



# AFO and Small CAFO Regulations Professional Development Training

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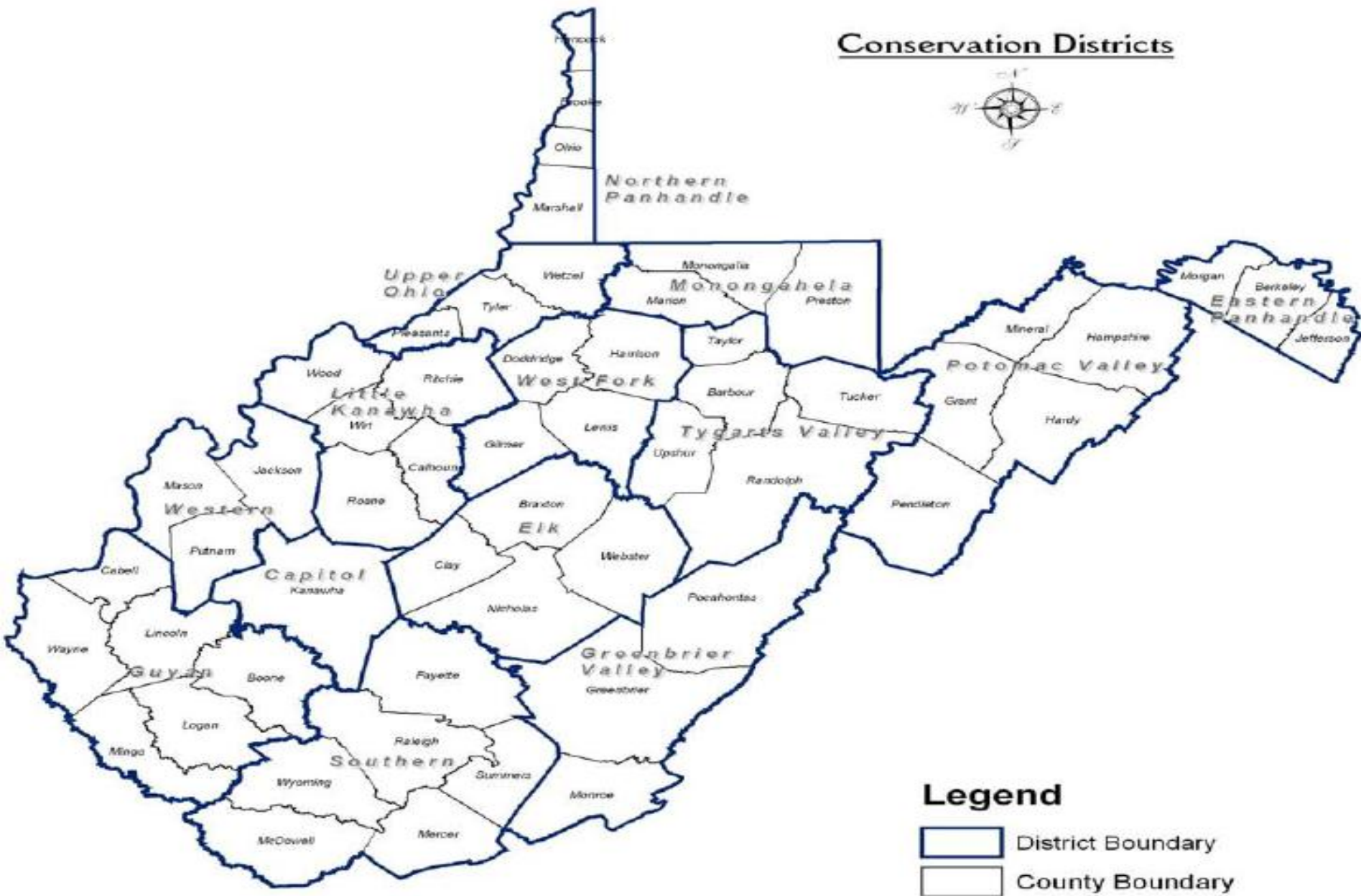
Marlon Knights, WVU Div. of Animal Science



# How you can Help!

- ▶ Attend 1 of 5 'train-the-trainer' workshops and field tour - recommended BMPs and related recordkeeping
  - Complete post-evaluation survey
- ▶ 14 ASPs develop and conduct similar education program for producers
- ▶ Identify 5 producers from each district (70 producers) to implement at least one of the recommended BMPs and complete the relevant records.
- ▶ ASPs work individually with and track the progress of the producers over a 10 months - educational team receives requests for and assists with one-on-one farmer visits.
  - Complete post-project survey

# West Virginia Conservation Agency



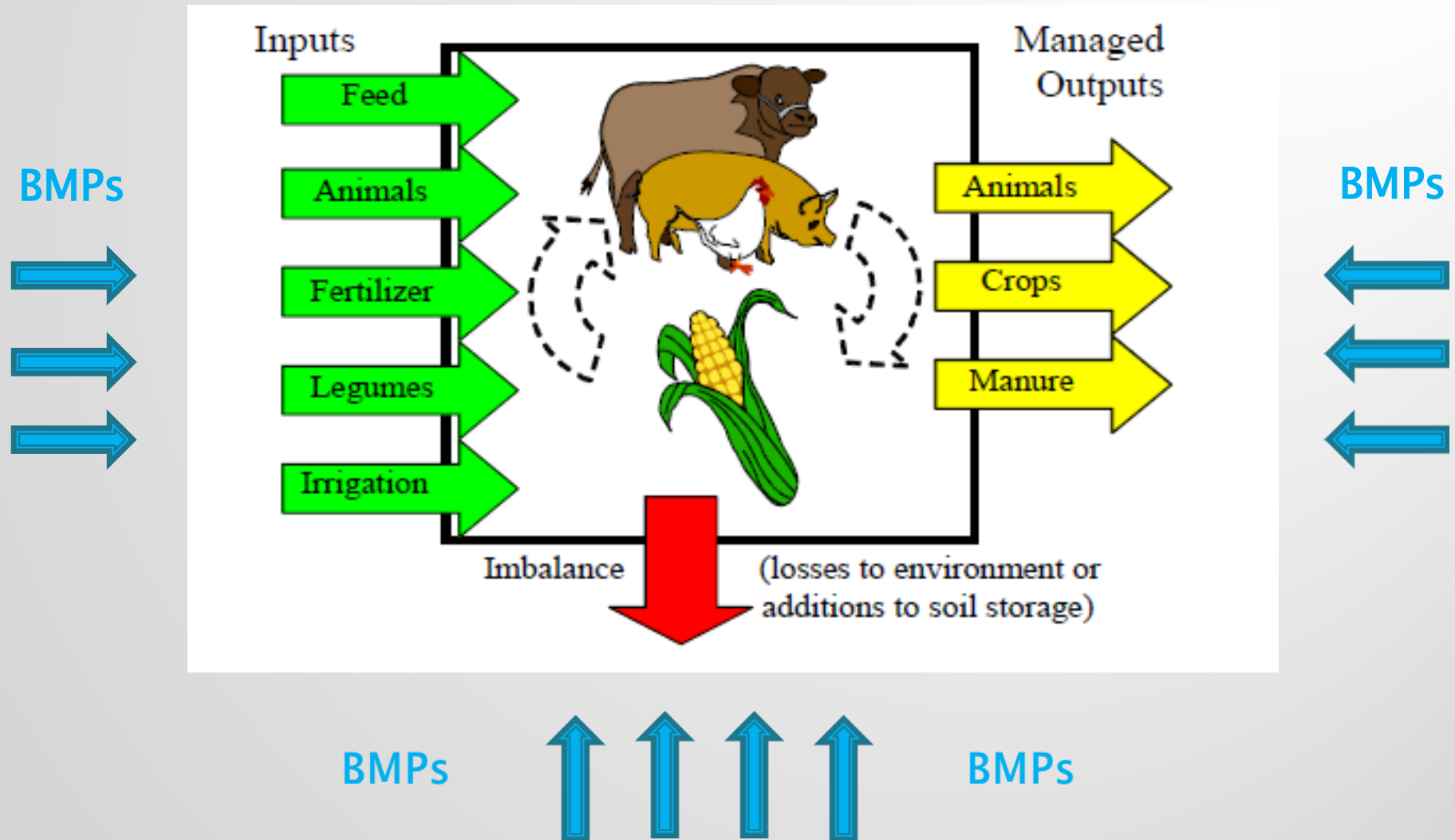




# Simple Record-Keeping System for Small Animal Feeding Operations

Dee Singh-Knights, WVU Extension Service  
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Morgantown, WV, February 13<sup>th</sup>, 2013  
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# An Environmental Management System - Incorporating environmental stewardship into profitable business management



# An Environmental Management System makes Sense!

- ▶ An EMS does not ignore **business management**.
- ▶ As a good citizen, a producer should be concerned how their farm affects others.
- ▶ As a good businessperson, one should also be concerned about productivity, input costs, and waste treatment and disposal costs.
- ▶ With ever-shrinking margins, agriculture simply cannot afford pollution or its liability.
- ▶ Incorporating environmental stewardship into profitable business management is the goal of an EMS.

# Benefits of an EMS

- ▶ Stewardship plans that target the operation's most significant environmental issues and risks.
- ▶ Pro-active farm commitment to environmental improvement.
  - Identifying and controlling potential sources of errors (Less time "putting out fires" )
- ▶ Tool for finding cost savings and/or improving efficiency.
  - Improves soil fertility and productivity
  - Reduces cost of chemical use
- ▶ Improved relationships with neighbors, the community, and regulators.

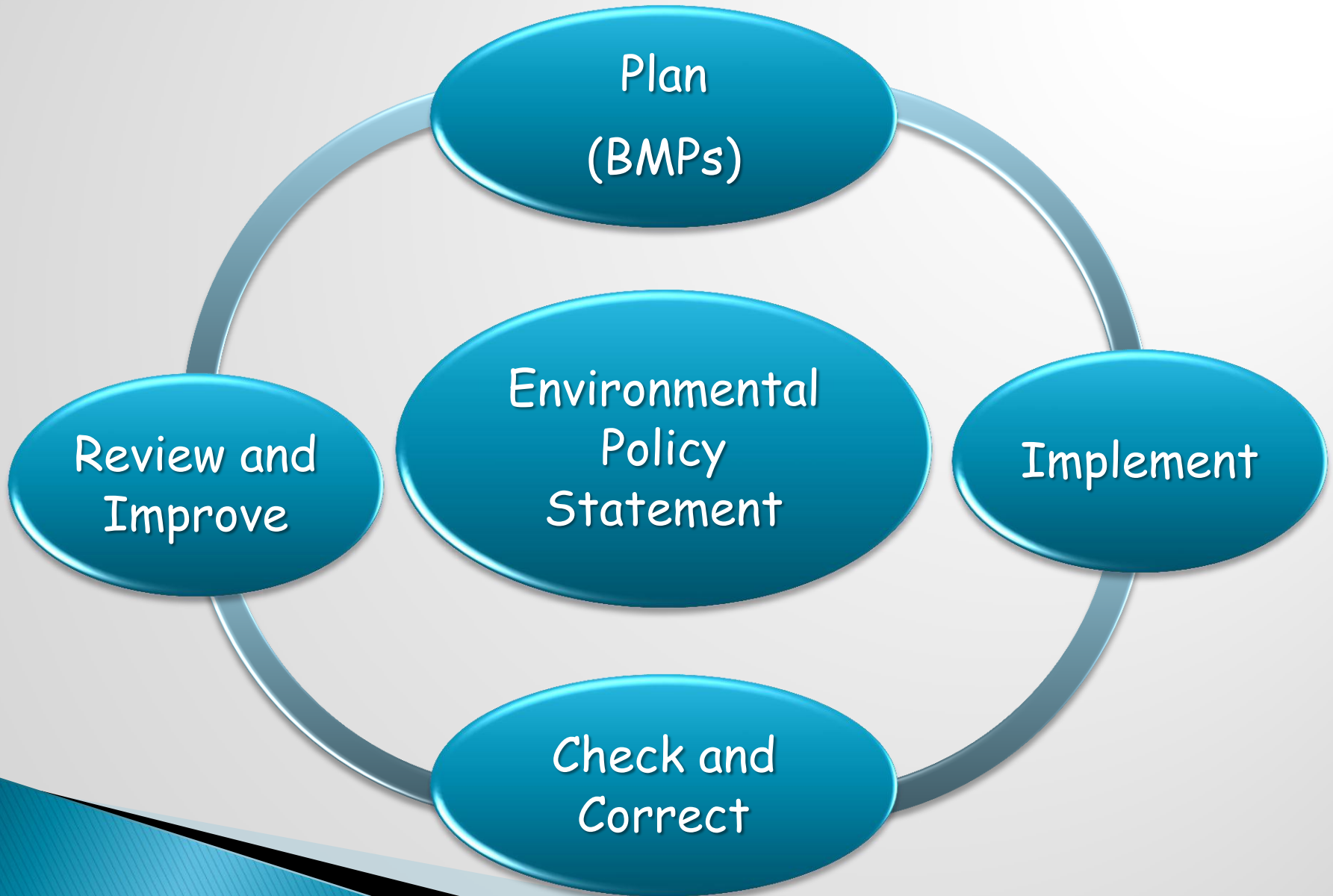


# Understanding BMPs (Best Management Practices)

- ▶ BMP's are strategies used to correct, reduce or prevent a potential water quality problem.
- ▶ Used by small animal feeding operations or pasture-based operations to reduce non-point source pollution.
- ▶ Producers can remain outside the permitting process by voluntarily undertaking proactive best management practices to reduce non-point source pollution.



# Developing an EMS



# Why Records?

Undertaking environmental stewardship effort without keeping the necessary records is like

'winking at a girl in the dark

- you know what you are doing, but no one else does'!!

# Understanding Need for Records of Implementing BMPs

## ► Appropriate records:

- Can serve as a good management tool for optimum production - progress towards benchmarks
- Can help assess your total environmental stewardship efforts and related costs - if interested in cost-sharing programs.
- serve as their best defense if regulatory agencies (DEP) should question them
  - in response to complaints by your neighbor or some evidence of water quality problems in the area.



# **Record Keeping Systems for Small and Medium Livestock Farms with Associated 'Top Ten' Best Management Practices**

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# Record Keeping Systems for Small and Medium Livestock Farms with Associated 'Top Ten' Best Management Practices

- ▶ **Section A** - Top 10 Best Management Practices that small-sized animal feeding operations and pasture-based operations can use to reduce nonpoint source pollution.
- ▶ **Section B** - Associated Record-Keeping Forms to document compliance with these BMPs
- ▶ An **electronic version** accessible at <http://anr.ext.wvu.edu/livestock/cafo>.
  - Can be downloaded and modified

# What are the Significant Environmental Issues

Significant Environmental Issue	Farm/Ranch Activities That Could Impact This Issue
Odor & flies	Manure storage, land application, open lots
Appearance of facility	Building site, sign by road
Nutrient runoff to surface water	Land application, open lots, manure storage
Groundwater	Land application, open lots, manure storage, wells
Chemical handling & storage	Chemical shed, mixing & application sites
Soil erosion	Tillage, maintenance of existing conservation structures

# What are the Priorities

Significant Environmental Issues (from Work Sheet 1)	Legal Requirements What plans are already developed or requirements do you need to meet as part of your permit or other legal obligations? (See "Handout 4. Environmental Regulations Affecting Animal Feeding Operations.")	Incentive Program Obligations Do you participate in any cost share or incentive programs (EQIP, CRP, buffer strip program) that are related to this significant issue?	Assessment and Proactive Efforts Have you already internally identified actions of interest or improvements needed?
Odor & flies			Personal concern, OFAER assessment
Appearance of facility			Personal concern, OFAER assessment
Nutrient runoff to surface water	State operating permit & (anticipated) NPDES permit		
Groundwater	State operating permit & (anticipated) NPDES permit		
Chemical handling & storage	Federal pesticide applicator regs, chemigation permit		Personal concern
Soil erosion		CRP	Existing practices are sufficient-no additional action proposed

# Stewardship Plan for: **Odor, Flies, and Appearance**

(List priority selected from "Work Sheet 4.")

## 1. What is the environmental objective of this plan?

To quickly identify & fix situations that could increase flies & odor emissions

To reduce standing water in lots, especially near waterers

To maintain neat, professional appearance of feedlot & farmstead

## 2. How will I measure performance?

Regular visual inspections & adherence to SOPs

## 3. Are legal requirements associated with this issue?

Description or Permit Title/Agency	Date Issued	Renewal Date	File Location
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## 4. What will be done?

List critical steps. <sup>1</sup>	Who is responsible?	Deadline/Frequency?
1. Daily waterer & water line inspections (a) Inspect waterers for leaks (b) Report leaks to tractor driver (c) Repair leaks	Cowboys Cowboys Tractor driver	Daily ASAP Within 24 hours
2. Continue to scrape & grade lots according to site plan & SOP	Tractor driver	See SOP
3. Begin rotating fly control products to prevent resistance of flies to chemicals	Tractor driver	ASAP
4. Spilled and/or spoiled feed to be collected & put into manure spreaders rather than swept into lane	Feed truck driver	ASAP
5. Develop backup plan for mortalities in case rendering is unavailable	John	12/1/05
6. Continue mowing, maintenance, painting, & general upkeep of area around feedlot, main office, other farm buildings, & manure storage pond as needed	All	Ongoing



# What Measures will be Most Useful

## What is Acceptable Performance

List of Records, Checklists, or Maintenance Logs	Issues to be Addressed	What is acceptable performance?
Waterer & water line inspection	Leaking waterers, daily water meter reading, standing water/mud in lots	20% increase in daily water use requires additional inspection. Leaking waterers fixed in 24 hrs. No standing water in lots 24 hrs after rainfall.
Runoff basin inspection	Structural integrity, Liquid levels	Problems fixed within 2 days. Liquid level 10 ft below spillway on Dec. 21; 8 ft rest of year. All parameters on checklist are acceptable.
Soil test	Soil NO <sub>3</sub> , P	Soil N used in fertilizer calculations, soil P below 100 ppm
Water test	NO <sub>3</sub> , coliforms	If NO <sub>3</sub> above 10 ppm, then treat drinking water & use calculations in nutrient plan, no coliforms present

# Record-Keeping Forms Aligned with BMPs



## F6. Producer Record of Odor Complaints.

Farm: \_\_\_\_\_

Date and Time of	Neighbor Expressing Concern	Concern Expressed	Weather Conditions at Time of Concern	Operation's Follow-up Actions	Initials
Contact:   Odor Observations:			Wind Speed <sup>1</sup> : _____ Direction wind is from: _____  Sky Conditions <sup>2</sup> : _____ Temperature: _____		
Contact:   Odor Observations:			Wind Speed <sup>1</sup> : _____ Direction wind is from: _____  Sky Conditions <sup>2</sup> : _____ Temperature: _____		
Contact:   Odor Observations:			Wind Speed <sup>1</sup> : _____ Direction wind is from: _____  Sky Conditions <sup>2</sup> : _____ Temperature: _____		

<sup>1</sup>Wind Conditions: 1...calm or light breeze (0-5 mph)    2...moderate wind (5-15 mph)    3...strong wind (15+ mph)

<sup>2</sup>Sky Conditions: SY...Sunny; PC...Partly Cloudy; MC...Mostly Cloudy; OC...Overcast; HZ...Hazy; NT...Night



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# RECORD FORM #2: Nutrient Land Application Log Sheet\* (Year: 20\_\_)

## Date, Method, Weather, Amount Applied and Initials

[illegible]

# RECORD Form #3(a): Soil Analysis Recordkeeping Form (Year: 20\_\_\_\_)

[illegible]

# RECORD FORM # 6: Manure or Litter Transfer Record Form\*

## (Year: 20\_\_)

Date, Farm Receiving, Amount, Nutrient Analysis , Total Tonnage moved

Date of Transfer	Name & Address of Recipient	Person Making Entry	Amount Transferred		Manure Analysis			Total Nutrient Transfer		Signature of Recipient
			Manure (tons)/ Litter (tons)/ Other (tons/gallons)		N	P <sub>2</sub> O <sub>5</sub>		N (lbs)	P <sub>2</sub> O <sub>5</sub> (lbs)	
04-01-11	Jane Doe Farm, Route 7, Bluefield, WV.	Jane Doe	2,000	Tons Gals. Ac-In	16	19	Lbs./ton Lbs./1000 gal Lbs./ac-in	32,000	38,000	
				Tons Gals. Ac-In			Lbs./ton Lbs./1000 gal Lbs./ac-in			
				Tons Gals. Ac-In			Lbs./ton Lbs./1000 gal Lbs./ac-in			

# RECORD FORM #7: Animal Inventory and Mortality Log Sheet\* (Year: 20\_\_)

## Date, # Animals In, # Animals Out, # of Mortality and Method

[illegible]



# RECORD FORM #8: Animal Confinement Log Sheet\* (Year: 20\_\_)

Period of Confinement, Animal Type, Field, Field Condition, Barn, # of Head

[illegible]