

SMALL COMMUNITIES ENVIRONMENTAL INFRASTRUCTURE GROUP

June 7, 2010

MINUTES

Attendees: Steve Grossman, Ken Heigel and Gina Sopp, OWDA; Dave Douglas, USDA/RD; Randy Hunt, RCAP; Tim Leasure, ODOD; Karen Mancl, OSU; Melissa Zoller, Buckeye Hills; Nick Gatz, Senator Voinovich's Office; Dave Bornino and Brian Hall, Ohio EPA; Kaye Borchers, Choice One Engineering; Kurt Ericksen, TMACOG; Mike Miller, OPWC and Greg DiDonato, OMEGA.

Kaye Borchers attended as a guest.

Steve noted he would report for Jim Bonk who was not able to attend. David Frantz from the Army Corps is also absent and offered his availability by phone during the meeting, if needed.

TRAINING COMMITTEE: Karen Mancl - Curriculum and Randy Hunt - RCAP Training

Karen noted that Lori Libby was unable to make the meeting and that she would report for both of them.

Karen reported that she has completed her coursework and defended her research on her thesis entitled "Environmental Technology Transfer to Rural China". She will graduate with her MA in East Asian Studies on June 13.

Steve and the group congratulated her on this accomplishment.

Curriculum:

Water and Wastewater-

Karen reported that for the first time since 2000, they had to cancel their Design School offering due to low registration.

She will be speaking at a septic system workshop (for plumbers who need certification) on Friday, August 27 in Worthington, OH (see attached brochure). The workshop is sponsored by Halfmoon Seminars, a private company from Wisconsin that organizes and offers workshops for groups that need continuing education. This is the first time she has used this seminar group and hopes this will open up future opportunity to reach this new group, as well as other groups of contractors that would normally come to OSU's Extension. She will give a report on how the workshop was received in September.

Per Brian Hall's request at the last meeting, a detailed agenda and information was sent to Dan Kopec at Ohio EPA in March to offer a seminar on sand bioreactors meeting affluent limits to their wastewater staff. The registration fee is \$75/person if the room is filled because no promotion or brochures will need to be printed. Minimum attendance is 10-15 people. She has not heard back from Dan to schedule and noted that she is available this summer.

Brian responded that he would check with Dan.

Karen noted that she is getting a lot of interest from engineers that are trying to design sand bioreactors; however, they are meeting with resistance from Ohio EPA staff because of a lack of knowledge of these systems. This is the reason she wants to offer this seminar to OEPA staff.

Reminder that the Ohio Water Quality and Waste Management Conference is scheduled for Thursday and Friday, February 3 & 4, 2011. The topic is "Wastewater Treatment at Cold Temperatures" and will include current research from OSU and presentations of research from other cold climates. Freezing of equipment and ammonia removal are the two big issues.

Karen reported that she has conducted an orientation session for a group of Ohio on-site installers and a civil engineer who are doing business with China.

She hosted 3 Chinese scientists in April from the Shandong Academy of Agricultural Sciences. They toured the Learning Lab at Molly Caren and the OSU lab. These scientists are currently building a 700 square meter sand bioreactor in the Shandong Province that will treat the wastewater for an entire village. She brought her thesis to the meeting today which includes pictures of this project.

Karen will be speaking on sand bioreactors (in Chinese) for wastewater treatment in October at a National Conference and at Zhejiang University.

Publications-

Since new onsite sewage law has finally been passed, the following bulletins have been published:

Updates: Bulletin 896 – "Suitability of Ohio Soils for Treating Wastewater" – adjusting soil depth tables and updating to new classifications; Bulletin 876 – "Sand Bioreactors for Wastewater Treatment" – adding information on artificial media;

A new bulletin on "Wastewater Disinfection" has been drafted and reviewed to add a short section on design factors.

These publications are available on their website at <http://setll.osu.edu>.

New Technology/Research

New Systems:

Karen reported that she has been doing research with a small slaughterhouse near Cincinnati. One shift a day was going to be eliminated that would have affected 110 employees because they could not afford to connect to the City sewer system. The owners had been given orders to abandon their permitted on-site lagoons.

In cooperation with OEPA, OSU and the owners of the plant, research was developed to treat slaughterhouse wastewater with sand gravel bioreactors. This process had never been done before. A pilot plant was built on site and has been operating for approximately 2 ½ years with affluent BOD levels at less than 10 consistently. Based on the positive results from the pilot plant, they requested and received a NPDES permit to discharge in the Whitewater River, which is a 200,000 gallon per day superior quality waterway facility.

The owners considered three types of treatment and found that the sand bioreactor was the most efficient and least expensive. The project total is \$1.2 million and is one-fourth the cost to connect to the City.

The design has to be submitted by the end of September. She is working directly with the owner's son, who is an engineer, to make the deadline. The owners will build the project themselves to make sure it is built correctly since they already built the pilot plant. They will be utilizing an aggregate company to clean the sand which is located next door to the plant. This makes this an affordable project saving 110 jobs and is the first facility of its kind in the US!

Karen stated that she is submitting a proposal to the Sustainable Agricultural Research and Education Fund at the University of Minnesota to do an educational program around this facility. While the owners are constructing the plant, the project will be videotaped in order to create a training video. She plans to write the curriculum on how to build small/seasonal meat slaughterhouse facilities for engineers and regulators in Ohio and throughout the US. This information will assist smaller facilities because large slaughterhouses will not process their animals for them. As a result, small slaughterhouses are going out of business because they have to meet environmental and other regulations. If this proposal is funded, it will be a 3 year process including building the facility and a hands-on teaching area similar to what OSU has at Molly Caren.

RCAP Training

Randy reported that RCAP recently completed the last cycle of training, which included Financial Management and CUPSS, the Check-Up Program for Small Systems. Financial Management is a pre-requisite to attend CUPSS. He attended the CUPSS training in Lancaster and felt it was a good automated system for managing water and

sewer infrastructure. The morning session is spent loading information into the program and the afternoon is spent running reports based on that information.

RCAP's training courses that began in March and ended with New Philadelphia on June 3rd have been nearly full and have had good participation.

Randy distributed an overview agenda for RCAP's Rural Community Conference on August 24-25th at the Hilton Easton. Information has been posted to the RCAP website and online registration will be available within the next few weeks, including booking room reservations. They have confirmed Senator Brown as the keynote speaker for lunch on the 24th and are working with Tony Logan to secure Under Secretary Dallas Tonsager for USDA RD. They also have an invitation into Governor Strickland but have not heard a response yet.

Three tracks will be offered during the first day including infrastructure, economic development and legislative affairs. Lori Libby is assisting with some training sessions for legislative affairs portion. For the second day, other than infrastructure and economic development, additional tracks in management and leadership will be offered in lieu of legislative. There will be an awards lunch that day as well as a resource roundup that will include many funding agencies, including those represented in the SCEIG. The round-up format will be round-robin where each agency has approximately 3-5 minutes to briefly present. Conference attendees will be encouraged to meet with the agencies, one-on-one after the presentations. Randy noted that he will be extending invitations to the SCEIG to participate.

DECENTRALIZED WASTEWATER WORK GROUP: Dave Douglas

The Decentralized Committee met on May 13 and are planning engineer training on August 10th in the Northeast Ohio OEPA office in Twinsburg. Another engineer meeting will be held later in the fall in the Northwest Ohio EPA District Office after reviewing the results of the Northeast meeting. The idea is to have engineers meet with OEPA to learn more about decentralized wastewater treatment.

Kurt asked Dave Douglas to send him the particulars of the Northwest meeting as soon as they are known. He will work to get the word out on that meeting.

The DWWG's Community training session will be held in Cambridge on September 21st, 2010 from 6:30 pm until 8:00 pm. The specific location is to be determined. Target communities will come from OEPA district enforcement lists, county commissioners, and the OWDA unsewered program communities list. Dave asked that everyone inform possible interested communities. The goal is to have these groups consider decentralized solutions and to assist them with how to go about that.

Karen suggested that they contact OSU's County extension office in Cambridge for a possible meeting site.

Dave Douglas reported that the following fact sheets have been developed:

- Planning a Decentralized Wastewater Treatment System for Your Community
- Centralized vs. Decentralized Wastewater Treatment Alternatives for Small Communities in Ohio
- 4 Amesville Fact sheets: Project Processing Steps
 Engineer Design Steps
 Management System Development Steps
 Project Success Elements

The group is still working on a fact sheet for engineers on collection systems for clusters.

Roberta Acosta will be presenting decentralized wastewater training to the Sandusky River Watershed Coalition on June 9th in Tiffin. The training session will be in the morning, with a field trip to the Shenandoah site planned for the afternoon.

Karen offered that OSU could do a follow-up session for the Coalition to assist them with various technology options.

Dave Douglas noted that he would pass the information along to Roberta since she is in charge of this session. Roberta's agenda covers centralized vs. decentralized; planning for a decentralized system including permitting; decentralized technologies; operation and maintenance; and public financing.

The DWWG will have a booth at the following conferences:

- OWEA/WEF, June 14-17 (Roberta)
- Ohio RCAP Conference, August 24-25
- County Commissioner Association, December 6-8

Since RCAP houses the Decentralized website for decentralized systems, they have agreed to update it sometime this year.

The group is planning a Decentralized Wastewater Work Group committee member field trip to Hamilton County later this fall to observe decentralized systems in operation.

Other Decentralized Projects:

The Village of Coolville has been funded and may start construction this summer. West Farmington is being reviewed for potential funding next spring. Possible decentralized projects in Perry County are: Glenford, Rehoboth, and Moore's Junction.

Over time, the group has been looking at some systems in Knox County; however, there has been no recent activity. The last report he had was for 9 to 10 different locations that will be managed by the Knox County Commissioners.

Brian noted that they are close to getting TI's in for Knox County. He is not sure who will be funding these projects.

Kurt's understanding is that OEPA will not permit decentralized systems, at least not in the Northwest District. Is this situation changing?

Brian responded that OEPA is reviewing these on a case-by-case basis.

Kurt commented that if an entire community wants to go with decentralization, approximately 2/3rds of the cost is the collection system. The best cost option would be to go with a cluster system. Will all of these possibilities be discussed at these sessions?

Dave Douglas responded that he is correct about the cost and savings; they will definitely be covering this during the sessions. The largest savings in terms of overall cost is the operation and maintenance expenses, which are generally much less. One of the reasons for having the engineers meetings at OEPA offices is to try to help convince everyone that this is something they should be looking at. The intent is to hit all 4 of the outlying OEPA offices over time.

There was a meeting last summer where they specifically invited all of the OEPA people to the groups large meeting for the purpose of trying to educate them about the aspects of decentralized. The DWWG is making progress with this because the Southeast District has approved both Amesville and Coolville; and approval may be coming soon from the Northeast District for West Farmington.

Kurt noted that beyond the engineers, the group has a real sales job ahead. They typically hear from small communities that if they are going to pay for a sewer system, they want to do it right the first time and not do something experimental where they would have to come back later and re do it. Experiences like Hoytville with their small diameter collection system have not helped. Twenty years after Hoytville's system was installed the community is running into problems. This does not help the credibility of alternative systems.

Dave Douglas concurred that this is a good point. His knowledge of decentralized systems is that this is not really new technology because many times a septic system is used that is centrally managed. With managed septic systems, it has been proven to work well over time. He thanked Kurt for bringing up this concern from the public's perspective.

Kurt stated that they have heard this at more than one public meeting.

Dave Douglas noted that the alternative is to have a large mass of concrete for a centralized system that is paid for over 40 years; however, this system is obsolete in 20 years.

Karen commented that with the Hoytsville system being 20 years old, it is expected that new tanks would need to be installed.

Ken noted that Hoytsville is having trouble with their collection system because it is a small diameter sewer.

Steve stated that change has come slowly. It took several years for Amesville to become a reality. It now has been operational for two years. There are a few more projects coming and once there is a handful of these systems, it goes past experimental and moves to experience.

Kurt commented that the problem lies with affordability. The communities that have 50–100 homes are not able to afford conventional systems and have the most difficulty. This may be their best shot at achieving their goal.

Steve asked if there is any media on Amesville.

Dave Douglas responded that there are fact sheets and further discussions are planned for this in Cambridge and with the engineers.

Brian noted that a point of distinction is with the receiving stream. This makes a difference as to what can be done.

APPALACHIAN ENVIRONMENTAL INFRASTRUCTURE STRATEGY
WORKGROUP: Steve Grossman

At the last meeting in March, the group decided to go back to meeting every 6 months. The next meeting will be September 7 and a notification has been sent out to save this date.

There still are a lot of projects out there that the group is working on.

SMALL COMMUNITY TRACKING SYSTEM: Ken Heigel

Thanks to the RCAP agents who are updating most of the data, the tracking system is going very well. If you are using the system, please let the RCAP agents know.

Ken noted that he is currently working on a list of what needs to be changed in the system. Within the next 4-6 months, those changes will be implemented because the resources are available and nothing is out of the question. Please send him any comments/requests.

