics - this will be repeated at the next meeting. Names of people/organizations necessary for comprehensive

rule-making were discussed. They will be contacted by the appropriate people/agencies.

7. The meeting adjourned at 3:45pm

MEMORANDUM

DATE: 11/23/98

TO: URBAN STORMWATER TEAM AND INTERESTED PARTIES

FROM: CHRISTY PERRIN CP (515-9602)

RE: 11/18/98 MINUTES OF URBAN STORMWATER STAKEHOLDER TEAM MEETING

TAR-PAM STAKEHOLDER RULE-MAKING MEETINGS
November 17, 1998
Urban Stormwater Team meeting, 9:30 a.m., Holiday Inn, Dortches, NC

Present: Nan Freeland and Simon Garber, facilitators, Bradley Bennett, David L. Cashwell, Steve Coffey, Darren England, James Rhodes, Doug Roberson, Jim Stephenson, Rich Gannon, Matt Lauffer.

After introductions the participants reviewed the charge to the team, the formal rule making process, the authority of the team and the proposed team charter under which they might operate. Adoption of the team charter was postponed to the next meeting when it is hoped there will be a larger attendance.

The team was charged to produce a rule or rules designed to achieve a 30 % reduction in total nitrogen loading to the Pamlico estuary form 1991 conditions while holding total phosphorus loading steady at the 1991 level. These goals are taken from the Tar-Pamlico River Nutrient Management Plan for Nonpoint Sources of Pollution.

Rich Gannon, Environmental Specialist , DENR, Division of Water Quality, then led a brief discussion of the nutrient problem. Questions that arose out of the discussion were as followed:

How is the nutrient load measured?
What are the various techniques available to reduce nutrient inputs from stormwater and what are their quantifiable effects?
What are municipalities doing now?
Are there any surveys available to assess the situation? (It was the consensus of the group that the information is available, but the municipalities will need sufficient lead time to assemble it.)

A general discussion followed in which participants identified needed information to understand the nutrient problem. Five information needs were prioritized for discussion during coming meetings. They included:

1. Use of basin maps to identify the perimeter of the basin

2. Knowledge of the Neuse Rules that were recently implemented, beginning with a general overview of all the rules, then focusing on the rule(s) directed toward stormwater.
3. Knowledge of the EPA's existing coastal stormwater regulations.
4. Knowledge of watershed buffer rules.
5. Techniques used to reduce nutrient pollution and their estimated effects.

(It was suggested the City of Greensboro may have some of this information.)

6. A clearer understanding of how the nutrient inputs are measured.

Near the end of the meeting a short discussion ensued regarding the need to have an inclusive set of organizations represented in the discussion for this rule making effort to be successful. It was agreed a greater effort was needed to contact the appropriate organizations and their representatives.

At the next meeting the charter and rule making procedure will be briefly reviewed and the first three items of the prioritized issues will be addressed.

Scheduled meetings for this stormwater stakeholder team will be held in
room 4103-5,Building D, Nash County Community College,
9:30 am to 12:00 noon on the following dates:
November 23
December 2
December 15
The community college is located on US 64, one exit west of the I95-US 64 interchange. Coming east from Raleigh the exit is the next exit after the two exits to Nashville, NC. A community college sign appears at the exit. Follow the signs to the community college. Follow the signs, Parking, Tar-Pam Meetings, around to the back of the campus. Enter the last building (D) and follow Tar-Pam signs.

MEMORANDUM

DATE: 11/30/98

TO: URBAN NUTRIENT MANAGEMENT TEAM AND INTERESTED PARTIES

FROM: CHRISTY PERRIN, PHONE (919)515-9602, RMAIL- CHRISTY_PERRIN@NCSU.EDU

RE: 11/23/98 MINUTES OF URBAN NUTRIENT MANAGEMENT TAR-PAMLICO STAKEHOLDER TEAM

TAR-PAM STAKEHOLDER RULE-MAKING MEETINGS
November 23, 1998
Urban Nutrient Management Team meeting, 1:30 p.m., Nash County Community College

Present: Derek Smith, NDDOT, Chris Parhorn, Eastern Turf Association, Rex Floyd, Carolinas GCSA, Gene Maples, Exec, Dir., Turf Grass Councill of NC, Matt Lauffer, DWQ Planning, Darren England, DWQ, George Stewart, DSWC, John A. Gibson, NCCES, Jerry Hardesty, NC Pork Council, Nan Freeland, Co-facilitator and Simon Garber, Co-facilitator.

After introductions, the team was reminded of its charge, then briefly reminded of its authority and the team charter under which it might operate. There were no objections to the charter.

The substantive agenda focused on a review of the Neuse rules affecting urban nutrient management. These rules target golf courses, transportation routes, urban lawn care and parks and recreation while focusing on education. Turf managers and applicators of fertilizer are required to undertake training to become familiar with the best techniques and BMP's available to reduce the amount of nitrogen inputs to the basin.

Gene Maples, Exec. Dir. of the Tuirf Grwass Council of NC (TGCNC) indicated the Turf Grass Council is highly supportive of the Neuse Basin rules. The council may have its first training program in January or February, 1999 to meet section I and II requirements. He went on to say the rules are quite flexible, and make options available to members of TGCNC. Its up to the managers and applicators to look for ways to implement uniformity in plans. He mentioned two great resources at NC State, Dr. Osmond and Dr. Hodges.

Discussion then switched to the use of buffers on golf courses. Matt Lauffer, DWQ, mentioned he had talked with Dr. Charles Peacock, NCSU, who supported the use of set-backs. It was noted by members in attendance, however, there are many management options available so it's difficult to set specific set-back distances.

The discussion turned to specific suggestions for nutrient management training requirements. It was suggested that the 50 acre limit be reduced to 10 acres. It was felt this would pick up

most landscape contractors, many of whom are left out by the 50 acre limit. Some suggested this may not have much impact on the overall problem. It was suggested Dr. Bruneau, NCSU, would be a good resource to consult on the acre number limit.

A sentiment then was expressed why are we rehashing the Neuse rules when so much time and effort has already gone into their creation? Why not have one set of rules that applies to the whole state? That would make it easier to develop and implement the needed training programs. Matt Lauffer, DWQ suggested we need to hear from Dr. Charles Peacock concerning recommended changes in the training program. We may want to alter the required training program after hearing his concerns and suggestions.

When asked how we should proceed next meeting, it was decided we needed to hear form Derek Smith, NCDOT, how NCDOT has been affected by the Neuse rules and hear from Dr. Charles Peacock about his proposed changes in training. We might then be ready to make a decision on the type of nutrient management rules we want to see applied to the Tar-Pamlico River Basin.

The next meetings for this Urban Nutrient Management Stakeholder Team meeting are scheduled to be held in room 4105, Building D, Nash County Community College, 1:30 p.m. to 4:00 p.m. on the following dates:
December 2, 1998.
December 15, 1998
January 5, 1999
January 19, 1999

New attendees follow the signs indicating Parking, Tar-Pam meetings, around to the back of the campus. Enter the last building (D) and follow the Tar-Pam signs to room 4105.

MEMORANDUM

DATE: 11/28/98

TO: WETLANDS RESTORATION TEAM AND INTERESTED PARTIES

FROM: CHRISTY PERRIN

RE: 11/23/98 MINUTES OF RESTORATION OF WETLANDS TAR-PAMLICO STAKEHOLDER TEAM

TAR-PAMLICO STAKEHOLDER RULE-MAKING MEETING
November 23, 1998
NOTES - RESTORATION TEAM

Present: Sandy Sweitzer (facilitator, notes), Steve Coffey, Rich Gannon, Bradley Bennett, Larry Camp, Ron Ferrell

1. Introductions and Purpose - participants introduced themselves and the agencies they represented. "The goal of each team is to produce a rule or rules designed to achieve their category's portion of the nutrient loading goals as set forth in the Tar-Pamlico River Nutrient Management Plan for Nonpoint Sources of Pollution. These goals are a 30% decrease in total nitrogen loading to the Pamlico estuary from 1991 conditions and holding total phosphorus loads steady at 1991 conditions." (from the charter)

2. Rule making process - Rich Gannon (DWQ) outlined the rule-making process and pointed out where these stakeholder meetings fit in to the larger rule making process.

3. Team Charter - The team charter was reviewed and agreed to by the group.

4. Nutrient Sensitive Water Strategy in the Tar-Pamlico River Basin – Rich Gannon explained the NSW strategy.

5. Discussion of Specific Nutrient Problem - The following issues were discussed for inclusion in the rule:

   Should be voluntary
   Set a load reduction goal of at least 4% of 30% and put a dollar figure on it (consider increasing goal if seen as cost-effective).
   Prioritize restoration areas based on: where best reduce nitrogen loads, where cause and effect can most clearly be seen, best preservation
   opportunities (more ideas will be discussed at future meetings).
   Establish a group to continually update the priorities.
   Encourage collaboration between agencies working in the Tar-Pam Basin.

Restoration accomplished by either cash to WRP or other restoration agency or they do it themselves.

6. Plans for Communication Logistics - this will be repeated at each meeting. Names of people/organizations necessary for comprehensive rule-making were discussed. They will be contacted by the appropriate people/agencies.

The meeting adjourned at 4:05pm.

Sandy Sweitzer
2608 Winton Road
Durham NC 27707

MEMORANDUM

DATE: 11/30/98

TO: URBAN STORMWATER TEAM AND INTERESTED PARTIES

FROM: CHRISTY PERRIN, PHONE (919)515-9602, RMAIL- CHRISTY_PERRIN@NCSU.EDU

RE: 11/23/98 MINUTES OF URBAN STORMWATER TAR-PAMLICO STAKEHOLDER TEAM

TAR-PAM STAKEHOLDER RULE-MAKING MEETINGS
November 23, 1998
Urban Stormwater Team meeting, 9:30 am, Room 4105 Building D, Nash County Community College

Present: Linda Aycock, NCCES, Eddy Davis, Pitt County Planning, Doug Roberson, City of Rocky Mount, David Cashwell, Town of Tarborok, James Jatko, City of Greenville, Jerry Hardesty, NC Pork Council, Bill Hunt, NCSU-NCCES, Matt Lauffer, DWQ Planning, Bradley Bennett, DWQ Planning, Darren England DWQ, Rich Gannon, DWQ Plannng, Peter Boetzer, ECU SOM/Biology,
Jim Stephenson, PTRF, Mark Hucks, NCCES, Simon Garber, co-facilitator, Nan Freeland, co-facilitator

Minutes of the first meeting were reviewed and a large map of the Tar-Pamlico Rver Basin was placed on the wall so that all present might be able to identify its boundaries. Members also were
reminded of their charge. This caused a number of concerns to be voiced before we could proceed with the agenda. These concerns were as follows:

1. Can this rule-area actually be separated from others, like urban nutrient management, on-site waste water, or construction erosion and sediment control? Answer from DWQ: They were split up to be more manageable in the time we have to address them.

2. What happens if the final reports of the different teams conflict? DWQ answer: The Stakeholder Steering Committee will spot that and send the conflicting reports back to their teams to be reconciled. In fact, there is so much overlapping representation on the teams that any potentially conflicting recommendations should easily be spotted before the reports are sent on to the Steering Committee.

3. Municipal governments will be primarily responsible for implementing these rules. How represented are municipalities on the Steering Committee? After a brief discussion it was decided municipalities are not well represented on the Steering Committee. DWQ members agreed that should be changed ASAP.

Following requests from last meeting, three items were placed on the agenda: a review of the Neuse rules, a review of the coastal stormwater regulations and a review of techniques to reduce nitrogen inputs.

Bradley Bennet, DWQ Planning, reviewed the Neuse rules as they stand right now. The urban stormwater rules, when developed will focus on new development. Thirteen governments within the basin having a lot of new development have been targeted. DWQ, the affected governments and other major stakeholders have begun working together 1) to agree on a measurement procedure to
determine the amount of nitrogen loading that is taking palce, and 2) to ascertain the best management practices (BMP's). The team working on this problem is expected to come up with a model ordinance that will

be sent to the EMC by Aug., 1999. Local governments will have one year to implement their own ordinance after the model ordinance is approved by the EMC.

In discussion that followed a concern was raised whether any fiscal analysis had been done up front on the BMP's. DWQ's answer was yes, and this team will need to do a similar analysis on any proposals it suggests. Another concern, voiced by representatives from municipalities, was what is the enforcement behind the rules? James Jatko, Greenville City, also wanted to know which rules that city must follow, since 25% of Greenville is in the Neuse River Basin, and the rest is in the Tar-Pamlico River Basin. DWQ answered that everyone has to implement the rules to protect the buffers as of 1997. Further, municipalities may adopt the model stormwater ordinance, or create their own, as long as the ordinance effectively reduces nitrogen inputs to the Tar-Pamlico River Basin.

Bradley Bennet then provided a brief overview of the coastal stormwater regulations. He indicated they, too, focus on new development activities. The EPA draft rules are expected in January, 1999.

In the discussion that followed it was suggested that it might be easier for municipalities if these apparently disparate rules could be incorporated into one ordinance, rather than having separate set of rules.

A handout describing various techniques to reduce pollution from stormwater was handed out to everyone to be read later.

Additional comments/questions shared with the group were as follows:

Are there any BMP's coming to the fore front?
Pre-development stormwater management seems stringent. There was some concern voiced that it will have a dramatic effect on growth.

When asked whether they needed any additional background information, some suggested they wanted to hear from a Neuse team, especially someone from local government. Others suggested they'd like to talk to representatives of communities that have implemented the stringent requirements. Team members also reminded DWQrepresentatives, developers need to be a part of the process as we proceed.

When asked how shall we proceed, members agreed we should critique the Neuse rules next time as a group and look at a set of criteria suggested by DWQ that rules applied to the Tar-Pamlico Basin must meet. Then develop a set of criteria that the group can all agree on.

Scheduled meetings for this stormwater stakeholder team will be held in room 4105, building D, Nash County Community College, 9:30 am to 12:00 noon on the following dates:
December 2
December 15
January 5
January 19
New attendees follow the signs indicating Parking, Tar-Pam Meetings, around to the back of the campus. Enter the last building (D) and follow Tar-Pam Signs.

MEMORANDUM

DATE: 11/30/98

TO: ON-SITE WASTEWATER TEAM AND INTERESTED PARTIES

FROM: CHRISTY PERRIN

RE: 11/24/98 MINUTES OF ON-SITE WASTEWATER TAR-PAMLICO STAKEHOLDER TEAM

ONSITE WASTE WATER TEAM

Notes from November 24

Review with new members of the Team

Do we know we have a problem? Can we make rules without having data?

Information we need to know:

Rate of failure of septic systems—what is the runoff as a result of failure of these systems?
What is the direct discharge via direct pipe?
Are there pathogens in the water?
Is there illness caused by septic system failure?
Are septic tanks the problem?
Several counties have studies that show that septic tanks are not the problem
Problems may come from disturbing the land

Definitions:

Failure = raw sewage on the ground
Groundwater = surface water or
the subsurface water table

Possible responses: (discussion)

Hydration of systems a problem when over-hydration occurs. There is a need to spread waste material over a larger area.

Supports should be developed to encourage builders and developers to build on land already served by sewer systems

Each person adds 10 pounds of nitrogen per year.

There are five locations where nitrogen is reduced:

1. At the site in native soil
2. Flowing through the soil next to streams
3. As stream bottom sediment
4. At treatment facilities
5. By forced treatment at the site

There is better natural impact on nitrogen at the mouth of the river (down east) than up stream.

Is there a need to lower treatment plants to the water table to make use of natural processes?

There is a need to compare subdivisions with shallow systems with those with traditional systems

Problem: There is substantial risk of onsite system (hydraulic performance) failure during wet seasons.

How should this problem be dealt with?

The drainage is not being maintained
Should systems be designed with a higher water table in mind

Problem: With the new definition of "failure" (effective in Aug/Oct of this year) 50-75% of systems are in failure. With inadequate resources the danger is that selective enforcement will take place.

The question that arises is "who inspects?"

A proposal:

A management program should be instituted so that the 2-3% that fail each year will be caught so they do not accumulate over time.

Newer systems are better engineered. As a result the failure rate is lower.

New systems should be required to have an operator.

Tax incentives could be instituted to maintain systems. This could include incentives for pumping out tanks.

Incentives could be put in place for existing systems. New systems would be dealt with by new regulations.

What incentives would encourage management of systems?

Inspections every 1-3 years
$50 per inspection was a low figure

When management is required without new management resources it creates a manpower shortage. The result is that no management takes place.

Centralized management is one way to respond to the issue. This would involve the certification of on site operators.

Outside of the scope of this team is the need for growth management. Sprawling development is costly to counties that permit it.

The team could come up with smart growth guides for the rules.

Question?

If we put management in place, will it reduced phosphate and nitrogen?

It was noted that the Neuse basis set model rules without guarantee that they would result in a 30% reduction.

A pilot project is a possibility, but funding would be required.

Process Questions:

Is media coverage being provided for the this process? It would be a good idea.

For next time:

Reports needed:

Shoreline survey
Onsite waste water
A survey of people on septic systems would be valuable. Tom Hoeman could provide it, but it would take $.

CONCENSUS OF THE GROUP:

THE TIME TABLE FOR THIS PROCESS IS UNREASONABLE

Next Meeting:

NOTE CHANGE in next meeting date and location:

Thursday, December 10 @ 9:30 in Greenville.

Directions: Come into Greenville on Highway 264. At Pitt County Hospital turn left on Moye Blvd. Go about one half mile to the stop sign at highway 43. Turn right, go about one block. You will see the Pitt County office complex. Take the second entrance. Go into the Development Service Building to the reception desk for directions. The number for Leroy Smith, our host, is 252-413-1253.

MEMORANDUM

DATE: 11/30/98

TO: EROSION CONTROL TEAM AND INTERESTED PARTIES

FROM: CHRISTY PERRIN

RE: 11/24/98 MINUTES OF EROSION/SEDIMENT CONTROL TAR-PAMLICO STAKEHOLDER TEAM

EROSION/SEDIMENT CONTROL TEAM

Notes from November 24 meeting

New participants were introduced.

Reports were received from the Sedimentation Control Commission's four work groups. The following information was highlighted from those reports. For the full report, see the handouts from each of the work groups.

#1 Bonding Requirements

The work group was undecided whether fines would be on a per site or per violation basis.

The rationale for the amount of the fees was pending the report from work group #2

Fees would be based on the complexity of the site.

A change would exempt one acre or smaller sites from bonding requirements.

At the lowest level bonding could be $500 per acre for slope grading and seeding. It would be greater for more complex sites.

Bonds could be obtained through a bonding company, by putting up a CD, or by providing a letter of credit from a bank.

#2 Risk Analysis

The work group attempted to quantity risk factors.

The higher the risk factor, the greater fees, fines, and requirements would be.

The Neuse rates would be reviewed regarding "width & character of buffer zones" to determine if the rates are comparable.

#3 Environmental Permit Concepts

What are incentives for developers?

Quick turn around on applications is already happening

The plan created a special designation for developers or builders.

When each item is separated out for payment there is greater attention paid to compliance versus lumping them all together in one payment.

The fine would be increased if there is a continuing violation.

There would be an advanced notification to Land Quality

In return for meeting the qualifications to be come a "Green Builder" there would be minimal supervision and inspection requirements.

There would marketing value in being designated a "Green Builder".

The Certified Designer Program would include a written test, continued training, and a annual renewal process.

Greenville's Concerns:

Getting plans submitted before grading begins.
What time frame would be required to get the "Green Contractor" program in place?
Contractors have never been fined, thus no incentive to comply.
Model regulations state that only an elected body can assess a fine.

The Green Builders program would enable the focus to shift to those contractors who could not be trusted.

The financially responsible party not the contractor would be fined. If fines are great enough, the responsible party will not permit problems to occur.

One option would be to hold site plans until an approved sedimentation plan is in place. Injunctions and stop orders could be obtained.

An increased level of protection will cost more. If builders and developers know the cost in advance they can build it into their cost factors and pass it on.

A portion of the plan pertaining to an increase in fees will require legislative action.

#4 New Technology

The concern was to develop policies which would provide a common basis for technological development.

Two flow charts were developed, one addressing new technology, the other addressing the

improvement of existing technology.

Another feature of this report is the ranking of BMPs.

The DOT program:

DOT provides the best learning lab in the state. They have also done one of the best jobs in planning, designing, and managing sediment control programs. Private contractors are not as rigorous. They will do only enough to get by.

The annual DOT report shows the % of effectiveness of programs. This can create a spirit of competitiveness.

Full time inspectors are on duty daily. There are 2-3 levels of control in the process.

Here is a system that is working. How do we duplicate the DOT model with private contractors?

The question becomes: How to have private contractors want to comply? Or, do penalties need to be so great that they will comply out of fear of the consequences?

There is a need to reassess the state's model local program for effectiveness. With a variety of rules, no rigid program is in place, and disparity creeps in.

There is a need for additional research to take place.

Research should include not only sediment rates, but also nitrogen levels.

When the process was set up, was there an awareness of other existing rules?

A process should be designed to compare the results of research projects.

Research funds are available through DOT and NCSU.

Questions:

Are nutrient problems a result of erosion and sediment control?

When we look at the data: Is there a problem?

Are current BMPs adequate?

There is an assumption (which is untested) that sediment particles carry nutrients attached to them and that sediment control measures would catch them.

The various commissions are not aware of what each other is doing. They are not coordinated. As a result, overlapping occurs.

Part of our charge is an educational function.

Contractors need a clear understanding of what the rules are without having to deal with different regulatory agents with different rules to contend with. The rules should be user friendly.

NPDES rules:

These are a general permit for land disturbing activity. They defer to Land Quality/Land resources regulations.

Phase II changes the land disturbing trigger point from 5 acres to 1 acre.

The permits could be combined into one, including NPDES which includes waste and storm water.

Water Quality Rules:

Turbidity requirements are set at 50/10/25 maximum levels, depending on the location and type of stream. Land quality determines which restrictions are in place.

Question: Are these levels reasonable?

In North Carolina there has been no research in the effectiveness of sediment control measures.

DOT Rules:

Trout streams are way above NPDES turbidity levels. Readings top out at above 200. Both the Neuse and the Rivers run "a lot".

What is an appropriate rate?

CAMA:

CAMA is concerned with density restrictions.

DWQ coastal storm water regs:

Coastal storm water regs may require retention ponds.

Restrictions and buffers are not very applicable to erosion control.

Next Time:

Information from Nancy White
Technical information regarding nutrients at construction sites.
Report by river basin (Carolyn)
Report on duration of projects (Carolyn)

Next meeting is December 11 @ 1:30 at the Holiday Inn at the Dorches exit on I-95. This is the next Exit north on I-95. Take the exit, turn right to cross over the Interstate, Holiday Inn is on the left behind the gas station.

MEMORANDUM

DATE: 12/01/98

TO: AGRICULTURE TEAM AND INTERESTED PARTIES

FROM: CHRISTY PERRIN; 919.515.9602, CHRISTY_PERRIN@NCSU.EDU

RE: 11/24/98 MINUTES OF AGRICULTURE TAR-PAMLICO STAKEHOLDER TEAM MEETING

TAR-PAM STAKEHOLDER RULE-MAKING MEETING
November 24, 1998
Agriculture Team meeting, 9:30 a.m. - 12:00 p.m. , Nash Community College

Present: Steve Hodges, NCSU/CES, Steve Coffey, DSW, Tim Etheridge, USDA/NRCS, Charlie Tyson, NCDA, Carl Crozier, NCSU/CES, John Harris, Franklin Co. Cattlemen, Gene Mullen, Franklin Co. Soil & Water, Cameron Daniels, Franklin Co. Cattlemen, Dale G. Steerberger, Hill & Dale Farms, Steve Stadelman, Novo Nordisk BioChem, Ron Sheffield, NCSU/CES, Dan Campeau, NCCES, Art Bradley, NCCES, Brian Blinson, NC Cattlemen's Assoc., Rich Gannon, DWQ, Anne Coan, NC Farm Bureau, Chester Lowder, NC Farm Bureau, George Stewart, DSWC, Mark Hucks, NCCES, R. Sean Gurkin, NCAN, Jim Stephenson, PTRF, Bill Peele, IMPACT Agronomics.

After introductions participants reviewed the charge to the team and the agenda. During the agenda review, it was agreed that the purpose of the process needed to be explained before participants could proceed.

Rich Gannon, DWQ, explained the need for nutrient reduction in the Tar-Pamlico River Basin, with the goal of a 30% reduction in nitrogen and holding phosphorous loads at 1991 levels, as well as the desire of DWQ to find mutually beneficial solutions are through a stakeholder deliberation prior to the formal process. The intent was to produce a set of mutually beneficial draft rules through the stakeholder process that could be submitted through the formal process.

Concern was expressed about stakeholders who were not represented at the table. Missing stakeholders included representatives from 1)environmental groups (only one was present), 2)fertilizer venders, and 3)poultry producers. It was emphasized that full participation is crucial for the process to be effective.

The group charter was reviewed and ground rules for operating as a group were agreed upon. The review of the charter prompted questions about whether the team would have a chance to meet and review any changes to the draft rules by the EMC. DWQ members agreed that the team would have a chance to meet and review any changes proposed by the EMC.

The first substantive item on the agenda focused on the need for nutrient reduction and how that need was ascertained. It became clear from the handouts provided by DWQ that agriculture was a significant contributor of nitrogen inputs to the basin. The discussion that followed focused on

understanding how the need was calculated and suggestions how the calculations might be made more precise. One observation was that septic systems, assumed major polluters, are all included with the agriculture figure, and should be eliminated.

DWQ members acknowledged that "edge of field" load reduction estimates could be compared to instream goals when assessing nutrient loads. DWQ used the term "edge of field" sampling but "edge of management unit" was suggested as perhaps more apropos by the agricultural representatives.. It was also suggested that the methodology employed by the EMC should be reviewed before an assessment method is agreed on. It was also observed by several farm representatives that the changing crops within the basin would also alter the nitrogen loading. They observed that corn, a major user of nitrogen, has given way to cotton, which requires much less nitrogen, since 1991, the base year that is used in the measurements.

When asked what specific informational needs the group required to better understand the problem the group came up with the following:

Chloryphyll-A calculation model

Accurate systems to measure nitrogen and phosphorus loading, that can also use 1991 as the base year.

Knowledge of demographic changes since 1991, including changes in land use.

Information (a credible number) on growers surveyed since 1991with erosion rates, crop yields, etc.

An accurate of dry litter operations from 1991 through the present.

When asked what specific information they would like to have included on the agenda for the next meeting, the participants identified the following:

Someone from NCDA to better review 1991 base line data when received.

Steve Coffey to talk about "how to present to the EMC."

Someone to explain NLEW worksheets and someone to explain the methodology that might be used to determine nitrogen loading.

An expert to talk about phosphorus assessment and how it can be done on a basin-wide basis.

Someone to explain the Neuse rules.

Information on damming, water flow and recreational users in the basin.

After discussing these information needs, the group decided to focus its attention first on the Neuse rules at the next meeting. The whole meeting will be spent studying the Neuse rules to understand how they are to be implemented and what the expected fiscal impact will be, as well as costs to farmers.. Anne Coan agreed to act as a resource person for the discussion. The group also asked that Lin Xu be invited as a resource person also. The next meeting will be held at the Holiday Inn, Dortches, NC on December 11 at 9:30 am.

The group also decided to address the nutrient loading measurement issues at their December 16 meeting, which will be held in room 4103-5, in Building D of the Nash Community College. Time permitting, both nitrogen and phosphorus loading measurement issues will be addressed. The January, 1999 meetings schedule is as follows:

January 7, 1999, Room 4105, Building D, Nash Community College, 9:30 a.m. to 12:00 p.m. January 22, 1999, Auditorium, Nash Agriculture Center, Nashville, NC, 9:30 a.m.-12:00 p.m.

MEMORANDUM

DATE: 12/01/98

TO: ATMOSPHERIC EMISSIONS TEAM AND INTERESTED PARTIES

FROM: CHRISTY PERRIN; 919.515.9602, CHRISTY_PERRIN@NCSU.EDU

RE: 11/24/98 MINUTES OF ATMOSPHERIC EMISSIONS TAR-PAMLICO STAKEHOLDER TEAM

TAR-PAM STAKEHOLDER RULE MAKING MEETINGS

November 24, 1998
Atmospheric Emissions Team meeting, 1:30 p.m., Nash Community College

Present: Gene Mullen, Franklin Soil/Water, Cameron Daniels, Farmer, Chester Lowden NC Farm Bureau, Anne Coan, NC Farm Bureau, Ron Sheffield, NCSU/CES, Bill Cure, NC DAQ, Viney Pal Aneja, NCSU, John A. Gibson, NCCES, Michelle Woolfolk, DWQ, Ralph Blalock, NCCES, Rich Gannon, DWQ, Bryan Blinson, NC Cattlemen's Assoc., Jim Cummings, NCDA&CS, George C. Steward, DSWC

Following introductions and review of the charge to the team, the issue of stakeholder inclusiveness at the table was raised.. In the discussion that followed the identified interests not represented at the meeting included pork producers, DOT, Pulp Mills (Forestry Association Reps.) Municipalities, Industry (i.e., Power Companies), manufacturers (Chemical Manufacturers Association) and automobile owners. (With the exception of pork producers the remaining interests became less relevant as it became more clear that ammonia and not NO2 was the pollutant of concern to DWQ.)

The draft charter and ground rules were reviewed and agreed upon. A method for operationalizing decision by consensus was reviewed and agreed upon. The time line of only three months was also discussed.

Rich Gannon, DWQ Planning, then explained the need for addressing atmospheric emissions, (primarily Ammonia). It was pointed that because the area of ammonia emissions is so nebulous, an outline describing what must be done and how it ought to be accomplished may have to be the final product. Bill Cure, DAQ and Viney Pal Aneja, NCSU, both indicated they are working on measuring the amount of nitrogen loading from ammonia, but neither has any available data yet; hence they both find it difficult to define the problem at this time. If at the end of the time limit it is not possible to agree on rules, Gannon acknowledged that an elaboration of BMP's, their estimated impacts and costs might would make a significant contribution..

Because the magnitude of ammonia emissions is not known n North Carolina the Division of Air Quality used European data its model to estimate ammonia emissions form various sources. 42 % of the estimated total ammonia emissions in North Carolina are attributed to animal operations. Air

Quality uses two steps in attempting to quantify ammonia emissions. They look at the source and what is in the air.

Following an extensive discussion on problems dealing with atmospheric deposition, several questions were raised:

1. Is there more data that deals with dairy and beef cattle since most data deals with hogs?

2. Where does ammonia deposition come down and where does it come from? Ammonia deposition should cover land as well as water.

3. Where are other sources of ammonia? Municipal waste and wild fires were mentioned; pets were also mentioned, though not believed to be a significant source.

4. Will the basin air shed be considered in the calculation?

It was agreed that ammonia should be on radar as a potential problem down the road. It was further agreed that in attempting to get a handle on the data, the European example should be a guide to "what not to do."

Discussion then turned to possible Management Options that might be used to control ammonia emissions. Ron Sheffield, Biological Engineer, NCSU/CES, helped the group explore the following practices that are being explored.:

1. Cover over the lagoon - Porous covers may be used that allow other compounds to pass through while detaining ammonia. The covers are expensive and the procedure raises additional irrigation questions because of the additional amount of ammonia that must be disbursed on the land.

2. The covered lagoon might be combined with a system that injects the effluent below the root layer in the soil. This eliminates ammonia volatilization, but this procedure could threaten pollution of the ground water.

3. The covered lagoon might be combined with a batch aeration, nitrification tank so that spray irrigation will not release ammonia.

Agreeing that odor and ammonia emissions are the chief complaints of lagoons, two crucial financial needs were identified: 1) money to further research on measuring ammonia emissions, and 2)financial support to accurately assess appropriate reduction strategies.

In order to get funds for the identified needs, Anne Coan suggested there presently is a window of opportunity within the next two weeks to convince DENR to include monies in its budget for support of this research. The team agreed this should be tried. Bill Cure, DAQ, Viney Pal Areja, NCSU, and Ron Sheffield, NCSU/CES each agreed to prepare one-page research proposal and send them to Rich Gannon and Anne Coan by December 2, 1998.. Rich will submit the proposals through the system as soon as he receives them. Anne will distribute the proposals to others in the group so that everyone might be able to promote the proposals in their dealings with DENR.

When asked what they would like to cover next meeting, the group decided they would like to have a more thorough review of the available research surrounding the problem. Ron Sheffield agreed to discuss what BMP's are available according to the literature and provide estimates on nutrient loading

reduction as well as costs to the farmer. The group also requested that someone from RTI, or Rich Gannon, explain what was in the literature review and answer questions regarding nitrogen loading allocations.

The next meeting will be at the Holiday Inn, Dortches, NC on December 11 from 1:30 to 4:00 p.m. Dates and places for succeeding meetings are scheduled as follows:

December 16, 1998, Room 4103-5, Building D, Nash Community College, 1:30- 4:00 p.m.
January 7, 1999, Room 4105, Building D, Nash Community College, 1:30-4:00 p.m..
January 22, 1999, Auditorium, Nash Agriculture Center, Nashville, NC, 1:30-4:00 p.m.