Nutrient Management in Green County

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To Whom & Where does it apply?

- Small farms
- Large farms
- CAFOS (confined animal feeding operations >1,000 animal units)
- Organic farms
- Grain farms
- Livestock farms (dairy, beef, sheep, goat, pigs, ect.)
- ALL cropland and pastures





Nutrient Management (590 standard)

• Combine on-farm nutrient sources, with commercial fertilizer, to meet crop need.



 Environmental protection (water quality)- limiting nitrates, soil loss and phosphorus

When does a NMP need to be done?

- If you mechanically apply nutrients to a field (commercial or manure)
- Program or ordinance compliance
 - Farmland Preservation Program
 - Manure storage ordinance
- Annual update
 - Soil sample every 4 years One sample represents 5 acres





Why have a NMP?

- Environmental protection
- Improve soil structure, water holding capacity
- Save money- spend less on commercial fertilizers
- Show compliance with regulations
- Record keeping
- Possible tax incentives (FPP)
- Will <u>not</u> solve poor

management





How to get NMP developed?

- Agronomists/ Certified Crop Consultants
- Farmers can learn to write their own through training course
- SNAPplus computer software incorporates maps and field information
- Cost sharing available



Every field is identified and attributes are associated with each. Sensitive features acknowledged to minimize impact.

														Intal Acres, 134.0 Field Obunt, 27											
A L L	Field Name	A c t i v e	Sub Farm	Fsa Tract #	Fsa Field #	Size (acres)	County		Soil Map Symbol (critical)		Soil Series Name (critical)	Soil Map Symbol (pre- dominant)		Soil Series Name (pre- dominant)	Field Slope (%)	Field Slope Length (ft)	Below Field Slope to Water (%)		Distance to Perennial Water (ft)	si F	Re triction eatures	T i l e d ?	Field notes		
Þ	AF-07		-			5.30	Green	•	NgD2	Ŧ	NEWGLARUS	NgD2	Ŧ	NEWGLARUS	13	151	2.1 - 6	- 1	001 - 50 🝷	·	yes				
	AF-08	V	-			4.80	Green	•	NgD2	Ŧ	NEWGLARUS	NgC2	•	NEWGLARUS	16	200	2.1 - 6	- 1	001 - 50 🝷	·	yes				
	AF-09		-			3.60	Green	•	NgC2	•	NEWGLARUS	NgC2	•	NEWGLARUS	9	200	2.1 - 6	- 1	001 - 50 🝷	·	yes				
	AF-10	V	-			4.70	Green	•	NgC2	•	NEWGLARUS	NgC2	•	NEWGLARUS	9	200	2.1 - 6	- 1	001 - 50 🝷		yes				
	AF-11		-			2.30	Green	•	NgC2	Ŧ	NEWGLARUS	NgB2	•	NEWGLARUS	9	150	2.1 - 6	- 1	001 - 50 🔻	·	yes				
	AF-12		-			2.40	Green	•	NgD2	Ŧ	NEWGLARUS	NgD2	•	NEWGLARUS	13	151	2.1 - 6	- 1	001 - 50 🔻		yes				
	AF-13		-			2.30	Green	•	SoE2	•	SOGN	NgD2	•	NEWGLARUS	13	151	2.1 - 6	- 1	001 - 50 🔻	·	yes				
	AF-14		-			1.70	Green	•	SoE2	•	SOGN	ChB	•	CHASEBURG	13	200	2.1 - 6	- 1	001 - 50 🔻		yes				
	AF-15		-			0.90	Green	•	NgD2	•	NEWGLARUS	ChB	•	CHASEBURG	16	200	2.1 - 6	- 1	001 - 50 💌	·	yes				
	AF-16		-			1.90	Green	•	NgD2	Ŧ	NEWGLARUS	NgD2	•	NEWGLARUS	13	151	2.1 - 6	- 1	001 - 50 🝷	·	yes				
	AF-17		-			2.50	Green	•	NgD2	Ŧ	NEWGLARUS	NgD2	•	NEWGLARUS	13	151	2.1 - 6	- 1	001 - 50 🝷	·	yes				
	AF-18		-			2.30	Green	•	NgD2	Ŧ	NEWGLARUS	NgD2	•	NEWGLARUS	13	151	2.1 - 6	- 1	001 - 50 🝷	·	yes				
	HF-01A		-			8.20	Green	•	NgD2	Ŧ	NEWGLARUS	NgD2	•	NEWGLARUS	13	151	2.1 - 6	- 1	001 - 50 💌	·	yes				
	HF-01B		-			10.00	Green	•	NgC2	•	NEWGLARUS	NgB2	•	NEWGLARUS	9	200	2.1 - 6	- 1	001 - 50 🔻	·	yes				
	HF-01C		-			5.00	Green	•	SoE2	•	SOGN	SoE2	•	SOGN	13	151	2.1 - 6	- 1	001 - 50 🔻	·	yes				
	HF-01D		-			7.60	Green	•	NgC2	•	NEWGLARUS	NgC2	•	NEWGLARUS	9	200	2.1 - 6	- 1	001 - 50 🔻	·	yes				
	HF-08		-			9.90	Green	•	NgC2	•	NEWGLARUS	NgC2	•	NEWGLARUS	9	200	2.1 - 6	- 1	001 - 50 🔻	·	yes				
	HF-09		-			3.60	Green	•	NgC2	•	NEWGLARUS	NgC2	•	NEWGLARUS	9	200	2.1 - 6	- 1	001 - 50 🔻	·	yes				
	HF-10		-			2.80	Green	•	NgC2	•	NEWGLARUS	NgC2	•	NEWGLARUS	9	200	2.1 - 6	- 1	001 - 50 🔻	·	yes				

Every field is identified an striction Features Sensitive features ac

A L L	Field Name	A c t i v e	Sub Farm	Fsa Tract #	Fsa Field #	Size (acres)	County	Soil Ma Symbo <mark>(</mark> critical
•	AF-07		•			5.30	Green	NgD2
	AF-08	V	-			4.80	Green	NgD2
	AF-09		-			3.60	Green	NgC2
	AF-10		-			4.70	Green	NgC2
	AF-11		•			2.30	Green	NgC2
	AF-12		•			2.40	Green	NgD2
	AF-13		-			2.30	Green	SoE2
	AF-14		-			1.70	Green	SoE2
	AF-15		•			0.90	Green	NgD2
	AF-16		•			1.90	Green	NgD2
	AF-17		-			2.50	Green	NgD2
	AF-18		-			2.30	Green	NgD2
	HF-01A		-			8.20	Green	NgD2
	HF-01B		-			10.00	Green	NgC2
	HF-01C		-			5.00	Green	SoE2
	HF-01D		-			7.60	Green	NgC2
	HF-08		•			9.90	Green	NgC2
	HF-09		•			3.60	Green	NgC2
	HF-10		-			2.80	Green	NgC2

with each. Spreading Restriction Features for Field 10.13 pact. Note: If any part of the field has an N restricted soil or is in a SWQMA, then it should be marked as such below.

Field soils	Dominant critical: SoE2	Predominant: NgC2			Ţ	
all N Restrictions	other than selected soils: None	✓ Code: R	Restriction definitions	Re striction Features	i I e d	Field notes
					?	
Field Restrictions	590 SWOMA			yes		
			-	yes		
	g water well within 50ft of field edge	<u>}</u>	-	yes		
Local pr	ohibitions for winter applications		-	yes		
✓ Slope re	estriction for winter applications		_ •	yes		
Concen	trated flow channel		-	yes		
Conduits to aroun	dwater within 200ft downslope o	_ _	yes			
Sinkhol	es		-	yes		
Well			-	yes		
Eracture	d bedrock at surface		-	yes		
		f	<u> </u>	yes		
Non-me	etailic mine (a gravel or sand mine	for example)	<u> </u>	yes		
Other di	rect conduit to groundwater		-	yes		
lotes			· ·	yes		
10103			· _ ·	yes		
			-	yes		
			. •	yes		
			-	yes		
			-	yes		
	Accept	Cancel				

File	Import/Exp	ort To	ols View	Help							Save sna	apshot														?																																																						
*	Subfarm:	Show a	ll fields.	-	*	Field:	1654-31-3	32	•	Farm n	ame: Sa	ampleFar	mV2.sna	pDb																																																																		
	Group:	Show a	ll fields.	•			K4 🔶	` →	I	Location	h: C:\Snap	Plus2\MyS	napPlusD)ata																																																																		
Farm	Soil Tests	Snap	Maps Fie	elds Nu	ıtrients	Cropping	Daily	Log Re	ports																																																																							
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		Viol	d Cool	15 1-20	ige to on	ran gra	15 1-20	ago		Anana/brome Seeding c						4655			4655							Symbol: SoC2 Slope: 9.0																																																						
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	UW Rec	ommer.	dation:	190	35	35	190	35	35	0	20	45	0	35	75	0	35	75	0	35	75		1205	R20		Strip crop	in field																																																					
	Pri	or years	s' extra:	-	0	0	-	13	101	-	8	126	-	36	217	-	1	142	-	0	67	-	-	-	-	Summany	2017 to 2022																																																					
Adjus	sted UW rec	:ommer	dation:	190	35	35	190	22	0	0	12	0	0	0	0	0	34	0	0	35	8	-	-	-	-	Summary																																																						
1st	& 2nd year	legume	credit:	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-		-	-		Avg soil loss	1.5 t/ac/yr																																																					
2nd	& 3rd year	manure	e credit:	0	-	-	19	-	-	8	-	-	19	-	-	0	-	-	0	-	-	-	-	-	-	Field "T"	1 t/ac/yr																																																					
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		Particu	late PI:		1.3	2.8				6.1			1.0			0.5			0.2							P2O5 balance ta	arget is needed.																																																					
Soluble Pl				0.0		0.0		0.0			0.0			0.0			0.0		0.0			0.0		0.0		0.0			0.0			0.0			0.0		0.0		0.0			0.0			0.0			0.0			0.8			0.0			0.0		0.8		1.2			1.3			0.0			T			010							

Conservation practices are accounted for in the SNAPPlus model to guide NM development. Program assists in meeting compliance with colored flags that need attention in order to meet standards.



590 Changes – Winter Spreading Restrictions

Current:

- 7,000 gal/ac limit
- No manure spreading
 - Within SWQMAs
 - On locally identified areas (ex. Sinkholes)
 - Within 200 ft upslope of direct conduits to groundwater
 - On slopes >12%

- 7,000 gal/ac limit or **60 lbs** P_2O_5 , whichever is less
- No manure spreading
 - Within SWQMAs
 - <u>Within 300 ft</u> of direct conduits to groundwater, not just upslope
- No <u>liquid</u> manure application in February and March on:
 - <u>DNR Well Compensation Areas</u> for manure contamination
 - Soils with <u>5 ft or less to Silurian</u> <u>dolomite</u>

590 Changes – Winter Spreading Plan

Current:

- Requires a winter spreading plan that identifies:
 - Areas of fields that don't have a winter restriction
 - ID Fields with low slope and erosion, high roughness, farthest from surface waters

- A Winter Spreading Plan identifies:
 - Quantity of nutrients to be spread during winter, or generated in 14 days, whichever is greater
 - Capacity of storage for each manure type generated
 - Capacity for stacking manure that is ≥ 16% dry matter without permanent storage.

590 Changes – Winter Spreading Plan

- Do not apply on <u>slopes greater than 6%</u> or to <u>fields with</u> <u>concentrated flow channels</u> unless 2 specific conservation practices are implemented
 - \cdot Options are intended to deal with one or more of the 4R's
 - Application rate (3,500 gal/ac)
 - Application timing (wait 14 days between apps)
 - Application method
 - Application type



590 Revisions – Groundwater

Current:

- No manure within 50' of drinking well, unless grazing
- Incorporate manure within 200' upslope of direct conduits to groundwater



- No nutrients within:
 - **50' of direct conduits to groundwater** (within 300" in winter), unless grazing
 - 8' of irrigation wells
 - Only manure that is treated to substantially eliminate pathogens can be applied within:
 - 1,000' of a Community potable water well
 - 100' of a Non-Community potable water well (church, school, and restaurant)



2016: 28,349 ac (13%) 2017: 42,620 ac (19%)