


Winter Manure Management
Being Good Stewards

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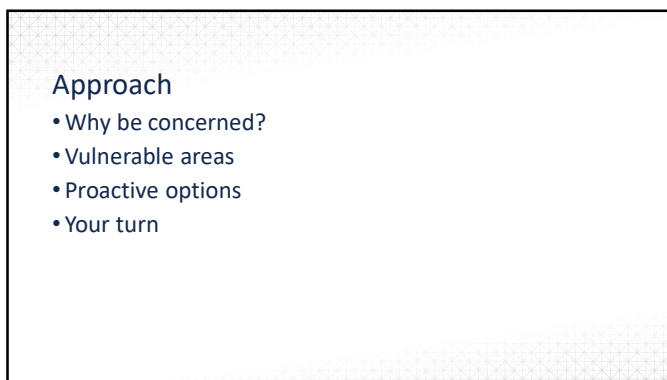
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Grounding

- Commonalty about livestock not defined by:
 - Size
 - Feeding system
 - Pasture or confinement
 - State
- Manure happens!

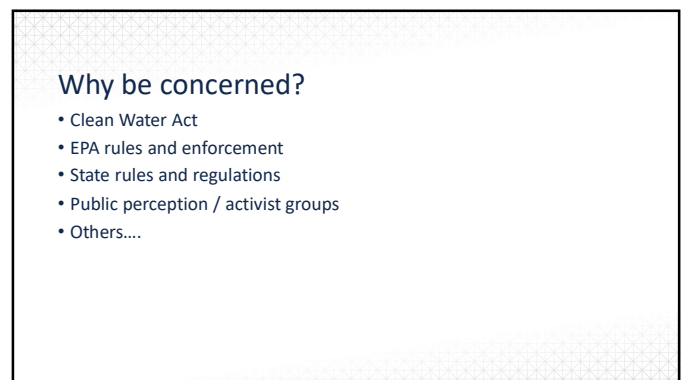
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Approach

- Why be concerned?
- Vulnerable areas
- Proactive options
- Your turn

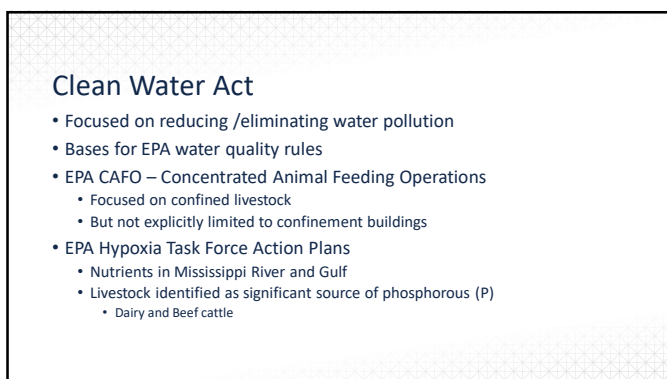
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Why be concerned?

- Clean Water Act
- EPA rules and enforcement
- State rules and regulations
- Public perception / activist groups
- Others....

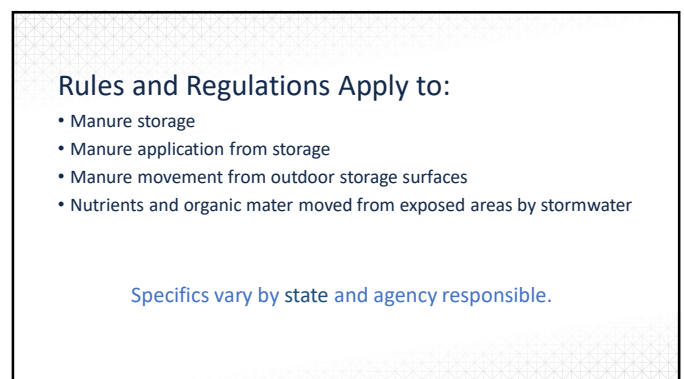
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Clean Water Act

- Focused on reducing /eliminating water pollution
- Bases for EPA water quality rules
- EPA CAFO – Concentrated Animal Feeding Operations
 - Focused on confined livestock
 - But not explicitly limited to confinement buildings
- EPA Hypoxia Task Force Action Plans
 - Nutrients in Mississippi River and Gulf
 - Livestock identified as significant source of phosphorous (P)
 - Dairy and Beef cattle

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Rules and Regulations Apply to:

- Manure storage
- Manure application from storage
- Manure movement from outdoor storage surfaces
- Nutrients and organic mater moved from exposed areas by stormwater

Specifics vary by state and agency responsible.

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Public Perception

- How does the public perceive our industry?
- Visual perception:
 - Muddy lot
 - Brown snow
 - Discolored flowing water

Manure Management Issue

Fight it! or Be Proactive!



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Vulnerable Areas

- Confinement
 - Animals inside building
 - Animals in pens/lots
- Grazing
 - Pasture
 - Crop residue
 - Timber lots?

Any area where manure is stored or applied



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Vulnerable Areas - Confinement

- Storage
 - Especially stacked dry storage
- Manure application to
 - Row crop land
 - Pastures and hay ground
 - Snow/frozen ground?



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Vulnerable Areas - Confinement

- Outdoor pens
 - Scrap and haul
 - Manure bed pack



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Vulnerable Areas – Grazing

- Watering area
- Feeding areas
- Creeks/ streams / waterways
- Winter pastures
- Winter confinement areas

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Proactive Approach

- Identify potential risk areas
 - Real chance of manure/ nutrient movement
 - Perceivable as unmanaged
 - Listen to neighbors and friends
- Consider options
- Make incremental changes
- Modify the situation

Being Proactive is not about admitting poor management. It's about constantly improving manage skills.

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Proactive – Collected manure

- Storage plan to avoid wet or froze applications
- Storage area
 - Protected from storm runoff
 - Limited storm exposure if possible
 - Sufficient space for 90 day or more
- Clean outdoor pens frequently



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Proactive – Collected manure

Manure application

- Apply at agronomic rates
- Avoid snow and froze ground application
- If necessary to apply to snow covered
 - Non-HEL, low slopes
 - On stalks or other ground cover
 - Leave appropriate buffers
- Avoid over application of liquid product



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Proactive – Pasture / Grazing

- Feeding and supplied watering sites
 - Plan ahead
 - High and well drained
 - Move around where possible
 - Consider weather impacts on accessibility
- Away from waterways
 - Small streams and spring flows
 - Prominent seasonal flow paths
- Leave a vegetative area down slope

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Proactive – Pasture / Grazing

Permanent Feeding and water stations

- High and well drained
- Not in an obvious drainage path
- Concrete and/or rock pad
- Reshape surroundings each year prior to start winter utilization
- Consider options to alternate access

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Proactive – Pasture / Grazing

Natural water sites

- Limited access
- Water points/crossings
- Strategic placement of fences



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Proactive – Pasture / Grazing

Winter containment and feeding paddocks

- Plan ahead
- Multiple paddocks preferable.
- High and well drained
- Forage / ground cover around the area
- Away from waterways
 - Small streams and spring flows
 - Prominent seasonal flow paths



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Proactive – Pasture / Grazing

Winter containment and feeding paddocks

- Consider stormwater control improvements
- Avoid the classic paddock with creek through it, next to the road
- Avoid creating the mud or manure flow question
 - Perception will always be MANURE!



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Proactive - Manure

- Is:
 - Valuable crop nutrient source
 - Soil amendment
 - Natural resource
- Can:
 - Significant pollution source
 - Cause fish kills
 - Harbor dangerous pathogens
- Managed by:
 - Insure containment
 - Application at agronomic rates
 - Avoid applying to snow cover or frozen ground
 - Control stormwater runoff

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Your Turn

- Critically look at your operation
- Look for opportunities to be proactive
- Work to improve
 - Environmental impacts
 - Your bottom line
- Communicate with your neighbors
- Tell your (our) story.

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