

SERA-17 Annual Meeting, August 2-4th, Ithica, NY Minutes

Wednesday

A field trip was organized that included visits to the Cornell Lake Source Cooling Facility, Waste Water Treatment Plant, Bolton Point Municipal Water System, and, Fessenden Dairy

Cornell's Lake Source Cooling project. The Lake Source Cooling project is a replacement and upgrade of the central campus chilled water system with a more environmentally sound design that conserves energy and utilizes a renewable resource, the deep waters of nearby Cayuga Lake. For more information, the website is located at http://test.utilities.cornell.edu/utl_lscabout.html

Waste Water Treatment Plant. We toured a WWTP that has done a lot of work on P levels in Cayuga Lake, particularly where the effluent outlet is, and just completed installation of a tertiary treatment system.

Bolton Point Municipal Water System. We were given a tour of the drinking water treatment facility which uses Cayuga Lake as the water source.

Fessenden Dairy. This is a 650 cow dairy that uses a series of solid separation techniques to reduce volume and nutrients in the manure generated on the farm. The materials are recycled and used for bedding, field applied, and composted for off-farm sale.

Thursday

Quirine Ketterings presented a talk entitled "Agronomic soil testing for P index assessment. Why?" A phosphorus site index (PSI) was introduced in New York State in March 2001. All CAFO's in the state have to do both a P runoff index assessment as well as nitrate leaching assessment on all fields. They use the Morgan test for the soil test phosphorus source component of the PSI. Within the PSI, the soil test phosphorus has a large influence over the PSI rating, and she posed the question, should we be using soil test P as an indicator of the risk of P loss? It was suggested that soil test P could be used as a management tool to determine effects of P loading over time.

Zach Easton presented a talk entitled "Soil Moisture Routing Model for P runoff risk assessment". This model attempts to identify high source and transport areas within a field as well as variable source areas within a field. They found a link between dissolved organic carbon and phosphate transport in streams studied. They also use a temperature correction in the model which improves the predicted P concentrations in streams during the colder months.

Karl Czymmek presented several CAFO related legal issues and suits that had been filed in New York State.

Tommy Daniels presented an update of the Arkansas-Oklahoma lawsuit.

Workgroup meetings were held and progress within the groups presented

BMP workgroup (Forbes Walker). As of May 2005 there are 32 fact sheets published on-line. These can be found and downloaded at www.sera17.ext.vt.edu

Aquatics and Transport workgroup (Brian Haggard). The workgroup would like to publish some materials that summarize methodology and provide guidance for water quality monitoring, build a data warehouse, provide some experimental protocols for research on “in stream processes” such as sediment P dynamics and doing work with in-stream P injections.

National P protocol (Andrew Sharpley). Projects have been completed and information is available on the ARS website which includes all the data that was generated by this project.

Soil/Manure Testing workgroup (John Kovar). The group is updating the methods manual, which is hoped to be completed by the end of the year and available on-line.

Modeling Conference and Workshop (Nathan Nelson). Nathan gave us an overview of what was discussed at the modeling conference. The modeling group has a new publication that will be available on November 7th “Modeling Phosphorus in the Environment”.

There was some discussion as to where SERA-17 is going and what the main goals of the group should be. Tom Sims suggested the group should be involved in developing process based modeling, which can be used across the landscape.

P management and Policy workgroup report (Greg Mullins). There are were five position papers written in 2005, four of them are published on the website:

- 1) Phosphorus Indices to Predict Risk for Phosphorus Losses
- 2) Predicting Phosphorus Losses
- 3) Phosphorus Determination in Waters and Extracts of Soils and By-products: ICP vs. Colorimetric Procedures
- 4) The Importance of Sampling Depth When Testing Soils for Their Potential to Supply P to Surface Runoff.

Several new position papers are being published in the near future.

- 1) Soil Sampling Methods and Expression of Units (Antonio Mallarino is lead on this)
- 2) Phosphorus in Animal Manures and Wastes: Is it Hazardous? (Philip Moore and Brad Joern)
- 3) Phosphorus Management Within Watersheds When they Cross State Lines (Deanna Osmond is lead on this)

Friday

Doug Beegle presented a talk entitled “How do we move towards nutrient balance and what do we do in the mean time?” It was suggested that the P pollution problem is due to

economics and not mismanagement. Concentrated nutrients are imported into regions having large concentrations of animal production and therefore generate regional excesses of nutrients. Best management practices are important but they will not solve the problem. We need to set goals on a large scale and look for ways to move towards nutrient balance.

Curt Gooch presented a talk entitled “Long term solutions: what can the engineers do? P removal from manure”. There was a lot of data presented related to solid separation techniques on dairies and it was found that solid separation removes approximately 20-30% of total P from manures. Other techniques will be needed to remove more P from manures. Belt press technology was shown to remove 92-95% of P from manures which is concentrated in the cake produced.

There was a panel discussion to address areas of concern within the group. The panel members included : Andrew Sharpley, Brad Joern, Jerry Lemunyon, and Jim Peck.

Business Meeting

Arkansas (Brian Haggard) volunteered to hold the meeting next year. It was suggested that we have two full days for the meeting and one day of field trip. Also it was suggested that the meeting be held in early-mid June to avoid the heat.

Forbes Walker was elected as the next President.

Meeting was adjourned.