

Comprehensive Nutrient Management Plan Development Course
February 25-27, 2008
Louisville, KY
Agenda

Monday, February 25, 2008

- 7:15 – 8:00 am **Registration and Coffee**
- 8:00 – 8:05 am **Welcome**
Mike Hubbs, Kentucky State Conservationist
Natural Resources Conservation Service
- 8:05 – 8:20 am **Introduction and Course Objective**
Robert Burns
Iowa State University
- Definition of CNMP
 - What you get from attending
 - ISU Certification Overview

TSP Certification and Registration

- 8:20 – 9:00 am **ISU Certification Requirements**
Lara Moody, P.E.
Iowa State University
- Certification options
 - Certification requirements by area
 - Maintaining certification
 - National Employee Development Center training courses
- 9:00 – 9:30 am **Introduction to Example CNMP**
Dr. Robert Burns, P.E.
Iowa State University
- Overview of example CNMP
 - Building a CNMP

Section 1– Conservation Planning

- 9:30 – 10:00 am **Field Office Technical Guide and Developing a Resource Management System**
Mark Waggoner
Natural Resources Conservation Service
- Organization of FOTG
 - NPPH
 - Technical resources
 - Resource Management Conservation System
- 10:00 – 10:30 am **Break – Refreshments in Exhibitor Area**
- 10:30 – 11:00 am **Conservation Planning Process for CNMPs**
Lori Ziehr
Natural Resources Conservation Service
- Nine step process
 - Example CNMP Farm Inventory

Section 2 – Land Treatment Practices

- 11:00 – 11:30 am **Land Treatment and the Conservation Planning Process**
Barry Kintzer
Consulting Engineer, Mechanicsville, VA
- Purpose of land treatment practices
 - Risk Identification
 - Site inventory
 - Resource assessment tools
 - Evaluation of alternatives
- 11:30 – 12:00 noon **Planning Land Treatment Practices**
Gary Moore
Natural Resources Conservation Service
- Basic understanding of land treatment in CNMPs
 - Conservation planning preparations
 - NRCS Conservation Practice standards
 - Conservation plan example
 - Conservation plan implementation
- 12:00 – 1:00 pm **Lunch – Provided on Site**
- 1:00 – 1:45 pm **Examples of Completed Conservation Practices**
Gary Moore
Natural Resources Conservation Service
- **Learning Example**
- 1:45 – 2:00 pm **Land Treatment Practices Summary**
Barry Kintzer
Consulting Engineer, Mechanicsville, VA
- **Learning Example**

Section 3 – Manure and Wastewater Storage and Handling

- 2:00 – 3:00 pm **Waste Management Systems Overview**
Dr. Robert Burns, P.E.
Iowa State University
- Species specific production systems
 - Species specific waste management systems
 - Storage structure types
- 3:00 - 3:30 pm **Break – Refreshments in Exhibitor Area**
- 3:30 – 4:00 pm **Waste Storage Structure Siting**
Billy Hartsell
Natural Resources Conservation Service
- Siting
 - Soils and Geologic considerations

- 4:00 – 4:45 pm **Waste Characteristics and Volumes**
 Saqib Mukhtar
 Texas A&M University
- Waste characteristics
 - Manure volume estimation methods
 - Manure nutrient estimation methods
 - Other waste volumes
 - **Learning Example**
- 4:45 – 5:15 pm **Animal Waste Management Software**
 Darren Hickman
 Natural Resources Conservation Service
- Software availability
 - Demonstration
- 5:15 – 6:45 pm **Refreshments in Exhibitor Area**

Tuesday, February 26, 2008

- 7:30 – 8:00 am **Coffee in Exhibitor Area**
- Section 3 – Manure and Wastewater Storage and Handling, cont.*
- 8:00 – 8:30 am **Farm Visit Biosecurity Issues**
 Ken Stalder
 Iowa State University
- Biosecurity precautions
- 8:30 – 9:00 pm **Emergency Action Planning**
 George Grandle
 The University of Tennessee
- Why have an emergency action plan
 - Types of emergencies
 - Plan components
 - Plan implementation
 - Example plan
 - **Learning Example**
- 9:00 – 9:45 am **Rainfall Runoff Management**
 Darren Hickman
 Natural Resources Conservation Service
- Watershed area determination
 - Climatic data
 - Curve number calculation
 - Runoff volumes
 - **Learning Example**
- 9:45 – 10:15 pm **Break – Refreshments in Exhibitor Area**

- 10:15 – 11:00 am **Structure Sizing and Evaluation**
 Saqib Mukhtar
 Texas A&M University
- Determination of critical storage interval
 - Storage volumes
 - Current storage interval and existing storage volume
 - Structural integrity
 - Seepage
 - **Learning Example**
- 11:00 – 11:30 am **Mortality Management**
 George Grandle
 The University of Tennessee
- NRCS practice standard
 - Estimating mortality numbers and mass
 - Dead animal disposal options
 - **Learning Example**
- 11:30 – 12:00 pm **Waste Storage System Closure**
 Barry Kintzer
 Consulting Engineer, Mechanicsville, VA
- NRCS practice standard
 - System clean-out
 - Estimation of nutrients to be applied at closure
 - Transport and application considerations
 - Decommissioning and reclamation of storage facilities
 - **Learning Example**
- 12:00 – 12:15 pm **MWSH Summary**
 Dr. Robert Burns, P.E.
 Iowa State University
- 12:15 – 1:15 pm **Lunch – Provided on Site**
- Section 4 – Nutrient Management*
- 1:15 – 1:45 pm **Nutrient Management Planning**
 Lori Ziehr
 Natural Resources Conservation Service
- Strategic Planning
 - Annual planning
 - Making it work
 - **Learning Example**
- 1:45 – 2:15 pm **Field Specific Decisions: N vs P**
 Natalie Rector
 Michigan State University
- Goal of nutrient management
 - Soil sampling
 - Nutrient decision tools (P-index, Threshold, Soil Test)
 - **Learning Example**

- 2:15 – 3:15 pm **Phosphorus and Potassium**
Lori Ziehr
Natural Resources Conservation Service
- Environmental concerns
 - Plant removal characteristics
 - **Learning Example**
- 3:15 – 3:45 pm **Break – Refreshments**
- 3:45 – 4:45 pm **Nitrogen Management**
Natalie Rector
Michigan State University
- Agronomic importance
 - Environmental concerns
 - Crop requirements
 - Estimating plant available nitrogen in manures
 - Nutrient based manure application plans
 - **Learning Example**
- 4:45 – 5:15 pm **Application Logistics**
Robert Burns
Iowa State University
- Application timing
 - Application windows
 - Application rates
- 5:15 – 5:30 pm **Nutrient Management Summary**
Natalie Rector
Michigan State University

5:30 – 7:00 pm **Refreshments in Exhibitor Area**

Wednesday, February 27, 2008

7:30 – 8:00 am **Coffee in Exhibitors Area**

Section 5 – Feed Management

- 8:00 – 8:45 am **Feed Management**
Galen Erickson
University of Nebraska-Lincoln
- Role in CNMP
 - General digestive process overview
 - Feed ingredients
 - By-product feeds
 - Nutrient content of diets
 - **Learning Example**
- 8:45 – 9:30 am **Non-Ruminant Animal Feed Management Issues**
Kenneth Stalder
Iowa State University
- NRC requirements
 - Nutrient excretion
 - Strategies to reduce phosphorus excretion
 - Economic analysis of reducing phosphorus and nitrogen
 - **Learning Example**

- 9:30 – 10:00 am **Break – Refreshments in Exhibitor Area**
- 10:00 – 10:45 pm **Ruminant Animal Feed Management Issues**
 Galen Erickson
 University of Nebraska-Lincoln
- NRC requirements
 - Nutrient excretion
 - Strategies to reduce phosphorus excretion
 - Economic analysis of reducing phosphorus and nitrogen
 - **Learning Example**
- 10:45 – 11:00 am **Feed Management Summary**
 Galen Erickson
 University of Nebraska-Lincoln

Module 6 – Record Keeping

- 11:00 – 11:30 am **Record Keeping CNMP and NPDES Requirements**
 Lara Moody
 Iowa State University
- CNMP requirements
 - NPDES requirements
 - Record keeping templates and checklists
 - **Learning Example**

Section 7 – Air Quality

- 11:30 – 12:15 pm **Air Quality Concerns**
 Dr. Richard Gates
 University of Kentucky
- Scope of issues
 - NRCS Standard 370
 - Common CAFO emissions
 - Other issues
 - **Learning Example**
- 12:15 – 1:15 pm **Lunch – Provided on-site**
- 1:15 – 2:00 pm **Air Quality Technologies**
 Dr. Richard Gates
 University of Kentucky
- Livestock building emission control practices
 - Open lot emission control practices
 - Manure storage emission control practices
 - Land application emission control practices
 - Implementing control practices
 - **Learning Example**

Constructing a CNMP

- 2:30 – 4:00 pm **Putting it all Together**
 Advice from working TSPs followed by a panel discussion
- 2:30 – 3:00 pm **Collecting and Organizing CNMP Data**
 Mike Sexton
 Twin Lakes Environmental

3:00 – 3:30 pm

CNMP Formatting Options

Richard Hodupp
Mendon Prairie Associates

3:30 – 4:00 pm

Meeting State NRCS CNMP Requirements

Brandon Moffat
Conestoga Rovers and Associates

4:00 – 4:30 pm

Panel Discussion – Developing and Implementing CNMPs

Mike Sexton, Brandon Moffat and Richard Hodupp -
CNMP Technical Service Providers and
Gary Moore – NRCS District Conservationist
Barry Kintzer – Consulting Engineer
Lori Ziehr – NRCS Conservation Agronomist