CAFO Nutrient Management Updates

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Nutrient Management Narrative Template

NMP Narrative Template

- NMP narrative template has been updated
- Updates were based on feedback from consultants and ag industry
- It will be updated on website when complete
- Not all changes are being shared here, just the major ones
    - Additional changes were smaller clean up items

OLD

Farm Sites with Expected Animal Numbers for First Year of Permit and Remaining Permit Term (Next Four Years)

The following tables provide the current and expected animal numbers that will be included for the first year permit term and the remaining permit term (4 years). Current and projected animal numbers are listed by farm (below) and are consistent with the *final* A.U. Calculation Worksheet(s) (form 3400-25A). See Section X of plan for this information. Farms included in this NMP are as follows: Main Farm X, Satellite Farm X, etc. Please be advised that future years are an estimate of animal numbers and actual numbers may vary from these values. Actual animal numbers will be revised in the NMP Annual Updates.

Main Farm X Number of Animals

Year	Herd Size (Milk+Dry+1000lbHeifer+600lbHeifer+Calf)	Total Animal Units
2010	800 (600+80+50+50+20)	1041
2011	800 (600+80+50+50+20)	1041
2012	1620 (1300+200+50+50+20)	2189
2013	1620 (1300+200+50+50+20)	2189
2014	2070 (1700+250+50+50+20)	2819

Satellite Farm X Number of Animals

Year	Herd Size (Milk+Dry+1000lbHeifer+600lbHeifer+Calf)	Total Animal Units
2010	500 (0+0+200+200+100)	360
2011	500 (0+0+200+200+100)	360
2012	1100 (0+0+450+450+200)	805
2013	1100 (0+0+450+450+200)	805
2014	1350 (0+0+550+550+250)	985

Note: *Add additional tables for multiple satellite farms.*

Total Number of Animals from All Sites

Year	Total Herd Size (Milk+Dry+1000lbHeifer+600lbHeifer+Calf)	Total Animal Units

NEW

Farm Sites with Expected Animal Numbers for First Year of Permit and Remaining Permit Term (Next Four Years)

Please see form 3400-025A submitted within the permit application for Farm X current animal numbers. The form labeled 'Current Animal Unit Calculation Numbers' represents the total current AU's at the farm. A planned herd size expansion will occur by year 'XXXX'. See form labeled as 'Projected Animal Unit Calculation Numbers' for the planned AU's after the expansion takes place. OR Currently there are no planned expansions in the next permit term.

Expected Amounts and Types of Manure and Process Wastewater Produced on Annual Basis

OLD

All sources and correlating manure generation volumes were calculated using the SnapPlus manure production estimator or the Wisconsin Manure Production Estimation worksheet found in **Appendix A** of this narrative.

Manure Liquids and Solids Volumes Generated for all Sites and Sources

Year	Total Liquids	Total Solids
2010	7,300,000 gallons	8,513 tons
2011	7,300,000 gallons	8,513 tons
2012	15,946,500gallons	17,070 tons
2013	15,946,500 gallons	17,070 tons
2014	20,730,400 gallons	20,287 tons

Amount of manure, process wastewater and other sources to be land applied

Please refer to Section X of plan for calculations/analysis for table value and Section X of plan for land application schedules for specific fields.

Total Amount of Manure, Process Wastewater and Other Sources to be Land Applied

Year	Total Liquids created	Total Liquids applied	Total Solids created	Total Solids applied
2010	9,950,000 gallons	10,500,000 gallons	8,533 tons	9,000 tons
2011	9,950,000 gallons	11,000,000 gallons	8,533 tons	9,000 tons
2012	19,596,000 gallons	20,600,000 gallons	17,090 tons	18,000 tons
2013	19,596,500 gallons	20,600,000 gallons	17,090 tons	18,500 tons
2014	24,380,000 gallons	26,000,000 gallons	20,307 tons	20,500 tons

Other Nutrient Sources for Land Application (NRCS 590 Requireme

Other nutrient sources generated, stored or received by this operation incl
waste feed, solid storage runoff, septic waste, etc. All nutrient sources ger
included in the total manure and process wastewater volume calculations
SnapPlus nutrient source and manure production estimator and Section X
sources of waste to be land applied to the fields.

Volumes of Other Nutrient Sources to be Land Applied

Liquid Waste Sources	Volume of Waste Collected	Solid Waste Sources	Total Amount
Feed Storage Leachate	550,000 gallons	Waste Feed	20 tons
Solid Storage Runoff	100,000 gallons		
Septic Waste – Joes Hauling	2,000,000 gallons		
Total Liquid Waste Sources	3,650,000 gallons	**Total Solid Waste Sources**	20 tons

Note: Add additional rows for other sources of waste generated or received by the operation.

Total amount of liquid and solid waste produced by Farm X.

This chart should include all waste generated on site by the farm including, but not limited to, manure, process wastewater, feed leachate, solid storage runoff, milk house water, etc.

NEW

Year	Total Liquids	Total Solids
2010	7,300,000 gallons	8,513 tons
2011	7,300,000 gallons	8,513 tons
2012	15,946,500gallons	17,070 tons
2013	15,946,500 gallons	17,070 tons
2014	20,730,400 gallons	20,287 tons

Total Amount of Manure, Process Wastewater and Other Sources created and to be Land Applied (This i the combined total of the above two tables).

Year	Total Liquids created	Total Liquids applied	Total Solids created	Total Solids applied
2010	9,950,000 gallons	10,500,000 gallons	8,533 tons	9,000 tons
2011	9,950,000 gallons	11,000,000 gallons	8,533 tons	9,000 tons
2012	19,596,000 gallons	20,600,000 gallons	17,090 tons	18,000 tons
2013	19,596,500 gallons	20,600,000 gallons	17,090 tons	18,500 tons
2014	24,380,000 gallons	26,000,000 gallons	20,307 tons	20,500 tons

Total waste received from offsite sources.

This chart should include all waste that is accepted by the farm from an offsite source including but not limited to other CAFO facilities, non CAFO facilities, septic companies, cheese plants, etc.

Note: Add additional rows for other sources of waste generated or received by the operation.

Liquid Waste Source	Total Volume	Added to Pit? Y/N	Solid Waste Source	Total Amount	Added to Pit? Y/N
Total Liquid Waste Sources			**Total Solid Waste Sources**		

NEW

Special treatment of manure and process wastewater.

This includes but is not limited to manure digestors, manure composting, solid and/or sand separation, etc.

Farm X does not use any special treatment of manure and process wastewater.

OR

Farm X does use special treatment of manure and process wastewater. Those methods include X, X, X.

Manure and process wastewater distribution and WPDES to WPDES permit transfers.

Farm X does not plan to distribute any manure or process wastewater to another entity.

OR

Farm X does plan to distribute manure or process wastewater to another entity. This distribution meets the criteria in NR 243.142(2).

Manure or process wastewater source name to be distributed	Total amount distributed annually	Entity receiving the distributed manure or process wastewater	Distribution method (Choose one from NR 243.142(2))

Description of planned distribution listed above.

Examples of distribution

OLD

Total acreage available (by landowner) for land application owned, rented or in 'agreements'.
The table below summarizes this information. Please refer to Section X of plan for more information related to landbase documentation. The farm has a total of approximately X spreadable acres of available after various restricted areas have been accounted for.

Total land application acres available – 825

Acres owned – 600 ; Acres Rented – 100; Acres in agreements – 125

Land Owner Name	Field Name	Acres	Rental or Agreement Length	Length	Shared Land* Y/N	Additional Field Info
Farm X	1-25	600	Owned land		Y	Eggcetera wastewater
P. Cracker	100	30	3 year	Written	N	
J. Doe	101	20	3 year	Written	N	
P. White	102, 103	8, 42	2 year	Written	Y	Smith Dairy also uses field
P. White	104	65	Annual	Verbal	Y	Jones Dairy also uses field
P. White	105	65	2 yr	Verbal	Y	Eggcetera wastewater

NOTE: Shared land means fields that receive nutrients from more than one farm or nutrient source (e.g., manure, industrial wastewater, commercial fertilizer, septage, etc). These fields must be carefully tracked within the NMP.

NEW

Total acreage available for land application owned, rented or in 'agreements'.

Please see form 3400-025B for NMP field acres. This form has been cross referenced with the NMP and accurately demonstrates the total acres, total spreadable acres, total acres owned by the farm, and total acres rented or under manure agreements.

NEW

Identification of sites for winter (frozen or snow-covered ground) solid manure spreading – NR 243.14(8)

Farm X does not plan to spread solid manure onto fields during winter (frozen or snow-covered ground) conditions.

OR

Farm X plans to spread solid manure onto fields in NMP during winter (frozen or snow-covered ground) conditions. Fields X-X have been selected for winter applications of solid manure.

Identification of sites for emergency liquid or solid winter (frozen or snow-covered ground) manure spreading – NR 243.14(8)

For compliance with NR 243.14(8) winter spreading sites requirement, fields X-X have been selected for emergency winter application(s) if application(s) of liquid or solid manure become necessary. These fields have been evaluated by Farm X to meet the NR 243 criteria in Tables 4 and 5 for manure and criteria in 214.17(2) and (6) for process wastewater. Farm X has also determined these fields represent the lowest pollutant delivery to waters of the state and have winter acute loss index value of 4 or less using the Wisconsin Phosphorus Index. In addition, Farm X will evaluate these same fields at time of manure application to determine if conditions are suitable for applying manure and complying with the requirements of NR 243.14(8).

NEW

Manure Stacking – NR 243.141

All manure stacking sites used by Farm X shall be included in this NMP and must receive DNR review and approval before use. Stacking sites formally approved by DNR must be submitted and re-evaluated. All manure stacking sites shall be selected for compliance with all requirements of NR 243.141.

Farm X does not plan to use manure stacking.

OR

Farm X plans to use manure stacking within the permit term. Below is a list of sites to be approved for manure stacking.

Stacking site name	Crop field stack is located within	Percent solids of manure to be stacked on site	Months sites will be utilized

NEW

Silurian Bedrock TPS - NR 243.143

The following fields have depth to Silurian Bedrock of 20ft or less and are required to follow the Silurian Bedrock Targeted Performance Standard (NR 151.075). *Depth to bedrock section should list all depth categories included in that field (i.e. 0-2, 2-3, 3-5, 5-20). Risk ranking is for fields less than 5ft to Silurian bedrock. The rankings should be based on risk of pathogen delivery to that field. Fields with more of a risk should be applied on last.*

FIELD NAME	DEPTH TO BEDROCK	RISK RANKING

5-year NMP Checklist

5-year NMP submittal checklist

- An updated checklist was created to help guide the 5-year NMP submittal process.
- Broken up by section of submittal
- Has code references where applicable
- Reminders/tips included where we see repeated deficiencies
- Will be uploaded to the Nutrient Management page in on the CAFO website when finished
- May update again with appendix section showing screenshots of examples

amounts, etc.)			
2. NMP Narrative (Narrative template available HERE)			
- **Expected numbers of animal units currently on site at end of first year of permit term AND through the permit term.** *NR 243.12(2)(6)*			
- **Expected amounts and types of manure/process wastewater produced currently AND through the permit term.** *NR 243.12(2)(6)(a)*			
- **Amount of manure/process wastewater to be land applied through the permit term.** *NR 243.12(2)(6)(a)*			
- **Anticipated frequency and methods of application** - Seasons applications take place, equipment used, etc. *NR 243.12(2)(6)(a)*			
- **Other methods of disposal or distribution** - Offsite waste collection, distributed manure/process wastewater, special treatment of manure, etc. *NR 243.12(2)(6)(a)*			
- **Acreage included in the NMP.** - Total acres, spreadable acres, acreage owned, acreage rented/in agreements; Do acres match 3400-25b and 590 checklist?			
- **General manure/process wastewater application requirements.** *NR 243.14(2)(b)(1-13)&(c-f)*			
- **Nutrient crediting requirements: NR 243.14(3); Requirements from code listed.** *NR 243.14(3)*			

- **SWQMA strategies to be used by the farm.**
  - Options 1-5.
  - At least 2 options should be selected if farm surface applies and injects/incorporates manure and process wastewater. **(See appendix X for list of strategies)**
NR 243.14(4)			

- **Phosphorus management method used.** - P index or Soil Test P			

NRCS 590 via NR 243.14(1)			
- **All fields meet PI requirements.** - All fields meet P Index of 6 or less over rotation AND 12 or less annually. *NRCS 590 via NR 243.14(1)*			

- **Fields over 100ppm soil test P meet the required target drawdown.**
  - Drawdown P by 50% cumulative crop removal over a maximum 4-year rotation
  - This is shown in P205 target column. Is the draw down balance lower than the target balance? **(See appendix 1 for example)**
NR 243.14(5)(2)(b)(1)			

- **Full field crop rotation years are used** *(not just permit term years)* *NRCS 590 via NR 243.14(1)*			
6. CNM4 SNAP+ CAFO Nutrient Mass Balance Report			
- **Each permit year included.**			
- **Manure nutrient breakdown for each source match lab test results OR averages. (See appendix 2 for example)** *NR 243.14(2)(f)*			
- **Manure/Process wastewater application volumes equal OR exceed production volumes for each source included in report. (See appendix 3 for example).** *NR 243.14(1)(b)*			
7. NM5 SNAP+ Spreading and NM Sorted by Crop Report			
- **Report for each permit year included.**			
- **Standard fertilizer regime planned.** *NRCS 590 via NR 243.14(1)*			
- **Manure applications planned are accurate to what the farm plans to spread on that field for that year.** *NR 243.14(1) & (2) and NRCS 590 via NR 243.14(1)*			
- **Fields >50ppm P** - Planned commercial P is kept under 20lbs in starter. *NRCS 590 via NR 243.14(1)*			
- **Fields 200ppm P or greater** - Prohibited from manure and process wastewater applications. *NR 243.14(5)(2)(b)(2)*			

Outdated or Missing Soil Tests

- The department is seeing a growing issue with some NMPs related to the soil testing requirements in NR 243.14.
  - NMP reviewers have noticed an increase in fields that are out of date with the soil testing requirements.
  - When reviewers have reached out the farms to ask what the plan is for soil testing those fields, some facilities have made the comment that they do not plan to soil test those fields unless manure is applied on them.
  - This has created issues in some plans where there is a very large percentage of the fields that are out of date with the soil testing requirements, sometimes up to 50% or more.
  - This creates an NMP showing that there are potentially more acres available to spread manure and process wastewater than there is at the time of submittal.

- Also have noticed that many substantial revisions being submitted for field additions do not include updated soil tests for that field.

Outdated or Missing Soil Tests

- What are the soil testing requirements?
  - NR 243.14 (1)(a) requires that a Nutrient Management plan must comply with the soil test recommendations in NRCS 590. NRCS 590 V. A. 1. C. requires that soil samples are taken once every 4 years in accordance with A2100.
  - 1 sample per 5 acres (DATCP Approved Lab)

Outdated or Missing Soil Tests

- We will continue with case-by-case determinations of compliance
  - The department makes a case-by-case determination whether NMPs meet the requirements of NR 243.14.
    - We will be placing a greater point of emphasis moving forward on determining compliance with the soil testing requirement to address the issue.
  - We understand the flexibility farms need to test soils at a minimum of once every four years, given the seasonal nature of soil testing and potential weather issues.
    - These factors will continue to inform our review of each NMP.
  - Several consultants have provided feedback to the department that typically less than 15% of the acres in a farms NMP have out of date soil tests due to these factors.
    - We estimate that approximately 10% of NMPs submitted to us have the issue of over 15% of fields having out of compliance soil testing.

Outdated or Missing Soil Tests

- Substantial Revisions to add a field to an NMP.
  - Fields that do not meet the soil testing requirements cannot be added to an NMP through substantial revision without compliant soil tests (up to date and the correct density).

- For the 5-year NMPs the department may take the following actions on a case-by-case basis in cases where an NMP is determined to be out of compliance with the soil testing requirement:
  - We may reject the NMP during the review of a permit application. In these cases, the farm would be required to resubmit the plan showing compliance with the soil testing requirements.
  - We may reissue the permit with a compliance schedule that includes updating the soil tests on fields that do not meet the requirement.
  - We may take enforcement action.

3400-025b Form

I. Operation Information

Operation	Contact (First name , Last name)		WPDES Permit No
Seguins Valley View Acres LLC	*	*	*

Location Address - Street, Route or Box	City	State	Zip Code
*	*	*	*

Phone Number (xxx-xxx-xxxx)	Cell Phone (xxx-xxx-xxxx)	Fax Number (xxx-xxx-xxxx)	Email Address
*			*

II. Preparer Information

Name of Crop Consultant (First, Last)		Company	Title
*	*	*	

Mailing Address - Street, Route or Box	City	State	Zip Code
*	*	*	*

Phone Number (xxx-xxx-xxxx)	Cell Phone (xxx-xxx-xxxx)	Fax Number (xxx-xxx-xxxx)	Email
*			*

1) Plan Type(select one) ◯ Initial Plan ◯ Annual Update ◯ Permit Renewal		Applicable Growing Session	*
2) Total acres covered by NMP:	*	Total spreadable acreage:	* acres
Cropland acres owned:	*	Agreement or Rented Acres:	* acres
3) Total acreage used for land application in previous 12 months:	*	Total animals at facility in pervious 12 months:	*

Waste Type	Amount Generated Annually	Amount Transferred Annually	Units (gallons or tons)
Liquid Manure and Process Wastewater	*	*	gallons
Solid Manure & Litter	*	*	tons

Press to Refresh Missing Items Below

Considerations

- Ensure that soil tests are taken, and results are received prior to adding land via substantial revisions
- Prior to submitting a 5-year NMP for permit issuance/re-issuance, ensure that the NMP does not have a large percentage of fields that are out of compliance with soil testing requirements.
- Consider one year in advance what fields are due to be sampled and have a conversation about what the plan is
    - Utilize the Soil Test Summary from Snap Plus to export a list to Excel and you can sort a customized list!
- Have a sampling plan!
    - Are there any tillage plans for fields or new seedings to go in that might affect timing and goals for sampling?
    - Who is sampling for the facility? Does the farm know who to contact for sampling?
        - Many retailers book out far ahead, get on their schedule!
    - Are there any new lands to be added to the sampling list, and has the final sampling list been agreed upon for the facility?
    - Who will soil sample data be sent to? Consultant, Farmer, Coop? Make sure the pathway for NMP writer to get data is simple!

Considerations

- Don’t have all your soil testing eggs in one basket.
  - If a season of soil testing is missed due to weather, this shouldn’t result in a large percentage of fields being out of date.
  - Consider splitting up your testing regime.
- Soil test report shows what crop year samples are due
  - This is by crop year and not calendar year
  - Plan accordingly to make sure that you are sampling fields by the time they expire (based on calendar date they were last taken)
  - This is how DNR evaluates what is expired vs. meeting requirements during our reviews.

Soil Test Date	2023	2024	2025	2026	2027	2028	2029	2030
2023-11-30						X		
2023-11-30						X		
2023-11-30						X		
2023-11-30						X		
2023-11-30						X		
2023-11-30						X		
2023-11-30						X		
2023-11-30						X		
2023-11-30						X		
2023-11-30						X		
2023-11-30						X		
2024-04-29						X		
2024-04-29						X		
2023-11-30						X		
2024-08-29							X	
2023-11-30						X		

CONNECT WITH US

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OFF THE RECORD"