



2011 Missouri Dairy Grazing Conference

Jeff Browning

Great River Engineering

Troy Chockley

Natural Resources Conservation Service



Regulatory Issues

- State environmental regulatory agency
 - Missouri Department of Natural Resources
 - Water Pollution Control Branch
- Regulatory threshold: 700 dairy animals
 - Required to obtain a permit from MDNR.
- Direct discharge into a stream
 - Regardless of size, regulatory action for a direct discharge (pipe or manmade conveyance).



Regulatory Issues

- Concentrated Animal Feeding Operation Nutrient Management Technical Standard, March 2009
 - Contains the requirements to qualify for the agriculture storm water exemption for the land application fields.
 - Summary of set back distances for the nutrient application.
 - Considered Best Management Practices for land application for non-CAFOs.



Technical Issues

- Number and size of animals
 - Regulatory threshold, 700 Dairy Cows
- Percent of manure that will be managed
 - Manure nutrient credit on the grazing area
 - Locations for nutrient application
 - Manure storage system
 - Volume
 - Consistency



Technical Issues

- Milk Center wastewater and manure management
 - Flush system
 - Scrape system
- Winter management area
 - Storm water management
 - Location, location, location!!



Technical Issues

- Storage Structures
 - 180 day storage recommended
 - Liquids
 - Earthen Pits
 - Concrete Tanks or pits
 - Treatment Lagoons (typically anaerobic)
 - Solids
 - Settling Basins
 - Separating devices – screens, wedge wire, etc.
 - Stacking Structure – solids storage




Technical Issues

- Water Usage
 - Recycle system from liquid storage
 - Plate cooler water reuse
 - Minimize parlor floor and storm water input
- Curbing
 - Push curbs – minimum 24 inches tall
 - Side curbs – minimum 8 inches tall, flushed area may need to be taller.



Technical Issues

- Manure and Wastewater Transfer
 - Consider potential for future additions
 - Adequately sized pipeline – knowledgeable person with pumps and piping
 - Layout concrete lanes for scraping or flushing
 - Minimize corners!
 - Adequate curb height
 - Appropriate slope
 - Land Application System



**Environmental
Quality
Incentives
Program (EQIP)**



Environmental Quality Incentives Program (EQIP)


- Promote agricultural production and forest management
- To optimize environmental benefits
- Authorized in 08 Farm Bill
- Producer must apply – VOLUNTARY!
- Competitive application process – No Guarantee of participation.



Environmental Quality Incentives Program (EQIP)

Eligible producer – person or entity engaged in livestock or crop or forest production

Eligible land – privately-owned cropland or grassland or pastureland or nonindustrial private forestland



Environmental Quality Incentives Program (EQIP)

- Waste Management Systems
 - Manure collection, transport and storage
 - Milking Center wastewater and manure
- Prescribed Grazing System
- Comprehensive Nutrient Management Plan
 - Comply with regulatory requirements contained in Nutrient Management Technical Standard.



Environmental Quality Incentives Program (EQIP)

- Technical Service Providers (TSP)
 - Private consultants performing activities that comply with NRCS standards and programs
 - Certain EQIP activities are performed only by TSP
 - CNMP plans
 - Energy Audits



Environmental Quality Incentives Program (EQIP)

Contact your local NRCS Office

- phone book under United States Government, Department of Agriculture
- Missouri NRCS webpage

www.mo.nrcs.usda.gov/programs



Environmental Quality Incentives Program (EQIP)

- NRCS information on social media
 - Visit www.twitter.com and search for NRCS_Missouri.
 - There is a direct link from the Missouri NRCS website to Twitter
 - Followers will receive timely updates



The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.