

**NC INTERAGENCY NUTRIENT MANAGEMENT COMMITTEE
MINUTES
JUNE 8, 2007**

Attendees:

<u>NCSU</u>	<u>NCDA&CS</u>	<u>DSWC</u>	<u>NRCS</u>
Deanna Osmond	Colleen Hudak-Wise	Vernon Cox	Tommy Cutts
David Crouse	David Hardy		Roy Vick
John Havlin	Brenda Cleveland		Josh Spencer

Also: Steve Woodruff (NRCS), Jim Green (NCSU, retired)

Discussion Items:

1. Potential additions to the INMC: David Crouse updated the committee on discussions with other NC DENR agencies involved in land application of waste about the possibility of adding members to the INMC. Crouse said that he had discussed with Karl Shaffer and that the high turnover associated with relevant positions in the DWQ Land Application Group and Solid Waste Division would be an obstacle in finding the right people to join the committee. The committee made the decision to not add members to the INMC at this point, but to make appropriate leaders within the two mentioned agencies aware of future INMC meetings and including them on the INMC distribution list for minutes, issue discussions, etc.
2. New Nutrient Mgmt in NC website: David Crouse updated the committee on progress on the new Nutrient Management in NC website. Crouse indicated that because of recent progress on the waste data tables, the website is very close to being ready to go live, and that modifications suggested by the INMC at the last meeting had been worked into the website. Crouse asked the committee to provide him with any useful web links for inclusion into site. The committee agreed that once the site is fully ready to go online, that Crouse should email the members a link to give a final chance for comments. Once any other comments are considered, the new web site should go online as soon as possible.
3. Pending release of NRCS 633 (Waste Utilization) standard: Josh Spencer updated the committee on progress towards release of the new NRCS 633 standard. Spencer said that the intention of NRCS is to release the new standard in late June, 2007 with the next NC Field Office Technical Guide notice. Because the new standard references the NC Nutrient Mgmt website as the source for waste data tables, the release of the standard will not occur until the new website is online. Spencer outlined the major updates and changes to the standard. Major updates include: (1) modernization of the current 1998 standard, including referencing of web links for state guidance, (2) references to NPDES permitting conditions and the new NC .02T rules including the manure hauler regulations, (3) allowance of pine forest application on a limited basis explained fully in the standard, (4) explanation that waste materials applied to land owned or controlled by the producer must be included in the waste management plan, regardless of whether a third party is responsible for application, (5) livestock heavy use areas where vegetation is damaged should not be included in the waste management plan, and (6) USDA CNMP implementation would require the new third party application form included in the standard. Spencer said that he would send members a copy of the committee a final draft copy of the standard for comment before release.
4. Waste application on "reclaimed" land with atypical or disturbed soil types: The group discussed the possibility of waste application on "reclaimed" agricultural land that had been previously utilized in a manner (eg landfill, cut & fill) that had permanently altered the natural soil series of the site. Disturbed sites of this nature have been mapped by

NRCS as “Udorthents”. Osmond questioned whether a site can be remapped by NRCS or even by a private consultant once it is “reclaimed”. Roy Vick commented that NRCS would have to do some research to find the legal and agency implications of private entities modifying NRCS soil mapping, even if only for waste application purposes. The group did not reach a consensus on what should be done in these situations, and will revisit if necessary in the future.

5. INMC interest in P trapping efficiency project at NC A&T: Spencer noted that NRCS is currently beginning to develop a comprehensive conservation plan for the NC A&T farm, and that further discussion of this project should probably wait until a resource assessment is done on the farm.
6. NRCS Outdoor Swine Technical Note: Spencer presented the key points of the NRCS Draft Outdoor Swine (OSO) Technical Note to the committee with input from Jim Green and Steve Woodruff. Spencer said that NRCS would like to release the guidance this summer, once comments and concerns from the INMC are considered. Spencer presented the document as planning guidance for NRCS field personnel that are currently receiving requests for technical assistance on these types of operations. Spencer noted that NRCS will be utilizing the guidance to develop plans for new and existing sites, and that research opportunities exist with these sites and with the potential for the pending NRCS Conservation Innovation Grants (CIG) with NC Choices and NC A&T. The introductory note to the guidance acknowledges the many questions that still exist regarding these types of operations and requests feedback from reviewers. The document notes that NRCS will plan OSOs as pasture-based or dry lot operations, with planning requirements dependent on what conditions exist on site, and on what landowner objectives are. NRCS assistance will be limited to exclusion practices, buffer practices, and surface water management when pasture or dry lot planning requirements cannot be implemented.

During the discussion, many members of the committee praised the work on the guidance, but expressed concern that the document could be used to facilitate cost-sharing on OSOs because of the likely negative water quality impacts that these farms have and the concern that conservation practices may not solve the problems to an acceptable extent. Spencer, Woodruff, and Green reminded the group the document was for conservation planning purposes for field personnel, and that decisions on cost-sharing were made by NRCS program managers and leadership. Members of the committee also expressed concern about the potential future regulatory implications of an NRCS document of this type.

The committee recommended that a few changes to the document be made: (1) a change of Plant Available Nutrients generated to Total Nutrients, and (2) that P indices given for planning scenarios be increased to more realistic “benchmark” levels. The committee asked Spencer what is needed from the INMC regarding this document. Spencer responded that he would consult with Lane Price to answer that question specifically, but that feedback on the technical aspects of the document is what NRCS would like to get and incorporate into the guidance before release.

With no further business, the meeting adjourned at 2:45 PM. The next meeting of the INMC is scheduled for August 16, 2007, 1PM, at NCDA Agronomic Lab.

INMC Comments on NRCS Outdoor Swine Technical Note

Dr. Deanna Osmond: NCSU Soil Science

Again, I want to commend the team on the thoughtful approach used for this technical note. Considering the dearth of information available on this subject, I realize that it was a difficult task to develop this "Note". I have some serious concerns about this technical note; some are technical and some are operational. I do not support this technical note on outdoor swine operations. I believe hoop systems are far more environmentally protective because the waste can be managed. Recognizing that the technical standard may go forward, I have some suggestions.

First, I think that a stocking rate of 2 sows per acre is too high. If you decide to continue with this technical note, I would set the absolute limit to no more than 1 sow per acre per year. If you look at the amount of time land will have to be rotated to remove 75% of the P with 2 sows per acre, it will take upwards of 8 cropping years without the pigs to remove the P. This is a long time to have the swine off the site. In addition, 1 sow plus her piglets appear to contribute over 130 lbs N per acre per year that will NOT be used by any crop, even under the pasture based system. (Since swine do not graze grass, there is no nutrient removal from a pasture based system.) Thus either system (pasture or bare) is allowing an effective discharge of over 100 lbs of N per acre per year through the soil and into the shallow groundwater system. This system is NOT managing N and is defacto allowing N into the groundwater and eventually streams and rivers.

I believe that PLAT should be run on these sites at least every three years. The PLAT scenario used in the "Note" shows 8 years to a High rating. Since the starting soil test P level was so low, it is my best judgment that on most fields it will take only a few years before the rating is High or Very High. I am also concerned about the consequences of a Very High PLAT rating as proposed in the "Note". Under the 590 standard, no animal waste can be applied if the PLAT rating is Very High. In the case of pasture swine, the consequences of a Very High Rating for outdoor swine and the 590 standard are inconsistent. I would suggest that at a Very High PLAT rating, all swine are removed until the PLAT site index is back to Medium.

Finally, it is my understanding that NRCS does conservation planning irrespective of other features, such as niche markets. The "Note" acknowledges (page 2) that outdoor swine operations cause environmental degradation. The practices outlined in the "Note" tries to minimize the impact; this is admirable. None-the-less, there will still be a large environmental impact from these operations. All N will be lost, P will build up in the soil, and it may be difficult, if not impossible, to ensure sheet flow from the swine production site through a buffer.

I do agree that NRCS should cost-share fencing and buffer installation between streams and outdoor swine operations. I would suggest that the buffer width match the 2T standards.

If you would like to discuss this further, please let me know.

Deanna L. Osmond
Professor and Department Extension Leader
Soil Science Dept. - NC State University
Box 7619
Raleigh, NC 27695-7619
919.515.7303

**Comment on NRCS Outdoor Swine Tech Note 180-7-XX
Agronomic Division
NC Department of Agriculture and Consumer Services**

The Agronomic Division's mandate is to provide agronomic services to North Carolina citizens that promote responsible land management and safeguard environmental quality. Thus, all issues related to nutrient management and environmental stewardship are of most paramount importance to our Division. Based on information presented in the draft NRCS Technical Note 180-7-XX note, outdoor swine operations, whether pasture or dry lot based, pose many environmental concerns to us. These range from poor aesthetics to degraded soil quality, as well excessive buildup of phosphorus and potential discharge of nitrogen into the environment.

We realize that NRCS wants to offer assistance to outdoor swine operations, many of which are owned by limited resource farmers. The Division supports assistance that NRCS can deliver to these operations through its planning process and acknowledges that without the note, operations would likely go unadvised given they are not regulated by state law due to limited animal units. We commend you for your goal of reducing the negative environmental impacts from such operations; however, given the limited amount of research in this area, development of specific technical guidance in the management of these systems is very difficult. It is hoped that the Conservation Innovation Grant recently received by North Carolina ("Supporting Adoption of Innovative Conservation Practices of Hog Production") will help to improve this research void.

The Division suggests that NRCS more closely evaluates stocking rates; based on calculated scenarios presented in the note, these stocking rates appear environmentally unsustainable due to nutrient buildup and loading. In particular, there appears to be a danger that phosphorus will accumulate to a very high PLAT rating during the five-year period over which a nutrient management plan will be valid. If a very high PLAT rating is reached, the guidance does not provide adequate protection (removal of swine) for recovery to occur.

The cost-share of fencing, installation of buffers and other engineering practices to limit erosion and protect surface water quality are endorsed. Possibly one of the most admirable ways of promoting and assisting these operations is through the cost-share of hoop houses. Additionally, educational efforts as related to environmental concerns posed by outdoor swine operations are greatly encouraged, and we are certain that sister agencies within the Interagency Nutrient Management Committee would actively participate.

Please know that the Division deeply values its working relationship with NRCS and will offer its assistance and guidance as requested. Thank you for allowing our comment on this issue.