

The first meeting of the Wake County On-site Wastewater Management Stakeholders Committee was held on July 18, 2007 from 11:30 a.m. to 1:00 pm at the Cameron Village Regional Library. The attendees included stakeholders, Wake County staff, and AMEC staff. The stakeholders in attendance were:

John Fountain, Chair	Jerry Pearce	Tara Lightner
Buck Kennedy	Dave Welch	Willem van Eck
Tricia Angoli	Mike Hoover	Shankar Mistry
Robert Massengill	Suzanne Harris	Sara Robertson
George Nicholson	JoJo Brady	

Two stakeholders, Jeffery Ritchie and Bob Rubin were unable to attend.

Wake County staff members in attendance were:

Mark Bailey	Celena Everette
Everette Lynn	Kurt Smith
Ed Duke	Heather Jankowski
Kent Daeke	

Other invited attendees were:

Brent Henry

Finally, AMEC staff in attendance were:

Henrietta Locklear	Keith Readling	April Camenisch
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The agenda for the meeting was as follows:

- Welcome
- Introductions
- Logistics
- Overview
- Discussion
- Wrap-up

The attendees ate lunch and the meeting began. Mark Bailey, Director of the Water Quality Division of Wake County Environmental Services, who convened the stakeholder group, welcomed the group and thanked the members for their time and commitment. He stressed the importance of the group's work in helping the County to move forward with a plan and funding for on-site wastewater issues. Buck Kennedy, who chairs the Environmental Services Committee of the Wake County Human Services and Environmental Services Board, also spoke eloquently about the importance of the group's mission.

John Fountain, chair of the On-site Wastewater Management Stakeholder Committee, then introduced himself and discussed his role in ensuring that the group process allows all interests to be expressed, not just those of the most vocal group members.

Then all of the stakeholders, staff, other attendees, and consultants introduced themselves.

Henrietta Locklear, who facilitated the meeting, went over logistical matters for the group. The group's usual meeting date, place, and time is the third Wednesday of each month, from 11:30 to 1:00 at the Cameron Village Regional Library, but there will be a few exceptions. The meeting dates and topics are as follows:

Meeting	Proposed Date	Topic(s)
1	July 18	Introductions Schedule and roadmap for process Ground rules Overview
2	August 16	Visit to on-site wastewater demonstration site (Lake Wheeler Road)
3	September 19	Identify problems, needs, and issues Draft problem statement
4	October 17	Review problem statement Options: where do we go from here?
5	November 28	Review options Decision: where do we go from here
6	December 12	Develop agreement on program plan
7	January 16	Options: Funding the agreed-upon program plan
8	February 20	Decision: Funding the program
9	March 19	Other issues (if necessary)
10	April 16	Wrap-up

The group agreed to the proposed ground rules for the group's meetings:

- Wait to be Recognized
- Stay on Topic
- One Question at a Time
- Share Time with Others
- No Sidebar Talk
- Arrive on Time and Stay to the End

The group also looked over the proposed roadmap for the process, which involves identifying and discussing the issues faced, formulating options for how to solve problems, develop agreement on one option, and develop a plan for moving forward.

Everette Lynn, of the Water Quality Division, spoke about the steps that led Wake County to convene the group. He gave some basic facts about on-site systems in the County. On-site systems serve a vital role in Wake County: the County estimates that 60,000 systems treat and dispose of 9-12 million gallons of wastewater per day, using a variety of technologies. These systems are functioning as a permanent part of the County's infrastructure. For example, where density restrictions in Wake County's water supply watersheds make the extension of central

sewer prohibitively expensive on-site wastewater treatment and disposal is the only option. Lynn continued with facts about the County's current on-site program. The program permits about 1,800 new systems per year and issues 500 repair permits per year. The County is delegated by the state to administer the state septic rules and has adopted more stringent requirements than the State. Staff members provide technical assistance to owners and provide routine inspections of about 500 of the most complex systems installed in the County.

In 2003, prompted by the recommendations of the Comprehensive Watershed Management Plan, the County did a pilot study to determine the failure rate of systems in the County. The study was statistically designed to find the wet season failure rate of systems installed since 1986 and to relate those failures to the degree and type of maintenance provided to the systems. The study found a 10% failure rate, which translates to 6,000 failures and around 1.2 million gallons of untreated wastewater per day. Untreated wastewater contains high levels of pathogens and nutrients, posing environmental and human health hazards. Evidently, self-reporting of failures is inadequate, since repair permits for a small fraction of these systems are issued each year (500). The study demonstrated a relationship between maintenance parameters (over 70 parameters were studied). Only a weak relationship was found between failure and system age, indicating that the systems are a sustainable technology. The pilot study recommended follow-on actions, some of which led to the stakeholder group formation:

2. Expand management of systems to enhance sustainability and protect public health and water quality
3. Conduct studies to facilitate development and implementation of management strategies.
4. Explore funding sources for expanded management.

In 2006, the County conducted a study "to facilitate development and implementation of management strategies." The study focused on identifying management strategies used by others in a nationwide study of leading programs. Preliminary management program alternatives were developed, and their possible financial, legal, and acceptance implications were identified. The management study looked at programs nationwide, from North Carolina to Iowa. In general, the study found that programs that manage systems more comprehensively are managing fewer systems:

- The County looked at 14 programs, large and small across the US
- Nine out of the programs were managing 5,000 or fewer systems (for some this made up a small percentage of systems located in the jurisdiction, for others this was a large percentage of systems)
- 12 out of the programs used fee revenues to support their programs
- Six programs were supported exclusively by fee revenue
- Nine charged fees for regular inspections
- Two programs, both in North Carolina, had voluntary participation in the management program
- Five programs had mandatory inspections when properties are bought or sold
- One program recovered fees through billing its fees via contractors who inspect and maintain systems

Not only did the Comprehensive Watershed Management Plan and the Upper Neuse River Basin Plan recommend that the County take action, the Environmental Services Committee supports examining management alternatives and the Stormwater Task Force drafted a recommendation to evaluate maintenance and inspection procedures.

A final and important driver that led to the creation of the stakeholders committee is the promulgation of new state rules. The rules are expected to take effect in July 2008. Counties are required to inspect systems with pumps every 5 years. Wake County has more than 8,000 such systems that are not being inspected. The new rules will impose a stiff penalty if systems are not inspected—the County will not be able to permit these systems, which make up about a third of the systems currently permitted each year.

Discussion

In the remaining time, the stakeholders and staff discussed the following questions related to on-site systems and management of systems.

Q: Could the County delegate its mandated inspections to private professionals?

A: County staff replied that the rules stated that the state rules required County staff to conduct the inspections and that the state did not appear to be open to contractor inspections.

Q: Are there standards for inspections that currently go on when homes are sold?

A: No, not currently. But as of January 1, 2008, inspectors will be required to be certified by the state and guidance is being developed for use by those inspectors.

Q: Why are systems failing?

A: One of the top factors is that people are not pumping their systems regularly. Other factors include poor site maintenance, structures built on the drainfield, and landscaping that affects the drainage and hydraulic loading.

Q: Does the County have a list of all of the systems and data about all of them?

A: No. The County's dataset is incomplete and much of it is not in a digital format. Right now, the County is working on digitizing and cleaning up the existing data and is working towards collecting the data that is missing.

Q: Do we know what the effects of better plumbing and lower water consumption are upon septic systems?

A: No. Studies are in progress on this topic.

Wrap-up

John Fountain summarized what the group had learned and reviewed the group's purpose.

The next meeting will take place at the J. Edward Booth Field Learning Laboratory on Thursday August 16th at 11:00 a.m. The purpose of the meeting is to see on-site technologies in the field. Directions and more information will be sent out prior to the next meeting.