MANURE MANAGEMENT AND AIR QUALITY (MMAQ)
EDUCATION PROGRAM
WORKSHOP SERIES

MAFEM – New User Training

The **Minnesota Annualized Feedlot Evaluation Model** is a computer model developed to uniformly and objectively evaluate pollution hazards from animal feedlots. MAFEM is based on the Feedlot Evaluation Model (FLEval) that was developed in Minnesota jointly by the Minnesota Pollution Control Agency (MPCA), NRCS, ARS and other agencies in 1982 through a Federal grant. Regulators and Cost Share programs will soon be switching from FLEval to MAFEM model for regulation and prioritization purposes.

This workshop provides extensive training on the use of MAFEM. Training consists of several hours of classroom activities that provide participants with a thorough understanding of the theory used in the model and the regulatory framework under which the model is used. Classroom exercises were designed to give course participants a thorough understanding of data input and output screens and key elements of the model inputs that can have a dramatic impact on model outputs. Field activities focus on evaluating the site and collecting data used in the model. Participants will work travel to two or more farms and have the chance to work in teams to collect data and run the model.

Upon completion of this training, participants will be able to:

- Understand the factors affecting pollution from open lot runoff
- Obtain the required information to run the MAFEM program
- Run the FLEval program
- Assess the pollution contributions of feedlots based on the MAFEM model
- Understand the limitations of MAFEM in assessing pollution potential

Who Should Attend:
Engineers, technicians, regulators, and others whose area of responsibility
includes determining the pollution hazard potential and/or for those who need to use MAFEM to establish priorities for financial or technical assistance. Those having some background in FLEval are encouraged to participate as well as those with no previous training in the FLEval or MAFEM.

Course Instructors:

David Schmidt, Engineer, University of Minnesota Department of Biosystems and Agricultural Engineering
Staff, Minnesota Pollution Control Agency
Local staff involved in feedlot runoff modeling

To register: http://www.manure.umn.edu/workshops
or call 1-800-646-2282

For more information on the course content contact David Schmidt at 612-625-4262 or schmi071@umn.edu

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Course Agenda
MAFEM Training

This course is for individuals who need to assess the pollution hazard from existing livestock open lots. The training will be very hands-on with time spent in both the classroom and in the field. Training materials include the model guidance documentation and the EXCEL spreadsheet. During the two-day workshop, participants will experience both classroom and field training on MAFEM. Participants must bring a laptop computer with Microsoft Excel.

The workshop teaches:

- the definitions of key terms used in the model.
- the critical inputs for the model including a good sketch, types, numbers and weight of animals and the amount of time animals are on the lot each day; determining the discharge point; evaluating the watershed and its three parts; determining soil cover complex numbers (runoff curve numbers); identifying the buffer, ground water pollution potential.
- a thorough understanding of model outputs including the model “rating” for surface and ground water and loading rates predicted by the program.

Agenda

1. Regulatory Overview
2. MAFEM background
3. Using MAFEM and introduction to site visits
4. Site visits farms 1 and 2
5. Site visit to farm 3
6. Data Entry and Model Sensitivity

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