



AFO or CAFO: Evaluating environmental issues on your farm

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Who?


- Dairy farms of any size that want to prepare their business for the future.
- Dairy farms that are considering growth into CAFO size.



How?

- Tap into AEM
 - Contact your District and/or a Certified Planner
- 5 Tiers
 - 1 & 2: Environmental Assessment
 - 3: Planning
 - 4: Implementation
 - 5: Evaluation





AEM Tier II Worksheets Barnyards

Glossary

20-foot Buffer Zone: The minimum distance property owner is required to maintain between the barnyard and the National Wetlands Inventory (Federal Paper No. 9000-01, "Wetlands for Aquatic Life of the U.S.," July 1982), and subsequent state and local regulations to protect riparian habitat and other resources developed thereafter.

Regulated Tier II Waters: The least level of protection that a riparian wetland is required to maintain under the Clean Water Act and other applicable laws.

Regulated Tier II Area: An area of ground, including NRE's Standard NY 200, and other applicable laws, regulations, and other policies that are required to be maintained.

Riparianity: A term that refers to the relationship between a water body and the land immediately adjacent to it.

Waterbody: A body of water that is capable of supporting a community of aquatic life.

Background

Livestock waste contains high levels of nitrogen, phosphorus, sediment, degraded feed, organic materials and microbes. When livestock waste is concentrated, as at farm barnyards, holding areas or feed lots, the danger of pollutants reaching surface water or groundwater increases. Older, less well-designed and managed barnyards can also be a cause of problems with neighbors. In addition, wet seasons and mud-bath barnyards can lead to animal health problems.

In general, good barnyard management involves two basic principles:

1. divert clean runoff from roofs and the watershed (and area above the barnyard) away from the barnyard, and
2. catch and treat, or store, concentrated runoff.

There is a greater chance of livestock manure entering surface water if the barnyard is located close to a downslope, a stream, or waterbody.

(Continued on Page 2)

Agricultural Water Quality Principles:

Livestock holding areas, including concentrated animal feeding operations and barnyards, should be managed in ways that minimize the delivery of pollutants from manure to surface and groundwater resources.

How?

- **Assess**

- **Farmstead Areas**

- Barnyards
- Milkhouse Waste
- Manure Handling
- Silage Leachate
- Mortality Management
- Clean Water Flows
- Other

- **Field and Pasture Areas**

- Manure & Fertilizer Mgt.
- Soil Erosion
- Other

Background (Continued from Page 1)

There is a greater risk of the barnyard allowing groundwater if:

- the barnyard is located on or near a source of natural groundwater (well and ponds).
- the water table is at or near the soil surface.
- bedrock is within a few feet of the soil surface.
- pollution runoff from the barnyard flows directly onto ground it will be collected, and
- the barnyard has been abandoned. Manure no longer soaks the soil, and water infiltration encourages the movement of pollutants left behind.

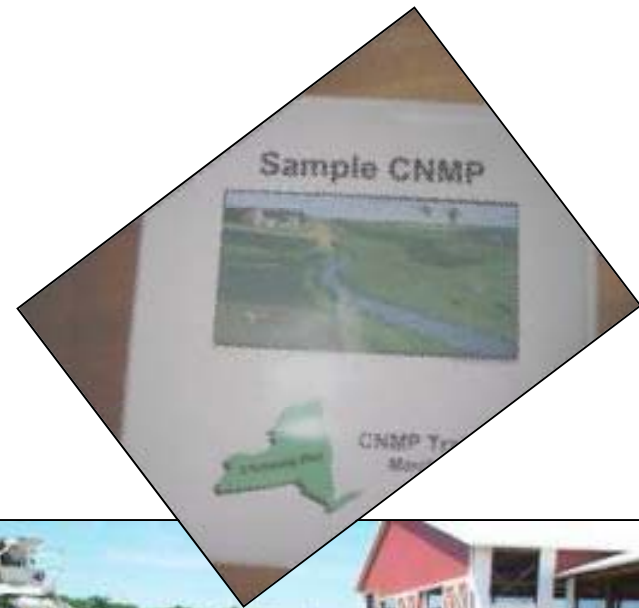
AEM Tier II Worksheets: Barnyards		Potential Concern			
Factors Needing Assessment	Lower 1	2	3	Higher 4	
What is the regulated flow distance from the barnyard to the nearest watercourse?	Greater than 200 ft.	Between 100 and 200 ft.	Between 50 and 100 ft.	Less than 50 ft.	
Is clean water (including roof water, surface runoff, and animal watering sources) kept separate from manure?	Clean water flows a 25-foot or greater distance from the barnyard.			There is no control of water from roof tops, surface runoff, and animal watering sources from running through the barnyard.	
Is leachate runoff controlled?	All leachate runoff is collected and held in storage facilities. If any leachate runs a 25-foot distance from the barnyard.	Leachate runs the length of an adjacent road or driveway. Leachate is contained in a retention tank. If it rains, leachate is scraped up daily.	Leachate is collected in a gutter, but runs, which is not scraped up from the roof daily.	There is no means of collecting leachate through the barnyard.	

AEM Tier II Worksheets: Barnyards Page 2



How?

- Work with a planner to make a plan
- Pick a practice or two and implement
- Apply for cost share funds for the rest
 - Soil & Water Conservation District
 - NYS Ag. Nonpoint Source Abatement and Control Grant
 - NRCS
 - EQIP and others

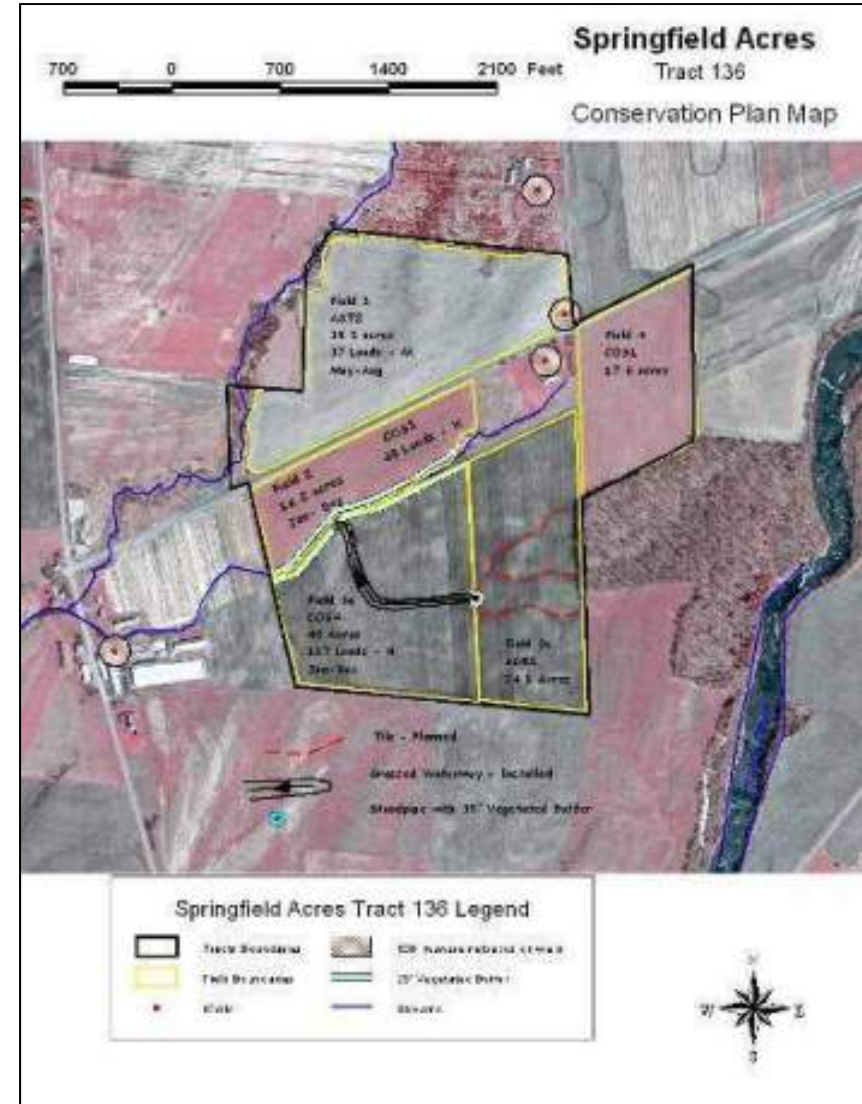


What about CAFO?

- History
- Comprehensive Nutrient Management Plan (CNMP) required
 - Annually updated
- 200 – 699 cows = medium CAFO
 - Still some time left to implement CNMP
- ≥ 700 cows = large CAFO
 - Fully implemented CNMP

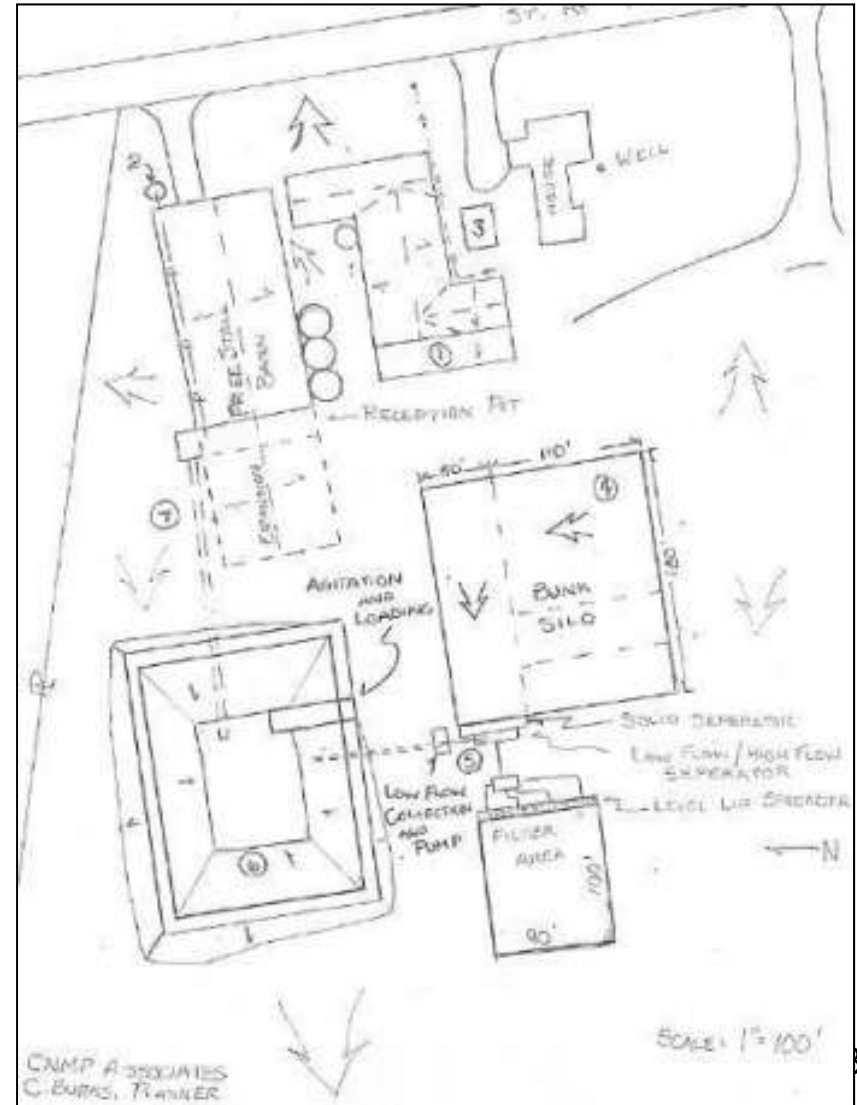
Key CAFO Rules

- General:
 - Prepare a CNMP
 - Certified Planner
 - Keep clean water clean & dirty water handled
 - Schedule the practices
 - Follow the plan
 - Record what is done
 - If change, make sure it fits the requirements
 - NO DISCHARGES from farmstead (unless extreme rain)
 - If discharge, report to DEC



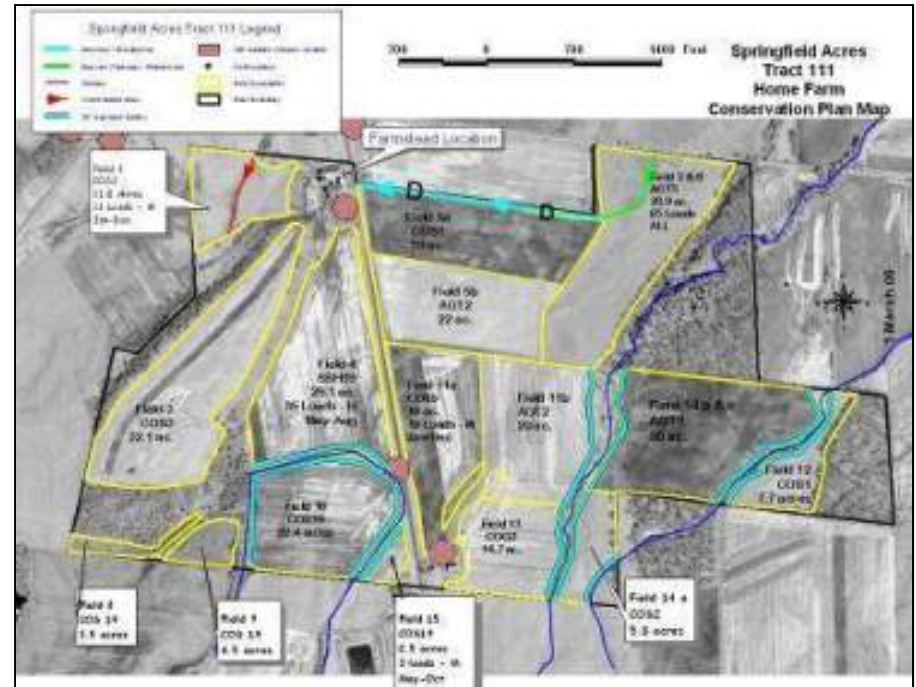
Key CAFO Rules

- Manure Storage:
 - Engineer certification
 - Freeboard
 - 25 yr/24 hour storm
 - Monitor depth
 - Housekeeping!
- Feed Storage:
 - Control runoff
 - Catch “low flow”
 - Maintain the screens!
- Milkhouse Waste
- Barnyards
- Mortalities



Key CAFO Rules

- Field Issues:
 - 3 year soil test schedule
 - Annual manure tests
 - Balance for N
 - Follow Land Grant Guidelines
 - Spreading setbacks
 - Control soil erosion
 - Assess leaching and runoff risk



Key CAFO Rules

- Field:
 - Rates
 - Plus or minus planned rate, not double!
 - Calibrate spreaders
 - Setback distances
 - 100' or 35' grass buffer
 - Stream, ponds, wetlands, tile inlets
 - Follow the maps
 - Make corrections
 - Observe:
 - Tile flows
 - Streams
 - Substantial visible contrast



What if 180 cows and want to grow over 200??

- Will (likely) need a Permit
- Evaluate needs before going over 200
- Work closely with a planner or other good advisor

















Take Home messages:

- Handle manure properly
 - Besides, it's worth more now
- Environmental pressure
- CAFO is rigid - need to follow plan and do the paperwork
- If headed to 200 cows or more, start planning!
- Smaller farms - can still do practices
 - Tap into AEM
 - It's easier on your own timeline



Take Home messages:

- How to get started?
 - Local District, NRCS, and/or private planners
 - AEM Tier II Assessment and Tier III Planning
- Funding
 - Field nutrient management planning may pay for itself
 - AEM Planning and NYS Ag Nonpoint Source Abatement Cost Share
 - Contact your District
 - EQIP Cost Share
 - Contact NRCS

