Nutrient Management Plans: Can We Make Them Simpler and Easier to Implement?

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What Do YOU See?

Asset?

Liability?
What Is Landowner Objective?

NUTRIENT MANAGEMENT = AGRONOMICS

WASTE MANAGEMENT = WASTE DISPOSAL
Nutrient Management Plans & Planning
Example: Washington State

Image: Cutting Through the Crop 2010
Surface Water Quality:
Nooksack River, Whatcom County

1998 Dairy Nutrient Management Act (90.64)
4 R’s of Nutrient Management

- Right Time
- Right Rate
- Right Source
- Right Placement
Application Risk Management (ARM)

1. Calculate agronomic rate
   - Agronomic Rate Calculation

2. Identify optimal fields
   - Field Risk Maps

3. Determine when to apply
   - Manure Spreading Advisory

4. Assess field conditions
   - Application Risk Management (ARM) Worksheet

5. Apply and monitor fields
   - Seasonal Manure Setbacks
Real-time Runoff Risk Level

Link to Field Level Assessment Form

Seasonal Setback Distance

Current Advisory Discussion and Links

www.wadairyplan.org/MSA
Washington Dairy Plan Framework

**Regulatory Framework**
- 1998 Dairy Nutrient Management Act
- WSDA Mandatory inspection process
- WSDA Regulatory support
- Regulation of non-dairy farm types by DOE, County
- Working on cross boundary coordination

**Technical Support**
- NRCS Practice Standards & Planning Process
- NRCS & State (CTD) Dairy Planner Certification & training
- State and partner $upport for planners
- Dairy Plan template collaboratively created and updated

**Expertise**
- Conservation District dairy planners, nutrient experts, agronomists, scientists, engineers
- Non-regulatory relationships
- Real-time, decision support tools for 4Rs
- Nutrient education and outreach programs
- Share CD staff statewide

**Supporting Programs**
- Annual Manure Nutrient Training Event
- Local water quality monitoring
- Pollution Identification and Correction program for other farm types
- Coordinated agency communication, data analysis, & education programs
Dairy/CAFO Regulation and Plans

1998 Dairy Nutrient Management Act (90.64) WSDA
2000 Unified National Strategy for AFOs USDA-NRCS/EPA
2003 NPDES CAFO Permit EPA/DOE
2017 Portage Bay Partnership Lummi/Farmer (Whatcom County)

Dairy Nutrient Management Plan (DNMP)
Comprehensive Nutrient Management Plan (CNMP)
CAFO Manure Pollution Prevention Plan (MPPP)
Water Quality Improvement Plan (WQIP)

+ Local Rules & Ordinances
Plans! Plans! Plans!

Lots of Plans ≠ Lots of Resource Protection
Challenges of Having Multiple Nutrient Management Plans

- Different plans can be duplicative...
- ...or contradictory....but landowner still required to follow
- Typically little coordination between agencies on plan contents
- Producer needs to record a lot of information... but lack of tools (or too many!) to help
- Lack of qualified staff to write different plans
- Can take a long time to write plan(s) (60+hours)
Does the Plan Achieve the Goal?

**Perfect Plan**

- Education & Information to landowners
- Technical Assistance and Support
- Good State/local agency relationships and program coordination
- Strong, helpful, consistent regulatory enforcement

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**Resource Implementation**

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**Protection**
Common Barriers to Successful Nutrient Management Plan Program

• Lack of available staff/expertise - Need to invest (time and $) in training planners (2 years+) & plan writers
• Plans to ridged or designed by those without expertise
• Have funds to write plan, but not adaptively manage
• A perfect plan is worthless if not properly implemented and effectively enforced
• Outreach and education not part of the “planning process”, even though one of the most important parts
• Plan is static, but operation is dynamic - Need more real-time decision support tools
• Focus on one “obvious” source at detriment of others
Surface Water Quality: Nooksack River, Whatcom County

- Annual Geomean

TMDL Target for Fecal Coliform

- Nooksack at Marine Drive (current data)

*Annual Geomean
The Success of Nutrient Management Plans Going Forward...

- The implementation of the plan is in the hands of the landowner...how do you support that?
- Need a singular, “building block” plan
- Regulations and plans vary between Agencies and States ... need coordinated effort
- Agriculture is dynamic industry - Need flexible, site specific plan, annual planning, real-time tools
- Support planners/writers and technical assistance
- Education is imperative!
- Need good, regional science to support plan criteria
Thank Mooou!

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