State of Wisconsin
Runoff Management Section-WT/3
Department of Natural Resources
101 South Webster Street
Madison, WI 53703

or PO Box 7921
Madison WI 53707-7921

Targeted Runoff Management (TRM) Grant Program
Small-Scale Agricultural Application
Form 8700-300 (R 1/15)

Notice: This application form template was created by the Wisconsin Department of Natural Resources. Application is hereby made to the Wisconsin Department of Natural Resources, Bureau of Watershed Management, for grant assistance consistent with s. 281.65, Wis. Stats., and Chapters NR 153 and NR 154, Wis. Adm. Code. Collection of this information is authorized under the authority of s. 281.65, Wis. Stats. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law [ss. 19.31 - 19.39, Wis. Stats.]. *Unless otherwise noted, all citations refer to Wisconsin Administrative Code.*

Please read the instructions prior to completion of this form. Complete all sections as applicable.
Refer to the instructions for attachments.

Applicant Information

Calendar Year of Grant Start: 2016

Project Name: Bauer Manure Management Project

Governmental Unit Applying (name and type) (e. g. Dane County Land and Water Resources Department): Marinette County Land Information Department - Land and Water Conservation Division

Governmental Unit Web Site Address: marinettecounty.com

Name of Responsible Government Official - Authorized Signatory (First Last)	Name of Government Official - Grant Contact Person (First Last)(if different)
Gregory G. Cleereman	
Title: Marinette County Conservationist	Title:
Area Code + Phone Number: (715) 732-7783	Area Code + Phone Number:
E-Mail Address: gcleereman@marinettecounty.com	E-Mail Address:
Mailing Address - Street or PO Box: Courthouse, 1926 Hall Avenue	Mailing Address - Street or PO Box:
City: Marinette / State: WI / ZIP Code: 54143-1717	City: / State: WI / ZIP Code:

Part I. Project Information

A. Project Category: Total Maximum Daily Load (TMDL) or Non-TMDL

○ **1. TMDL Project:** The project must meet all of the following criteria:
- The project is in a geographical area covered by an EPA-approved TMDL.
- The project addresses the most critical nonpoint pollution sources of the agricultural nonpoint pollutants identified in the TMDL document.

Provide the title of the TMDL report that this project implements. (TMDL link: http://dnr.wi.gov/topic/tmdls/tmdlreports.html).

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Provide a link to the report, if available.

Provide the document page number(s) that identify the pollutants and sources being addressed by this project.

◉ **2. Non-TMDL Project:** The project must be designed to achieve attainment of the NR 151 agricultural performance standards and prohibitions.

TRM Grant Project Name:
Bauer Manure Management Project

B. Location of Project

See Attachment A and Surface Water Data Viewer (SWDV) at http://dnrmaps.wi.gov/SL/?Viewer=SWDV for assistance in completing this question.

County	State Senate District number:	State Assembly District number:
Marinette	12	36

Minor Civil Division Name (city, village, town, etc. - ex. Holland, Town of)	Township (N)	Range	E or W	Section	Quarter	Quarter-Quarter	Latitude (North, 4 to 7 decimal places)	Longitude (West, 4 to 7 decimal places)
Middle Inlet, Town of	33 N	21	E	30	NW	SE	45.3011	-87.931
	N							
	N							
	N							

Method for Determining Latitude & Longitude (check one)

○ GPS ◉ DNR Surface Water Data Viewer

○ Other (specify):

Upper Middle Inlet

C. Watershed and Waterbody

See Attachment A and SWDV at http://dnrmaps.wi.gov/SL/?Viewer=SWDV for assistance in completing this question.

Watershed Name	DNR Watershed Code	Primary Waterbody Name	Nearest Waterbody Name
Middle Inlet Lake Noquebay	GB09	~~Lake Noquebay~~	Upper Middle Inlet and ~~Tribs~~

12-digit Hydrologic Unit Code (HUC): 040301050301

Unt trib to

D. Endangered and Threatened Resources, Historic Properties, and Wetlands

Check the appropriate box for each question based on what the ***governmental unit knows*** to occur where the project disturbs land.

☐ 1. There are endangered or threatened resources, as identified in s. 29.604, Wis. Stats., and NR 27 in the project area. (Refer to: http://dnr.wi.gov/topic/erreview/publicportal.html?utm_source=featureimage&utm_medium=homepage&utm_campaign=20140929_nhiportal for assistance.)

☐ 2. There are archaeological sites, historical structures, burial sites, or other historic places identified in s. 44.45, Wis. Stats., in the project area.

☐ 3. There are wetlands in the project area that are governed by water quality standard provisions of NR 103. (Answer with the SWDV map layer **Wetland Indicators** at http://dnrmaps.wi.gov/SL/Viewer.html?Viewer=SWDV&runWorkflow=Wetland

E. Maps and Photographs

Yes

☒ An 8.5" x 11" map from USGS or the DNR data/map viewers, showing the project area, is attached.

☒ Aerial photo maps and project area photos are also included.

F. Filters *Note: The applicant **must** be able to check "Yes" to questions 1 through 9 and, if applicable "Yes" to questions 10 and 11 below to be eligible for a grant.*

Yes

☒ 1. The project will control agricultural runoff.

☒ 2. The applicant certifies that funding from this grant will ***only*** be used for BMPs to bring ***existing*** cropland, ***existing*** livestock facilities and non-significant expansions of livestock operations into compliance with NR 151 performance standards or prohibitions. (See definitions for existing (existing prior to effective dates of standards and prohibitions) and significant expansion in the instructions at **Part I. F & G** and **Part II. H,** respectively).

☒ 3. The applicant certifies that funding from this grant will ***not*** be used for best management practices to bring a livestock facility or cropland back into compliance with a performance standard or prohibition in NR 151 when such compliance had previously been achieved after the ***effective date*** of the standard or prohibition. (See effective dates at instructions Part I. G.)

TRM Grant Project Name:
Bauer Manure Management Project

☒ 4. The applicant certifies that funding from this grant will ***not*** be used for best management practices for which the DNR or local unit of government included a previous offer of cost sharing as part of a NR 151 notice or county notice that meets requirements of NR 151.09 or NR 151.095.

☒ 5. The project is consistent with the county Land & Water Resources Management Plan (LWRMP), plan amendment, or work plan prepared under s. ATCP 50.12, Wis. Adm. Code, and the approved LWRMP plan amendment, work plan or Inter-Governmental Agreement with DNR includes a qualifying strategy to implement state agricultural performance standards and prohibitions contained in subch. II of NR 151.

Identify the document name and date approved by the Land & Water Board.

Name: Marinette County 2011-2020 Land & Water Resource Management Plan	Date 12/07/2010

a. To demonstrate consistency with the LWRMP, identify the goals, objectives or activities from the LWRMP, plan amendment or work plan related to the resource(s) of concern being addressed by the project.
Goal #3: Control runoff pollution from agricultural lands and increase natural habitat.
Objectives: A. Provide technical assistance and cost sharing for constructed or somewhat permanent agricultural BMP's.

b. To demonstrate a qualifying NR 151 implementation strategy, identify the implementation strategy outlined in the approved LWRMP document. Provide page numbers and a web link or attach hard copy of the pages.
Page 39; http://www.marinettecounty.com/i_marinette/d/2011-2020_lwrm_plan_8.5_x_11.pdf

☒ 6. The project will be completed within 24 months of the start of the grant period.

☒ 7. Staff and contractors designated to work on this project have adequate training, knowledge and experience to implement the proposed project.

☒ 8. Staff or contractual services, in addition to those funded by this grant, will be provided if needed.

☒ 9. The local DNR Nonpoint Source Coordinator (see http://dnr.wi.gov/topic/nonpoint/NPScontacts.html) has been contacted and the project was discussed.

Name of the Local/DNR Nonpoint Source Coordinator Contacted	Date Contacted	Subject of Contact
Erin Hanson	04/02/2015	Provided project scopes and asked for comments

☒ 10. If this application is for a livestock facility, an Animal Units Calculation Worksheet (Form 3400-25a) for existing and future livestock numbers is attached. (Form available at: http://dnr.wi.gov/topic/AgBusiness/documents/3400025A_WT.doc).

☐ 11. If this is a joint application among local units of government, a draft of the Inter-Governmental Agreement is attached. (See Attachment H)

TRM Grant Project Name:
Bauer Manure Management Project

G. Best Management Practices (BMPs) for which DNR TRM Funding is Requested.
Check all BMPs for which DNR funding is requested and insert the Performance Standard and Prohibition codes the BMP addresses, if applicable. See instructions Part I. G. for table of standards and prohibition codes and effective dates. (Also see Attachment D for additional BMP information.) Assure a budget for each BMP is included in Part II. A.

Structural Practice (Wis. Adm. Code)	*Enter Code #s: Performance Std.(s) or Prohibition(s) the BMP Addresses*	*Structural Practice (Wis. Adm. Code)*	*Enter Code #s: Performance Std.(s) or Prohibition(s) the BMP Addresses*
☒ Manure Storage Systems (NR 154.04(3)) R16	Code(s) 4	☐ Riparian Buffers (NR 154.04(25)) R23	Code(s)
☐ Manure Storage System Closure (NR 154.04(4)) R15	Code(s)	☐ Roofs (NR 154.04(26)) R25	Code(s)
☐ Barnyard Runoff Control Systems (NR 154.04(5)) R3	Code(s)	☐ Roof Runoff Systems (NR 154.04(27)) R24	Code(s)
☐ Access Roads & Cattle Crossings (NR 154.04(6)) R1	Code(s)	☐ Sediment Basins (NR 154.04(28)) R26	Code(s)
☐ Animal Trails and Walkways (NR 154.04(7)) R2	Code(s)	☐ Sinkhole Treatment (NR 154.04(30) R28	Code(s)
☐ Critical Area Stabilization (NR 154.04(10)) R6	Code(s)	☐ Subsurface Drains (NR 154.04(33)) R30	Code(s)
☐ Diversions (NR 154.04(11)) R7	Code(s)	☐ Terrace Systems (NR 154.04(34)) R31	Code(s)
☐ Field Windbreaks (NR 154.04(12)) R8	Code(s)	☐ Underground Outlets (NR 154.04(35)) R32	Code(s)
☐ Filter Strips (NR 154.04(13)) R9	Code(s)	☐ Waste Transfer Systems (NR 154.04(36)) R33	Code(s)
☐ Grade Stabilization (NR 154.04(14)) R10	Code(s)	☐ Wastewater Treatment Strips (NR 154.04(37)) R34	Code(s)
☐ Heavy Use Area Protection (NR 154.04(15)) R11	Code(s)	☐ Water and Sediment Control Basins (NR 154.04(38)) R35	Code(s)
☐ Lake Sediment Treatment (NR 154.04(16)) R12	Code(s)	☐ Waterway Systems (NR 154.04(39)) R36	Code(s)
☐ Livestock Fencing (NR 154.04(17)) R13	Code(s)	☐ Well Decommissioning (NR 154.04(40)) R37	Code(s)
☐ Livestock Watering Facilities (NR 154.04(18)) R14	Code(s)	☐ Wetland Development or Restoration (NR 154.04(41)) R38	Code(s)
☐ Prescribed Grazing (NR 154.04(22)) R20	Code(s)	Streambank and Shoreline Protection (NR 154.03(31)) (includes associated fencing)	
☐ Relocate or Abandon Animal Feeding Ops. (NR 154.04(23)) R21	Code(s)	☐ Stream Crossing R39C	Code(s)
Process Wastewater Handling (NR 154.04(19) & NRCS 629)		☐ Rip-rapping R39R	Code(s)
☐ Milking Center Waste Control Systems R17	Code(s)	☐ Shaping & Seeding R39S	Code(s)
☒ Feed Storage Leachate R52	Code(s) 7	☐ Fencing R39F	Code(s)
☐ Other Wastewater - specify in "Other" below	Code(s)	☐ Other Protection - e.g. bio-engineering - specify in "Other" below R39O	Code(s)
☐ Other (specify)			

TRM Grant Project Name:
Bauer Manure Management Project

Part II. Competitive Elements

A. FINANCIAL BUDGET TABLE

A.1. Detailed Budget for every BMP checked in Part I. G. above. The grant amount is capped at $150,000.

A Detailed List of Project Activities and Sub-activities Eligible for DNR Cost Sharing	B Amount Eligible for DNR Cost Sharing ($)
Construction Components:	
Strip 2311 cu yds topsoil for the manure storage and leachate collection	6,933
Excavation (237 cu yds for leachate and 4663 cu yds for the storage)	19,600
Stone (290 cu yds)	5,260
Trenching for leachate 500 lin ft	2,500
Clean sand 289 cu yds (pipe bedding)	1,445
Shaping and finishing 2 ac site	3,500
8 foot wall 60 lin ft	5,400
8" slab 200 sq ft	1,200
9.5" lid 264 sq ft	2,904
6" slab (2000 sq ft for leachate and 12,600 sq ft for storage)	54,750
5" slab 13,344 sq ft for storage	43,368
8 - 2" polystyrene 4' X8' sheets	360
Leachate pump	12,000
Leachate pump wiring	5,000
Leachate pump plumbing (6" PVC pipe, elbows and cleanouts)	10,700
Saw cut and concrete removal for storage	300
2 foot wall 120 lin ft for storage	3,000
Manure storage fence 532 lin ft	5,320
12 - 10 foot gates and 12 gate posts for storage	4,200
Seeding 2 acre site	1,000
Fill for manure storage	26,435
Private Engineering Activities	
1. Construction Subtotal	215,175
2. Local Force Account Activities (Entry is limited to $10,715 or .05263 of Row 1, whichever is less.)	

Cost-Sharing:

A	B Eligible Project Totals	C Cost-Share %	D Eligible Cost-Share
3. Construction-related Subtotal: [add Rows 1 and 2]	$ 215,175	70 %	$ 150,623
4. Property Acquisition: Fee Title & Easement	$	70 %	$
5. Project Grand Totals: [add Rows 3 and 4]	$ 215,175		$ 150,623

Cap Test:

6. Maximum State Share: [row 5, column D or $150,000, whichever is less]	$ 150,000

State and Local Share:

7. Requested State-Share Amount (Enter Requested Grant Amount)	$ 150,000
8. Local-Share Amount: [row 5, column B less row 7]	$ 65,175

A.2. Use of Additional Funding

☐ Check this box if both of the following conditions are met.

TRM Grant Project Name:
Bauer Manure Management Project

- The requested state-share amount in row 7 is less than the $150,000 grant cap.
- The requested state-share amount in row 7 is below the maximum state-share in row 6. (The resulting cost-share rate is less than 70%.)

B. Method Used to Calculate Cost Estimates: Select the appropriate option. Attach design, bid, estimate documentation, as applicable.

○ **1.** Project costs are based on completed design and competitive bid on the project. Construction components and costs above should be detailed. Provide the supportive documentation attached to this application.

◉ **2.** Project costs are based on completed design with materials and labor costs based on similar, recently bid projects. Construction components in C. above should be detailed. Provide the supportive documentation in this application.

○ **3.** Project design is not complete; however, the proposed project and costs are based on similar and recent projects and costs. Provide as much construction detail in C. above as possible. Provide the supportive documentation in this application

○ **4.** Project design is not complete and the cost estimate is based on an average or a range of projects and costs. Provide as much construction detail in C. above as possible. Provide the supportive documentation in this application.

○ **5.** Project and costs are less specific than choices above.
Provide explanation of cost estimates below or attached to this application.

C. Timeline and Source of Staff
For each applicable milestone listed below, fill in the appropriate data.

Milestone	Target Completion Date (month/year)	Source of Staff
Completion of design	04/2015	Marinette County
Obtaining required permits	5/2016	Landowner
Landowner contacts	05/2016	Marinette County
CSA signing	05/2016	Landowner & Marinette County
Bidding	06/2016	Landowner
DNR approvals	07/2016	Marinette County
Contract signing	07/2016	Landowner & Contractor(s)
BMP construction	08/2016	Contractor(s) & Landowner
Site inspection and certification	11/2016	Marinette County
Project evaluation	11/2016	Marinette County
Other (specify) Operation & Maintenance Checks	11/2026	Marinette County

D. Water Quality Need Category – The project must be consistent with at least one of the following seven watershed priorities. Check the **one** category (surface or groundwater) which best identifies the water quality priority which the project directly addresses. See the instructions for category definitions and scoring information.

Surface Water Considerations For assistance with this section, consult the DNR's web pages provided below, see the instructions and see Attachment A of the instructions.

○ 1. Clean Water Act section 303(d) List of Impaired Waters
Name of Applicable Impaired Water:

Pollutant Causing Impairment:

TRM Grant Project Name:
Bauer Manure Management Project

◉ 2. Outstanding or Exceptional Resource Waters (ORW/ERW), Area of Special Natural Resource Interest (ASNRI) - To locate ASNRI using DNR's Surface Water Data Viewer go to http://apwmad0d1600/SL/Viewer.html?Viewer=SWDV&runWorkflow=DesignatedWaters.

Name of Applicable ORW/ERW or ASNRI:
Middle Inlet, Upper Middle Inlet, and Lake Noquebay

○ 3. Not Fully Supporting Uses or NPS Ranking of High or Medium.

○ 4. Surface Water Quality

Bonus Points: Federal NPS Program Watershed Project Funding Eligibility

☒ Check this box if the project meets all of the following criteria:

- The project addresses a nonpoint source impaired waterbody listed on the most current EPA-approved Section 303(d) list of impaired waters or a nonpoint source threatened unimpaired/high quality water.
- The project is located upstream of and in the same 12-digit hydrologic unit (sub-watershed) as the 303(d) listed water or the unimpaired/high quality water. (Refer to Attachment A and http://dnrmaps.wi.gov/SL/?Viewer=SWDV for assistance.)
- The project implements the goals and recommendations of an EPA-approved watershed-based "9 key element" plan.
- The project controls the same NPS pollutants which are impairing the 303(d) listed waterbody or threatening the unimpaired/ high quality water.

The project may be eligible for Federal NPS Program (Clean Water Act Section 319) Watershed Project Funding. (Refer to Attachment C of the application instructions for a list of eligible plans or link to map and plans at: http://dnr.wi.gov/water/9kemp/.)

Provide the title of the EPA-approved nine key element plan this project implements.

Nonpoint Source Control Plan for the Lake Noquebay Priority Watershed Project

Groundwater Considerations For assistance with this section, consult the local DNR Drinking Water and Groundwater Specialist (http://dnr.wi.gov/topic/drinkingwater/documents/countycontacts.pdf) or the County Extension Office. **Attach supporting documentation.**

○ 5. Exceeds Groundwater Enforcement Standard
Pollutant Causing Impairment:

○ 6. Exceeds Groundwater Preventive Action Limit
Pollutant Causing Impairment:

○ 7. Groundwater Susceptible to Contamination by Agricultural Nonpoint Source Pollutants

E. Drinking Water Bonus Points:

Yes

☐ Check this box if the project water quality goals identified above relate to the reduction of nonpoint source contaminants in community or non-community public drinking water supplies. This includes any of the following: Municipal water supplies governed by chs. NR 809 and 811; Other-Than-Municipal (OTM) water supplies governed by chs. 809 and 811; Non-Transient water supplies governed by chs. NR 809 and 812; Transient water supplies governed by chs. NR 809 and 812.

1. If "Yes" **and** you checked box 5, 6, or 7 above, then mark a, b or c below and move on to question F. (You will need assistance from your local DNR Nonpoint Source Coordinator (http://dnr.wi.gov/topic/nonpoint/NPScontacts.html) or Water Supply Specialist (http://dnr.wi.gov/topic/drinkingwater/documents/countycontacts.pdf) to answer.)

○ a. Check this box if the project is located: within the wellhead protection area of a municipal well, ***or*** within 1,200 feet of a municipal well for which a wellhead protection area is not delineated, ***or*** within 1,200 feet of an "Other-Than-Municipal (OTM)" water supply well, or within 1,200 feet of a non-transient water supply well

○ b. Check this box if the project is located within 200 feet of Transient water supply well.

○ c. Check this box if you did not select a or b.

2. If "Yes" ***and*** you checked box 1, 2, 3, or 4 for surface water considerations above, then place a check mark next to the drainage area where the project is located (see below).

TRM Grant Project Name:
Bauer Manure Management Project

- ☐ Pike River and Creek
- ☐ Root River
- ☐ Oak Creek
- ☐ Milwaukee River
- ☐ Sauk Creek
- ☐ Sheboygan and Onion Rivers
- ☐ Manitowoc River
- ☐ Twin Rivers
- ☐ Kewaunee and Ahnapee Rivers
- ☐ Menominee River
- ☐ Fish Creek
- ☐ St. Louis and Nemadji Rivers
- ☐ Lake Winnebago

F. Nature of the Water Quality Impact. Check the box if the statement applies to receiving waters that are being affected by the project site.

○ **1. General water quality impacts.** The receiving waters experience general resource degradation from nonpoint pollution sources. Cause and effect relationships between the impairments and the specific site to be funded are difficult or impossible to establish. *(Note: This may be chosen if 1, 3, 4, 5 or 6 is checked in D. Water Quality Needs.)*

○ **2. Site-specific degradation.** Site-specific impacts on receiving waters from the site to be funded are observable or measurable such that a cause and effect relationship is clearly evident. *(Note: This may be chosen if 1, 3, 4, 5 or 6 is checked in D. Water Quality Needs.)*

☐ Supporting information, such as data summaries or photos, is attached. (Required to earn credit for statement 2.)

◉ **3. Threats.** There are no nonpoint source impacts observed or measured in receiving waters but the existence of the pollution source is perceived to be a threat. *(Note: This may be chosen if 2. or 7. is checked in D. Water Quality Needs.)*

G. Project - Describe the water quality problem, the solution being proposed and the expected environmental improvements.

1. Describe the pollution problem(s) at the site and its effect on water quality (on site and off site).

What are the critical pollutants and the pollutant sources on the project site? What are all of the Performance Standards & Prohibitions (PS&Ps) and/or TMDL goals that need to be addressed on the site? How does the site impact water quality? Describe how pollutants are conveyed to waters of the state, the distance(s) between source(s) and discharge points or areas to surface or ground water, frequency, magnitude and/or duration of discharge(s), etc. What is the current, estimated pollutant load? (Recommendation: attach photos of pollution source areas, pollution conveyance to waters of the state and the affected receiving water and mention photos here.)

The CRITICAL POLLUTANTS on this site are phosphorus, nitrogen, organic matter, and Biochemical Oxygen Demand (BOD). Agriculture waste has a high B.O.D. compared to untreated domestic sewage:

Material	BOD mg O2/L of Pollutant
Raw Domestic Sewage	300-400
Cattle Slurry	10,000-20,000
Silage Leachate	30,000-80,000
Milk	140,000

The POLLUTANT SOURCES are stored food leachate, manure, milk house waste, and urine from approximately 210 dairy cows, 150 heifers and 25 calves totaling 408 animal units.

This project will address the following Performance Standards and Prohibitions (PS&P): NR 151.05 MANURE STORAGE FACILITIES PERFORMANCE STANDARDS (2); NR151.055 PROCESS WATERHANDLING PERFORMANCE STANDARD (1); NR151.08 MANURE MANAGEMENT PROHIBITIONS (4); and NR151.07 NUTRIENT MANAGEMENT (1).

Cattle are maintained in a freestall barn, loose housing, a calf barn and a small earth lot for the dry cows. THE EXISTING MANURE STORAGE IS TOO SMALL, and only has capacity for three months of manure generation. This results in winter manure spreading on fields which drain to Lake Noquebay, a former Priority Watershed Project. The Waste Storage Facility Design Spreadsheet estimates cattle on this site will generate 2,593,308 gallons of manure and waste water annually that will need to be properly incorporated. The owned land base for waste utilization totals 350 acres. Approximately 50% of the cropland is suitable for winter spreading of manure. The ratio

of owned cropland acres to animal units is .86:1. A ratio of 3:1 is considered optimum to avoid build up of excess soil phosphorus.

The EFFECT on WATER QUALITY is POTENTIAL FISH KILLS in the streams adjacent to the farms crop lands due to winter spread manure and leachate runoff. The project will also minimize the amount of phosphorus reaching Lake Noquebay. The Lake Noquebay Rehabilitation District already implements an extensive harvesting operation to remove aquatic plants which impede navigation. This farm also rents significant acreage in the watershed. The parcels receiving manure vary each year. The producer may not have thorough knowledge of how melting snow drains off the parcel and may not know which areas to avoid. If we entirely end winter manure spreading, the threat goes away.

POLLUTANTS are CONVEYED by melting snow and precipitation. Approximately 200 acres of cropland surround the farm site, which are in turn surrounded by Upper Middle Inlet and an unnamed tributary to it. Hills are centered in two blocks of crop fields which slope fifty feet down to the streams. The fields lay as close as 280 yards east of Upper Middle Inlet and 180 yards west of the unnamed tributary to it. Hills are centered in two blocks of crop fields which slope fifty feet down to the streams. The fields lay as close as 280 yards east of Upper Middle Inlet and 180 yards west of the unnamed tributary. The attached Manure Spreading Restriction Map shows the proximity of these, and other, fields to surface waters.

The ESTIMATED POLLUTANT LOAD IS an estimated 1,5000,000 gallons of manure and waste water being deposited on frozen and/or snow covered ground annually. Estimated annual runoff from the feed storage area is 912,700 gallons.

2. Describe the project.

What is this project? What pollution problem(s) described above will be addressed with this project and how? How much of the pollution problem(s) associated with this site/operation will this project address? Which of the NR 151 PS&Ps or TMDL goals identified above will this project address? Which, if any, will remain to be addressed (and why)? Will the remaining PS&Ps be addressed with other funding sources in the same timeframe as this project or will they need to be addressed in subsequent years/grants?

Currently there is a manure storage facility with only 107 days of capacity. Feed is stored on gravel pad. During rain events any leachate flows north and west to wetlands and the Upper Middle Inlet. Where practical, the clean water on the site will be diverted to avoid contact with animal waste. PROCESS WATER HANDLING practices for FEED STORAGE LEACHATE will be installed. A WASTE TRANSFER SYSTEM will collect and convey feed leachate to the newly expanded MANURE STORAGE FACILITY. The manure storage is sized to hold the additional contaminants. The existing undersized manure storage pit was installed and inspected under the guidance of Marinette County and therefore meets the counties ordinance requirements. The new manure storage will be sized (226,656 Ft.3) to hold the manure, milk house waste and feed leachate for seven months. A NRCS 590 Standard compliant NUTRIENT MANAGEMENT plan will be implemented.

All of the PS&Ps identified in Question II G.1. will be addressed by this project and bring the farm into compliance with NR151 standards and prohibitions within the grant time frame. Instead of totally unconfined manure, the manure storage/feed leachate will be a zero runoff system. All of the manure, waste water, and uneaten food will be be spread following a NRCS 590 Standard compliant NUTRIENT MANAGEMENT PLAN. No animal waste will leave the manure storage and be spread on frozen or snow covered ground.

3. Describe the expected environmental improvements.

How effective will this project be in solving the pollution problem(s) and water quality impacts described above? What is the expected percent reduction in pollutant loading or pollution potential after this project is completed? What is the compliance level with NR 151 PS&Ps that will be achieved with completion of this project and what will remain to be addressed? What is the potential for water quality improvement of the receiving water?

Primary Water Quality benefits include ELIMINATION OF CONTAMINATED LEACHATE RUNOFF FROM THE FARM SITE and ENTIRELY ENDING WINTER SPREADING OF MANURE PRODUCED BY THIS OPERATION. Manure management will meet requirements established in NR151.07 and ATCP 50.04 (3).

This farm will be in FULL COMPLIANCE with NR151 PS&Ps. Zero runoff from the farm site, no unconfined manure or feed stacking, no winter spreading of manure, and full implementation of their nutrient management plan.

Marinette County adds an addendum to Targeted Runoff Management cost share agreements stating, "That any and all manure stored in the storage facility designed to be emptied annually or semi-annually may not be applied on frozen or saturated ground and shall be incorporated within 3 days after application."

Both Middle Inlet and Upper Middle Inlet are ORW's and Class I/II trout waters. The project will greatly reduce the risk of fish kills and the amount of phosphorus reaching Lake Noquebay, arguably Marinette County's most important recreation water body. The Lake Noquebay Rehabilitation District already implements an extensive harvesting operation to remove aquatic plants which impede navigation.

A landowner just north of the Bauer farm has worked with the US Fish and Wildlife Service for seven years on channel and habitat restoration on the Upper Middle Inlet. This year, the stream restoration project will be complete with 1.35 miles of stream restored. The response to the project by Brook Trout has been excellent. Trout numbers and size structure have improved dramatically. Brook Trout are known for seasonal movement up and down stream at different points in their life cycles. Improperly spread manure could, at least temporarily, completely undo all the hard restoration work done if a fish kill occurs.

H. Cost-Effectiveness

1. a. Explain how the proposed best management practices are a reasonable means to achieve NR 151 Performance Standards and Prohibitions (PS&Ps) or TMDL water quality goals. Include factors such as cost-effectiveness, site feasibility, available technical standards, and practicality. If applicable, include information to demonstrate that BMP(s) are sized to meet current and allowable insignificant growth needs of the operation (e.g. concrete pads for barnyards, feed storage, etc.) to achieve PS&Ps and water quality goals.

The main WATER QUALITY GOALS for this project are to eliminate contaminated runoff from field spread manure, end winter spreading of manure and fully implement a 590 compliant nutrient management plan. Implementation of a nutrient management plan is very difficult without a storage facility. A storage facility, properly sized using the WASTE STORAGE FACILITY DESIGN - 313 STANDARD FORM, minimizes the impact of weather, facilitates testing of manure for nutrient content, and lessens management constraints on the producer.

In this situation, the existing manure storage facility is sound, but under sized. A new system will be built immediately adjacent to it. Together, the two storages will hold the all waste generated, including feed leachate. Although gravity flow is the preferred method of conveyance for leachate, the topography of the site requires the leachate to be collected and pumped to the existing manure storage.

LWCD staff match the site and preferred management style to the locations and layout of BMP's. Before visiting the farm site, aerial photos, topographic maps and soil survey maps were viewed to aid in setting preliminary design parameters. To further investigate local geological conditions, soil investigation logs from neighboring farms (when available) were reviewed. In this case we also have soil logs from a previous project.

At the initial site visit LWCD staff met with the landowner to assess and record current management style and future management objectives. SITE FEASIBILITY was checked for obvious physical limitations affecting the location, type, size or depth of structures that can be built. Animal types, numbers and weights, bedding type and volume, manure consistency, housing type, rolling herd average, and desired storage duration were all obtained and recorded. Using DATCP and NRCS parameters, applicable pollutant delivery computer models were run and structures designed to address water quality needs for the site and based on the winter spreading restrictions of the cropland receiving manure.

The preliminary design and knowledge of the site are used to estimate quantities needed to construct the best management practices needed to address the water quality needs for the site. Marinette County has created a spreadsheet that calculates the average cost of BMP components for the last three years. The spreadsheet is then "proofed" by randomly calling local contractors and soliciting their prices for commonly used materials. Finally, the

estimated cost is calculated by integrating competitive bids and the average costs for materials from past projects. Each year costs are reviewed and updated to ensure accurate estimates.

b. DNR requires that new or substantially altered manure storage facilities be designed to meet the applicable NR 151 PS&Ps. Typically, a manure storage facility that is designed and maintained to provide 180 days of storage is sufficient to meet NR 151 PS&Ps. The state share should be based only on the cost to construct a facility to meet NR 151 PS&Ps. Submit the WASTE STORAGE FACILITY DESIGN - 313 STANDARD worksheet or equivalent information to support the facility size and cost information submitted in this application.

Marinette County designs and builds manure storages with a minimum of 7 months (210 days) capacity. The case for this practice has been thoroughly made the last two years. In 2013, a very late spring resulted in a very late start to a manure spreading season that did not end until mid June. Many manure storages were full past the MOL before manure spreading could start. Fortunately, with the additional capacity, they did not overflow.

This past cold, wet fall, many fields froze solid before they dried out enough to spread manure on. Corn still remains unharvested on some fields. Many county farms went into this winter with significant amounts of manure still in storage. The extra capacity we design into manure storage facilities may be critical to avoid over flow or manure spreading issues. With only 5% of cropland suitable for winter spreading of manure, having sufficient manure storage space is critical.

Finally, the average total cost of our last 8 TRM projects involving a manure storage facility is $246,345. The cost sharing cap is reached at $214,286. Therefore, cost of the additional capacity is not being paid by the TRM program. Please see the attached WASTE STORAGE FACILITY DESIGN - 313 STANDARD FORM.

2. If other alternative management measures were evaluated, list them here and describe why the alternative(s) is not being recommended.

There is no alternative to a manure storage facility for full implementation of a NRCS Technical Standard 590 compliant nutrient management plan. Based on the soil test hole investigations in the area, the native soil at the site will not meet NRCS specifications for earthen manure storage structure construction. When managing for dairy manure, the preferred options include in-ground concrete lined facilities or above ground slurry stores. We chose to install an in ground concrete lined manure storage facility because it offers the least cost, has the lowest risk of failure, and is the easiest way to capture barnyard runoff. The alternative slurry store has higher maintenance needs and depends more heavily on active management for success. Due to our extreme weather conditions, above ground pumps and valves have a higher failure rate and must be more intensely managed, leading to a greater likelihood of manure spills. For years we have compared the costs and found the in-ground concrete facility averaged about 1/3 less cost than the above ground slurry store.

I. Project Evaluation Strategy

1. Project Modeling and Measures of Change

Describe the strategy that will be implemented to evaluate the pre- and post-project pollution potential and pollutant loading data that is required for the Final Project Report. Describe the pre- and post-project evaluation modeling methods and measures that the applicant will use to measure success in achieving the NR 151 PS&Ps or TMDL project goals. See the instructions for lists of BMPs, PS&Ps, modeling and measurement methods and units of measure.

LWCD staff will count the new storage facilities, number of animal units and acres of cropland implementing nutrient management planning (includes cessation of winter manure spreading) for the Final Report. The BARNY model will be run again, if applicable, for the barnyard post project for comparison with pre-project conditions.

2. Water Quality Monitoring (not eligible for cost sharing at this time)

If, in addition to the above, the project evaluation strategy includes evaluating BMP effectiveness and/or pre- and post-project water resource monitoring, and the information will be provided to DNR, check all that apply below.

- ☐ a. A one-page summary of the project-specific BMP and/or water resource monitoring strategy is attached.
- ☐ b. The project will evaluate BMP pollution reduction effectiveness (*e.g.*, inlet/outlet monitoring).
- ☐ c. The project will evaluate the in-stream physical habitat, fisheries, biological, or chemical conditions.
- ☒ d. The applicant is willing to participate with the Department to do monitoring in the project area should funding become available

TRM Grant Project Name:
Bauer Manure Management Project

J. Evidence of Local Support that currently exists for the proposed project - check the applicable situation below.

1. **Regulatory Situations** - The total project cost is attributed to the resolution of a Notice of Discharge (NOD) or a Notice of Intent to Issue an NOD (NOI) under NR 243 or non-compliance with agricultural performance standards and prohibitions under subch. II of NR 151 or a local regulation and *at least one* of the following is attached to this application form: (check all that apply).

○

- ☐ a. Signed and dated copy of the NOI or NOD issued under NR 243;
- ☐ b. Signed and dated copy of letter signed by the authorized DNR representative stating that DNR will issue a notice under NR 151 or NR 243;
- ☐ c. Signed and dated copy of letter from the authorized county representative that the local regulation will be enforced at the project site.

If you checked J.1., then go on to Question K. If this project is not regulatory, continue to number 2. of this question.

2. **Non-Regulatory Situations** - Check the applicable situation below.

◉ The governmental unit has:

- ◉ a. Developed a detailed pollution control plan with the landowner(s)/land operator(s) that identifies specific BMPs and the affected landowner(s)/land operator(s) indicated that they will sign a cost-share agreement to install the practices requested in this grant application; **or**
- ○ b. Conducted general assessments of the pollution sources within the project area and affected landowner(s)/land operator(s) indicated a general interest to participate in the project; **or**
- ○ c. Contacted the landowner(s)/land operator(s) about the proposed BMP installations; however, landowner(s)/land operator(s) participation is undetermined.
- ☐ d. If a. or b. is checked, letters of support for the project from affected landowner)/land operator are attached.

If a., b. or c. is checked above, provide details here.
LWCD staff have met with the landowner on site and discussed a preliminary project design, the TRM grant process, the CSA process, and necessary permits, The landowner has provided a letter (attached) explaining his commitment to installing the prescribed BMP's.

3. **Involvement of Partners** - check box if applicable.

☒ Partners, in addition to the unit of government (applicant) and landowner, have committed resources (materials, equipment, staff or financial resources) towards the BMP installation, maintenance or evaluation of the project.

If checked, list the project partner(s).
Our Marinette County UW-Extension agent works with our project landowners, especially relating to nutrient manageement.
NRCS assists with site surveying, BMP design and certification, and possibly cost sharing.

☒ Letters from the project partner(s) indicating the resources they committed to support the project are attached. (Letters of resource support must be attached for a score here.)

K. Consistency with Other Resource Management Plans

☒ Check this box if the proposed project implements a water quality recommendation from a locally approved resource management plan. Examples include Smart Growth plans, Legacy Community plans, Water Star plans, local Storm Water Management plans, wellhead protection, lake management, regional water quality plans, Remedial Action plans and other watershed-based nonpoint source control plans.

(This question does not include a TMDL report or implementation plan, or a County Land and Water Resource Management Plan.)

Cite the name and date(s) of publication of the document. Attach pertinent page(s) or provide URL and page numbers. Summarize the water quality recommendation(s) and describe how it relates to the goals of this proposed project. (Required to earn credit for K.)
The Marinette County 20-Year Comprehensive Plan Volume I: County Plan page 4-9 contains the Natural Resources GOAL: To protect, enhance, and promote a healthy and thriving natural environment in which to live, work, and recreate.
Objective: Preserve, enhance, and promote the quality of the lakes, rivers, and streams of Marinette County.

Policies: Support efforts and programs that assist property owners with the installation of BMP's to protect against animal waste runoff.
Continue to support the review, updating, and implementation of the Marinette County Animal Waste Ordinance.
Support efforts that promote the use of sound agricultural and soil conservation methods that minimize erosion

TRM Grant Project Name:
Bauer Manure Management Project

impacting surface waters. See Attached Comp. Plan cover and pertinent plan page.

Part III. Eligibility for Local Enforcement Multiplier

Completion of Part III is optional. However, an applicant can increase the final project score by qualifying for a project multiplier. Check the **one** enforcement authority situation which **best** applies to the governmental unit applying for a TRM grant combined with the proposed project.

- ○ The applicant certifies that it has local authority to enforce all state agricultural performance standards and prohibitions at all sites within the local jurisdiction where such state agricultural performance standards and prohibitions apply. *Multiply the initial project score by a factor of 1.15.*
- ◉ The applicant certifies that it has local regulations that give local authority to enforce most, but not all, of the state agricultural performance standards and prohibitions at all sites within the local jurisdiction where such state agricultural performance standards apply; **and** this project addresses an enforceable performance standard or prohibition. *Multiply the initial project score by a factor of 1.10.*
- ○ The applicant certifies that it has local regulations that give local authority to partially enforce some of the state agricultural performance standards and prohibitions at some, but not all, of the sites within the local jurisdiction; **and**, this project addresses an enforceable performance standard or prohibition on a site under local jurisdiction. *Multiply the initial project score by a factor of 1.05.*
- ○ Applicant has no local authority to enforce state agricultural performance standards and prohibitions within the local jurisdiction **for this proposed project**. *No multiplier is earned.*

Copies of ordinances for which credit is taken in this section are: (choose at least one)

- ☒ Found at this website (provide most direct web page URL).
  http://www.marinettecounty.com/i_marinette/d/chapter_18.pdf
- ☐ Attached to this application.
- ☐ Already attached to another application for funding.

Optional Additional Information

Carefully review the answers to all of the questions above. Is there additional information that will add to the understanding of this project? If so, describe here.

Applicant Certification

A Responsible Government Official (authorized signatory) must sign and date the application form prior to submittal to the DNR. The governmental official with signatory authority must be the person authorized by the Governmental Responsibility Resolution. I certify that, to the best of my knowledge, the information contained in this application and attachments is correct and true.

Signature of Authorized Government Official	Date Signed
	4/14/15

Name (*Please Print*)	Title
Gregory G. Cleereman	Marinette County Conservationist

☒ The required, completed Governmental Responsibility Resolution (signed in blue ink) (see Attachment I) is attached.

Submittal Directions

TRM Grant Project Name:
Bauer Manure Management Project

To be considered for funding, provide the following for each application submitted:

- One copy of the completed application form [DNR Form 8700-300 (R 1/15)] with **original signature in blue ink**, and all attachments.
- Three additional copies of the completed, signed application form and all attachments.
- One electronic copy of the completed application form in **PDFormat only** plus all attachments and maps on CD.

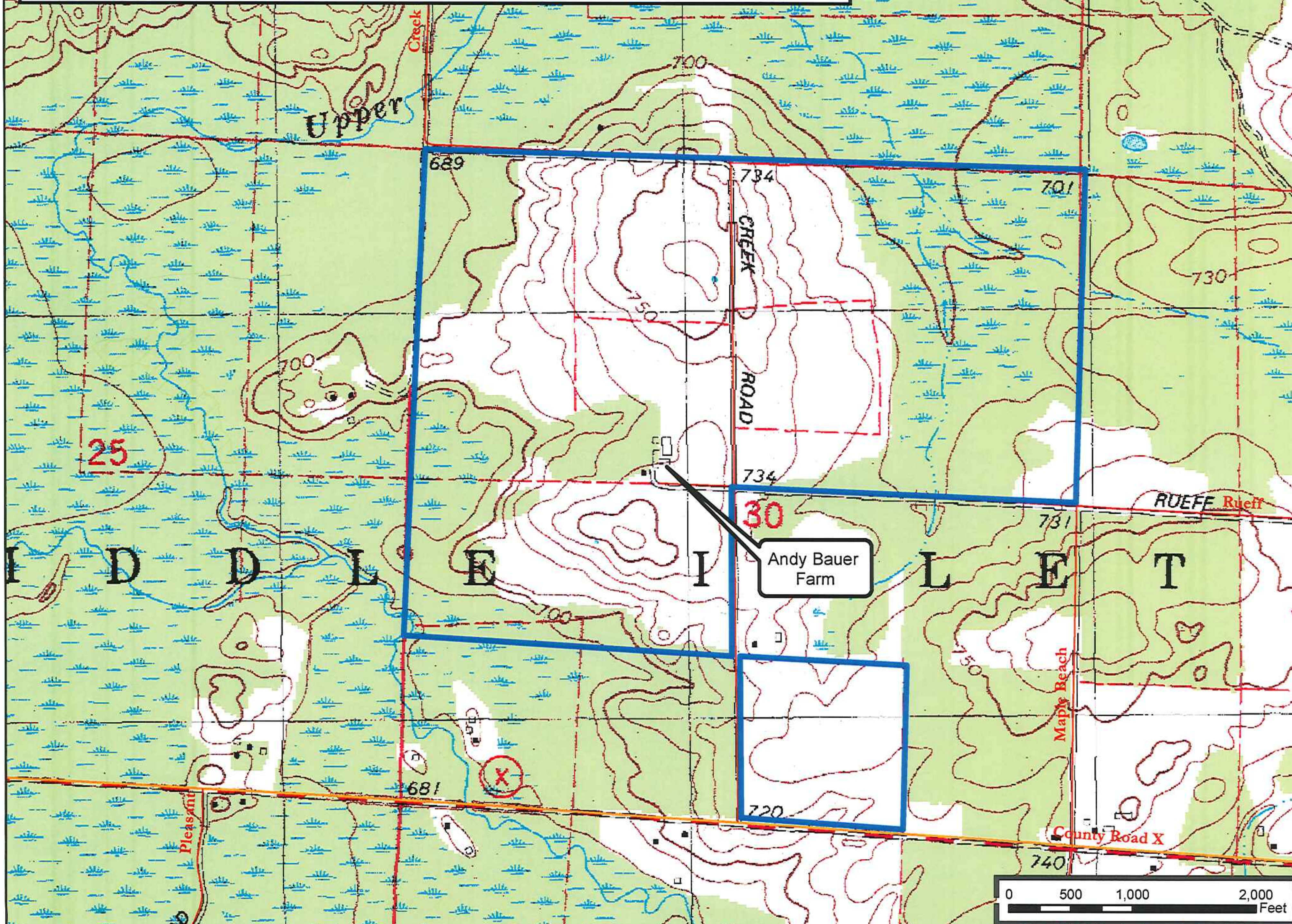
All application materials must be postmarked by midnight **April 15 of the same calendar year**.

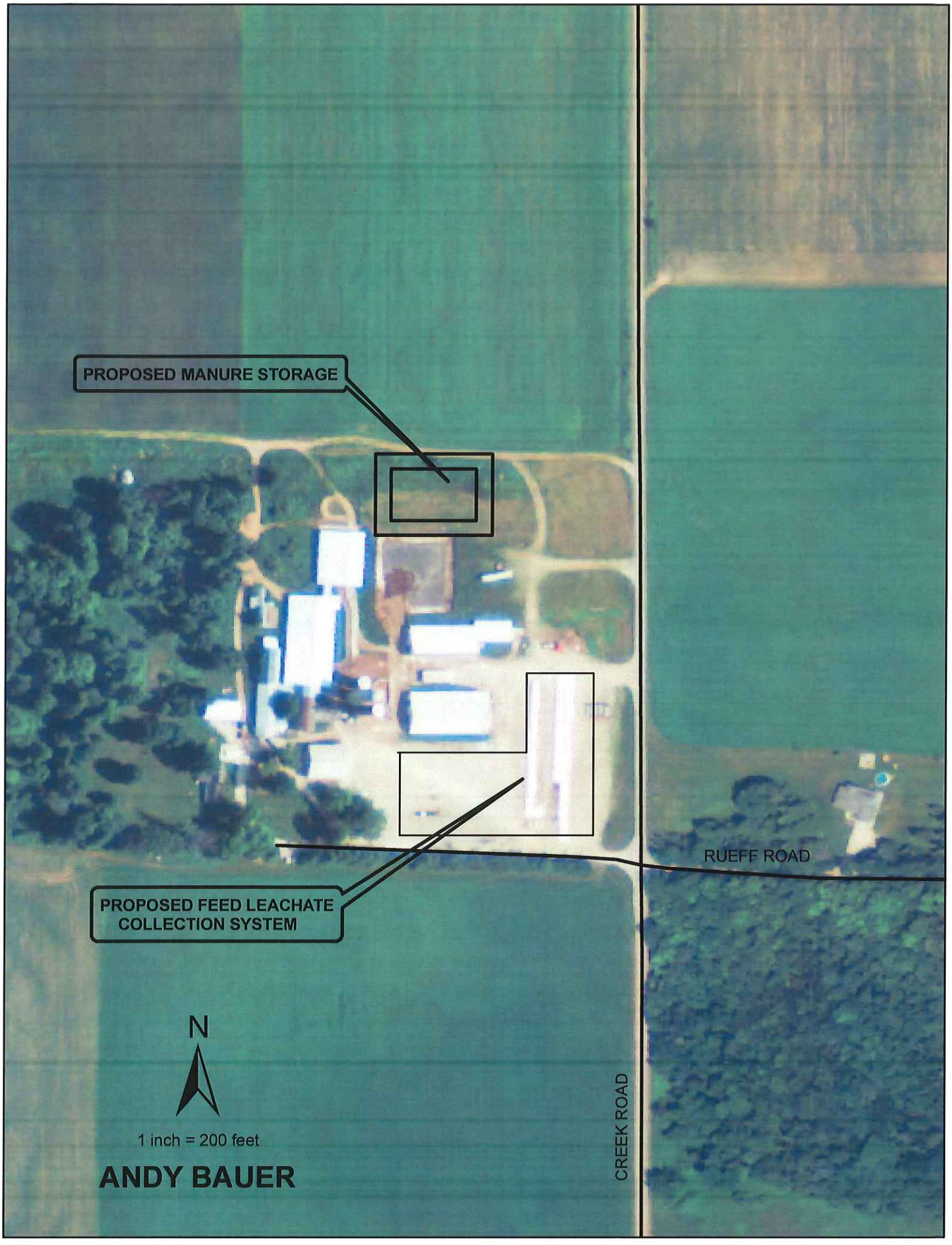
Send to: Department of Natural Resources
Runoff Management Section-WT/3
101 South Webster Street
Madison, WI 53703

or

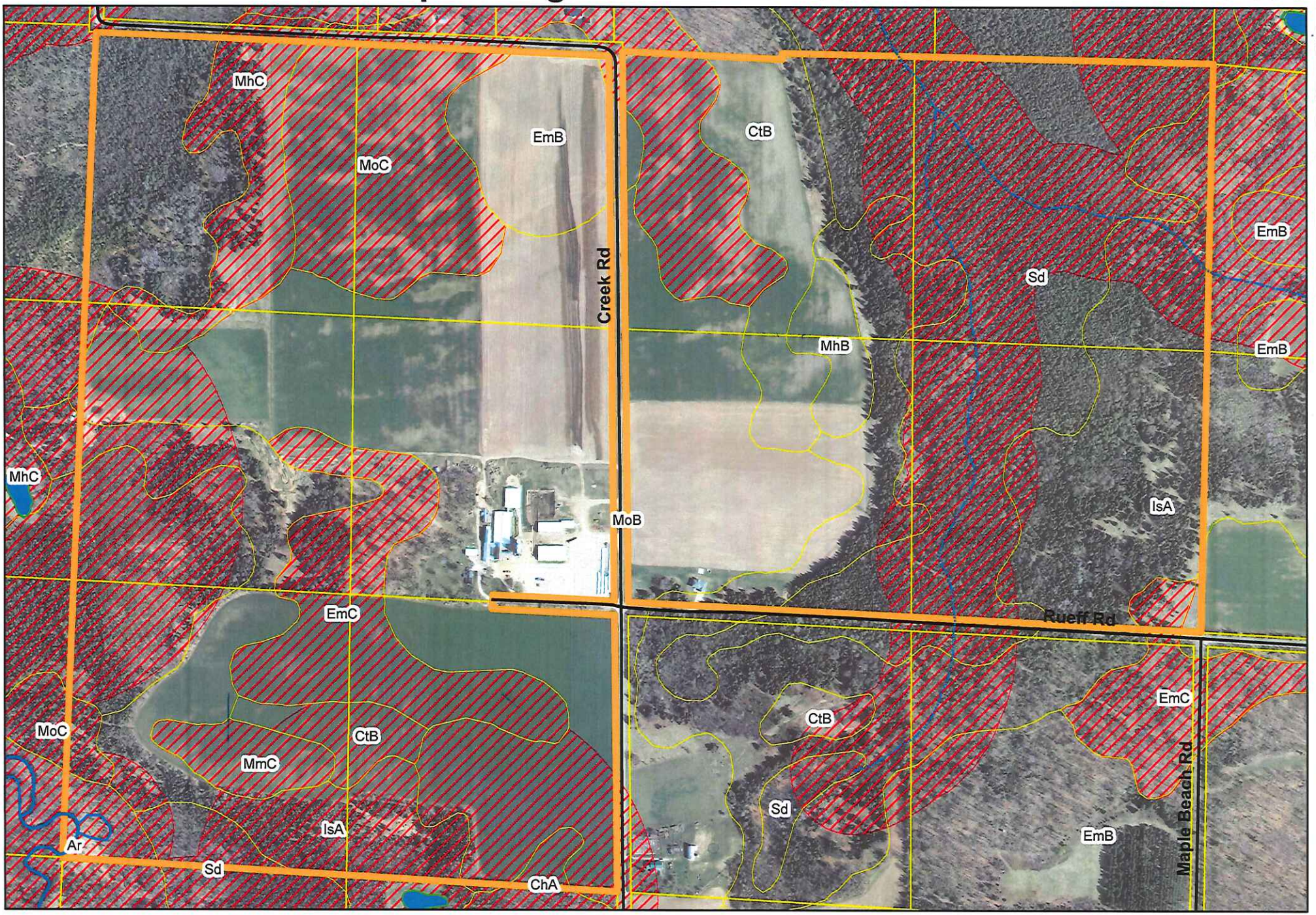
PO Box 7921
Madison WI 53707-7921

Andy Bauer Farm - Topography and Drainage Patterns




PROPOSED MANURE STORAGE
PROPOSED FEED LEACHATE COLLECTION SYSTEM
RUEFF ROAD
CREEK ROAD
N
1 inch = 200 feet
ANDY BAUER

Manure Spreading Restrictions Bauer Farm



Soil Type Restriction (fall application)

Slope Restriction (winter application)

Water Features

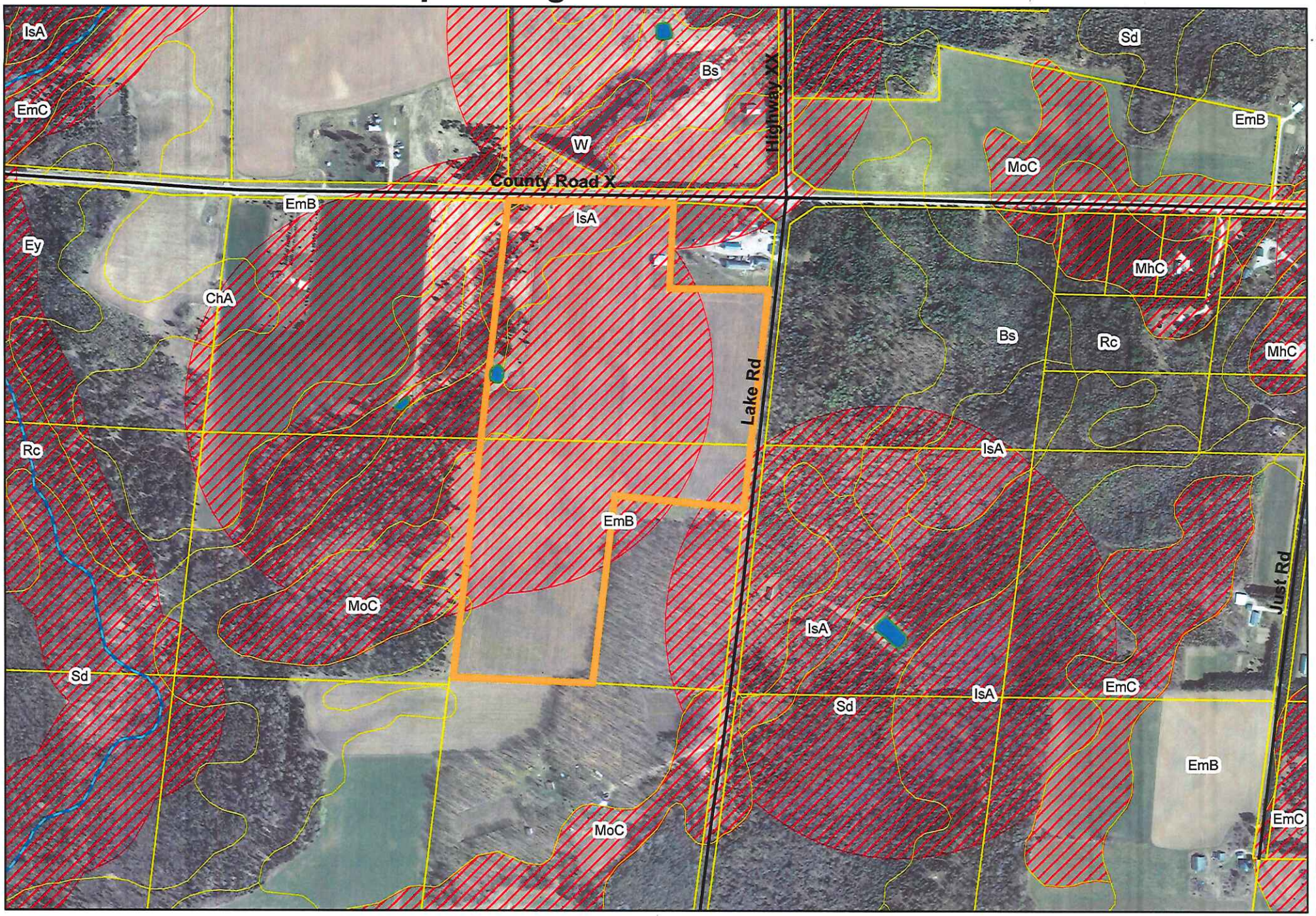
April 7, 2015
Marinette County
Land Information Dept

NORTH

0 300 600 1,200 1,800 Feet

1:7,200

Manure Spreading Restrictions Bauer Farm



Soil Type Restriction (fall application)

Slope Restriction (winter application)

Water Features

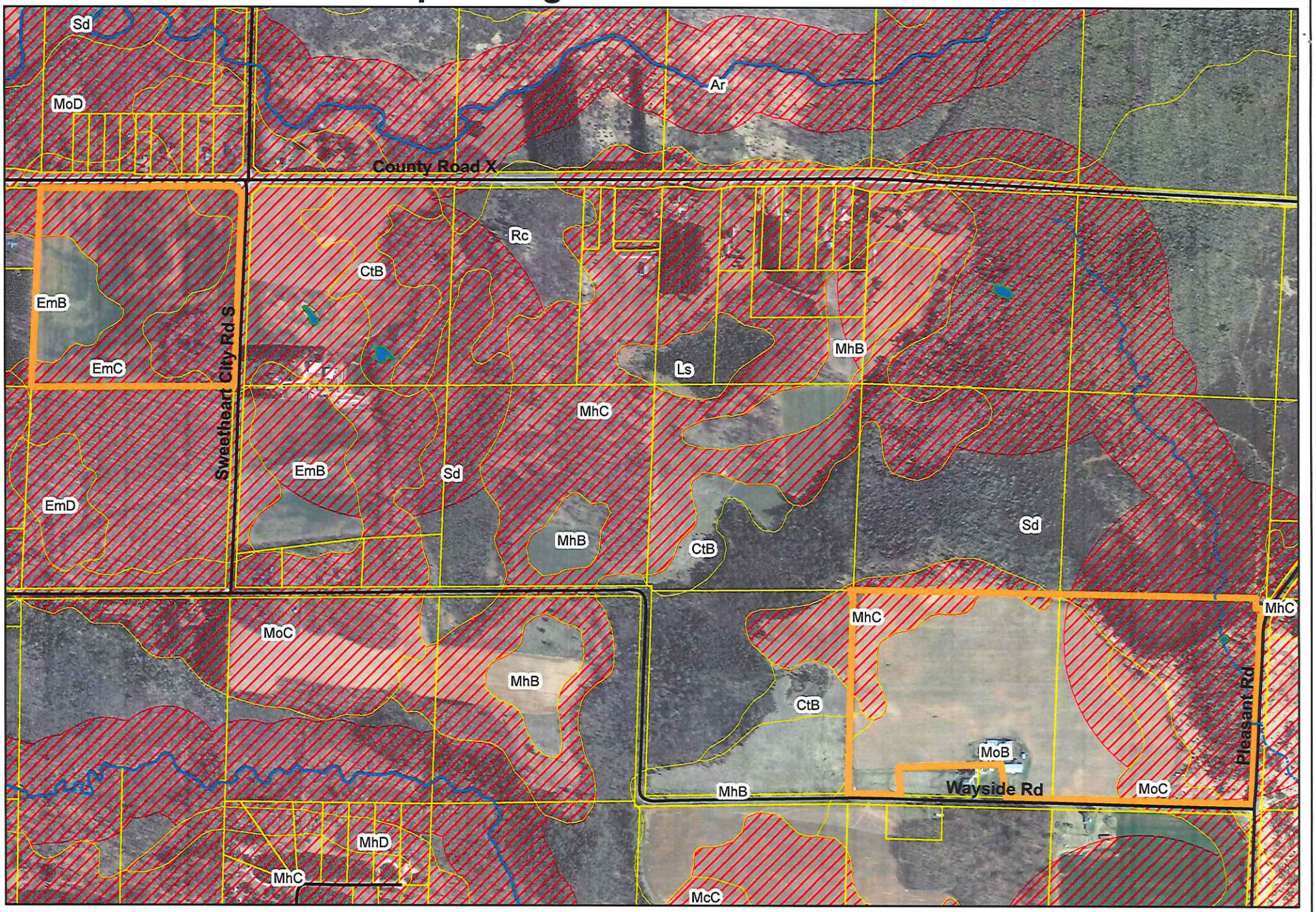
April 7, 2015
Marinette County
Land Information Dept

NORTH

0 300 600 1,200 1,800 Feet

1:7,200

Manure Spreading Restrictions Bauer Farm



Soil Type Restriction (fall application)

Slope Restriction (winter application)

Water Features

April 7, 2015
Marinette County
Land Information Dept

NORTH

0 400 800 1,600 2,400 Feet

1:9,600

State of Wisconsin
Department of Natural Resources
PO Box 7185, Madison, WI 53707-7185
dnr.wi.gov

Animal Unit Calculation Worksheet
Form 3400-025A (R 3/2012)

The Current Animal Unit Calculation Worksheet must be filled out separately for the "main" site and each site which are owned or operated by your farm for the purposes of housing animals associated with your operation. The site name, for which you are filling this worksheet out, must be provided below and correlate with Form 3400-025 Site Information (Section II).

Current Animal Unit Calculation Numbers

Name of Site: Bauer Farm

Animal Type		I. Mixed Animal Units			II. Non-mixed Animal Units		
		b. Equiv. factor	c. Current Number	d. No. of AUs	e. Equiv. factor	f. Current Number	g. No. of Aus
Example - Broilers (non-liquid manure):		*0.005 x*	*150,000*	*= 750*	*0.008 x*	*150,000*	*= 1200*
Dairy/Beef Calves (under 400 lbs)		0.20 x	25	= 5	*Fed.numbers in this column comply with 40 CFR s. 122.23*		
Dairy Cattle	Milking & Dry Cows	1.40 x	210	= 294	1.43 x	210	= 300.3
Dairy Cattle	Heifers (800 lbs to 1200 lbs)	1.10 x	150	= 165			
Dairy Cattle	Heifers (400 lbs to 800 lbs)	0.60 x		=	1.00 x	150	= 150
Beef	Steers or Cows (400 lbs to market)	1.00 x		=			
Beef	Bulls (each)	1.40 x		=	1.00 x		=
Veal Calves		0.50 x		=	1.00 x		=
Swine	Pigs (up to 55 lbs)	0.10 x		=	0.10 x		=
Swine	Pigs (55 lbs to market)	0.40 x		=			
Swine	Sows (each)	0.40 x		=			
Swine	Boars (each)	0.50 x		=	0.40 x		=
Chickens	Layers (each) -non-liquid manure system	0.01 x		=	0.0123 x		=
Chickens	Broilers/Pullets (each) -non-liquid manure system	0.005 x		=	0.008 x		=
Chickens	Per Bird -liquid manure system	0.033 x		=	0.0333 x		=
Ducks	Ducks (each) -liquid manure system	0.2 x		=	0.2 x		=
Ducks	Ducks (each) -non-liquid manure system	0.01 x		=	0.0333 x		=
Turkeys (each)		0.018 x		=	0.018 x		=
Sheep (each)		0.1 x		=	0.1 x		=
Horses (each)		2 x		=	2 x		=
Total Animal Units:		**Total Mixed Animal Units = 464** (add all rows above)			**Total Non-Mixed Animal Units = 300.3** (Enter the single highest number from any row above; DO NOT add the totals)		

☒ Check here if there are no proposed increases in animal numbers at this site within the next five years.

State of Wisconsin
Department of Natural Resources
PO Box 7185, Madison, WI 53707-7185
dnr.wi.gov

Animal Unit Calculation Worksheet
Form 3400-025A (R 3/2012)

The Projected Animal Unit Calculation Worksheet must be filled out separately for the "main" site and each site which are owned or operated by your farm for the purposes of housing animals associated with your operation. The site name, for which you are filling this worksheet out, must be provided below and correlate with Form 3400-025 Site Information (Section II).

Projected Animal Unit Calculation Numbers

Name of Site: Bauer Farm

Animal Type		I. Mixed Animal Units			II. Non-mixed Animal Units		
		b. Equiv. factor	c. Projected Number	d. No. of AUs	e. Equiv. factor	f. Projected Number	g. No. of Aus
Example - Broilers (non-liquid manure):		*0.005 x*	*150,000*	*= 750*	*0.008 x*	*150,000*	*= 1200*
Dairy/Beef Calves (under 400 lbs)		0.20 x	25	= 5	*Fed.numbers in this column comply with 40 CFR s. 122.23*		
Dairy Cattle	Milking & Dry Cows	1.40 x	210	= 294	1.43 x	210	= 300.3
	Heifers (800 lbs to 1200 lbs)	1.10 x	150	= 165			
	Heifers (400 lbs to 800 lbs)	0.60 x		=	1.00 x	150	= 150
Beef	Steers or Cows (400 lbs to market)	1.00 x		=			
	Bulls (each)	1.40 x		=	1.00 x		=
Veal Calves		0.50 x		=	1.00 x		=
Swine	Pigs (up to 55 lbs)	0.10 x		=	0.10 x		=
	Pigs (55 lbs to market)	0.40 x		=			
	Sows (each)	0.40 x		=			
	Boars (each)	0.50 x		=	0.40 x		=
Chickens	Layers (each) -non-liquid manure system	0.01 x		=	0.0123 x		=
	Broilers/Pullets (each) -non-liquid manure system	0.005 x		=	0.008 x		=
	Per Bird -liquid manure system	0.033 x		=	0.0333 x		=
Ducks	Ducks (each) -liquid manure system	0.2 x		=	0.2 x		=
	Ducks (each) -non-liquid manure system	0.01 x		=	0.0333 x		=
Turkeys (each)		0.018 x		=	0.018 x		=
Sheep (each)		0.1 x		=	0.1 x		=
Horses (each)		2 x		=	2 x		=
Total Animal Units:			**Total Mixed Animal Units = 464** (add all rows above)			**Total Non-Mixed Animal Units = 300.3** (Enter the single highest number from any row above; DO NOT add the totals)	

Date of Proposed Expansion (MM/YY): **NA**

WASTE STORAGE FACILITY DESIGN - 313 STANDARI

CLIENT: Bauer Andy | COUNTY: Marinette | DATE: 4/14/15
DSN BY: | CHK BY: | DATE:
COMMENT planned storage

ANIMAL TYPE> 1 (1=DAIRY, 2=BEEF, 3=VEAL, 4=SWINE(finishing), 5=SWINE(farrowing), 6=POULTRY, 0=OTHER)

For Dairy: Rolling Herd Average 22,000 lbs/cow/yr | Is it a stanchion barn? n (Y or N)

MANURE AND WASTEWATER

LIVESTOCK KIND	NUMBER	AVG. WT. PER HEAD	DAILY OUTPUT, CU FT MANURE	BEDDING	TOTAL	DAYS OF STORAGE	VOLUME REQUIRED	ANIMAL UNITS
Cows	210	1,400	2.36	0.4	580.0	210	121,804	294
Heifers	150	700	1.12	0.4	228.0	210	47,880	105
Calves	25	350	0.56	0.4	24.0	210	5,040	9

WASTEWATER: 1773 GAL/DAY 237.0 CU FT/DAY 408 TOT. A.U.
TOTAL DAILY VOLUME: 1069.1 CU FT / DAY

1,679,267 GALLONS
Total Manure and Wastewater 224,501 **CU FT**
Expected % solids in waste (Includes runoff and precip.) 6.1 %

RUNOFF VOLUME

MONTHLY RUNOFF
RCN 95 | 14.8 / 12 IN. X 80,000 Ft2 Drainage Area= 98,667 CU FT (Do not include storage area)

25-Year, 24-HOUR RUNOFF
RCN 95 | 3.53 / 12 IN. X 80,000 Ft2 Drainage Area= 23,531 CU FT (Do not include storage area)

2,593,308 GALLONS
Total for Manure, Milking Center, Runoff Volume, and 25 Yr Runoff 346,699 **CU FT**

PRECIPITATION Does the facility collect precipitation? (No roof or lid) 1 (1 for yes, 2 for no)
Beginning Month for Precip. Collection 11 (1=Jan, 2=Feb, etc.)

Precipitation minus evaporation

Average Precipitation on Storage Surface	13.5 INCH	1.1 FT
Average Evaporation from Storage Surface	- 7.1 INCH	0.6 FT
Net Precipitation on Storage Surface	6.4 INCH	0.5 FT
25-Yr, 24-Hr Precip on Storage Surface	4.1 INCH	0.3 FT

REMAINING WASTE (If no sump, use these minimums: ponds -2', tanks-1') 1.0 FT

EXTRA DEPTH FOR SAFETY (1-ft. Minimum) 1.0 FT

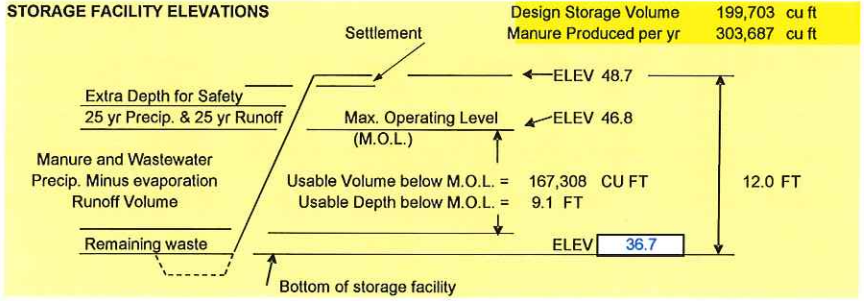
SETTLEMENT (5% of Embankment Height) FT

M.O.L. DEPTH (Depth to hold Manure, Wastewater, Runoff, and Precip.) 9.13 FT

Total Depth of the Storage Facility 12.0 FT

STORAGE FACILITY ELEVATIONS

Design Storage Volume 199,703 cu ft
Manure Produced per yr 303,687 cu ft



STORAGE SIZING IS STORAGE RECTANGULAR OR ROUND ? 1 (1= Rectangular; 2= Round)

SIDE SLOPES OF STORAGE 2.0 :1 (Use "0" for walls)

CHOOSE A BOTTOM WIDTH 90 FT

BOTTOM LENGTH REQUIRED 318 FT

ROUND STORAGE BOTTOM DIAMETER REQUIRED N.A. FT

SECTION FOR FIGURING VOLUME OF A CHOSEN OR EXISTING STORAGE FACILITY

RECTANGULAR	BOTTOM SIDE 1:	90 FT		
	BOTTOM SIDE 2:	140 FT		
	M.O.L. VOLUME PROVIDED:	167,308 CU FT	1,251,461	GALLONS
	DAYS STORAGE PROVIDED:	100 DAYS		
	TOTAL VOLUME FROM BOTTOM TO SETTLED TOP:	226,656 CU FT	1,695,387	GALLONS
ROUND	CHOOSE BOTTOM:	FT DIAM		
	M.O.L. VOLUME PROVIDED:	4,302 CU FT	32,177	GALLONS
	DAYS STORAGE PROVIDED:	3 DAYS		
	TOTAL VOLUME FROM BOTTOM TO SETTLED TOP:	7,238 CU FT	54,142	GALLONS

DESIGN DOCUMENTATION FOR COST ESTIMATE

DOCUMENTATION FOR B. 2.

COST ESTIMATE

FOR: Andy Bauer
BY: pk
DATE: 4/6/2015
PROJECT: Manure Storage
COMMENTS: trm estimate

ITEM	QUANT.	UNITS	U.COST	COST	C/S%
Strip top soil	2222	cu.yds.	$3.00	$6,666	70
Excavation	4663	cu.yds.	$4.00	$18,652	70
Fill	5287	cu.yds.	$5.00	$26,435	70
Crushed Limestone	48	cu.yds.	$18.00	$864	70
Breaker run	48	cu.yds.	$18.00	$864	70
Saw cut/remove conc	1	job	$300.00	$300	70
Shape & Finish Site	1	job	$2,500.00	$2,500	70
6" thick concrete	12600	sq.ft.	$3.75	$47,250	70
5" thick concrete	13344	sq.ft.	$3.25	$43,368	70
2' wall	120	lin.ft.	$25.00	$3,000	70
Fence	532	lin.ft.	$10.00	$5,320	70
10' gate	12	each	$250.00	$3,000	70
Galvanized gate post	12	each	$100.00	$1,200	70
Seeding	2	acre	$500.00	$1,000	70

TOTAL COST: $160,419
MAX. C/S: $112,293
OWNER COST: $48,126
C/S % : 70

TOTAL 215,115

COST ESTIMATE

FOR: Andy Bauer
BY: pk
DATE: 4/6/2015
PROJECT: Feed Leachate Collection
COMMENTS: trm estimate

ITEM	QUANT.	UNITS	U.COST	COST	C/S%
Strip top soil	89	cu.yds.	$3.00	$267	70
Excavation	237	cu.yds.	$4.00	$948	70
Clear stone	20	cu.yds.	$20.00	$400	70
Trenching	500	lin.ft.	$5.00	$2,500	70
Clean sand	289	cu.yds.	$5.00	$1,445	70
Crushed Limestone	174	cu.yds.	$18.00	$3,132	70
Shape & finish site	1	job	$1,000.00	$1,000	70
8' high wall	60	lin.ft.	$90.00	$5,400	70
8" thick slab	200	sq.ft.	$6.00	$1,200	70
9.5" thick lid	264	sq.ft.	$11.00	$2,904	70
6" thick apron	2000	sq.ft.	$3.75	$7,500	70
2" polystyrene ins.	8	sheets	$45.00	$360	70
Pump	1	each	########	$12,000	70
Wiring	1	job	$5,000.00	$5,000	70
6" PVC pipe	500	lin.ft.	$15.00	$7,500	70
PVC cleanouts	4	each	$750.00	$3,000	70
PVC elbows	4	each	$50.00	$200	70

TOTAL COST: $54,756
MAX. C/S: $38,329
OWNER COST: $16,427
C/S % : 70

2-26, 2015

To whom it may concern,

I have met with Marinette County Land & Water Conservation Division (LWCD) staff regarding the proposed Targeted Runoff Management grant application. My responsibilities under the program, as well as the roles and responsibilities of the LWCD and WDNR, have been explained to me.

I commit, to the best of my ability, to installing and properly implementing the best management practices described in the grant application. In addition, I have the financial resources to pay my share of the project costs.

Sincerely,

Andrew O. Bauer

Andrew Bauer

USDA

United States Department of Agriculture

March 25, 2015

To: TRM Grant Review Team

Subject: Andy Bauer - Marinette County LWCD TRM Grant Application

The TRM Grant Program has been extremely beneficial to the water quality goals and initiatives of Marinette County residents. The Marinette County LWCD and the USDA-NRCS office use the TRM Grant Program and the Environmental Quality Incentives Program (EQIP) to help agricultural producers manage animal wastes. Mr. Bauer has a need and has shown interest in addressing his manure management resource concern. Collecting and spreading manure according to an approved 590 plan will greatly improve water resource in Marinette County.

Producers who receive funding through the TRM Grant Program are then offered to participate in EQIP funding for nutrient management planning. This helps educate the farmers on how their manure storage can be used as an asset in the nutrient budgeting. This partnership between TRM and EQIP also helps farmers get manure spreading restriction maps developed so they know where the environmentally sensitive areas are located.

We at NRCS are grateful for the Marinette County Land and Water Conservation Department. They are doing an excellent job of helping farmers deal with the waste management issues that plague Wisconsin. Paul Klose from LWCD (along with NRCS) currently work on waste management systems together. A team effort is being developed to help out agricultural producers in Marinette County better manage a valuable asset while protecting the waters of the state.

The applications are customers who need assistance in their conservation efforts. Marinette County LWCD and USDA NRCS are working with these farmers to help them reach their goals.

Thank you,

Jeff Maroszek
Oconto-Marinette NRCS District Conservationist

Natural Resources Conservation Service 111 Arbutus Ave., Oconto, WI 54153
www.wi.nrcs.usda.gov (920) 834-5688 ext. 3

Your county extension office

UW Extension
Cooperative Extension
Marinette County

Marinette County UW Extension
1926 Hall Avenue
Marinette WI 54143-1717
715-732-7510 • Toll-free 877-884-4408
Fax: 715-732-7513
Website: http://marinette.uwex.edu/

April 13, 2015

To: Whom it may concern

Re: Marinette County LWCD TRM Grant Applications

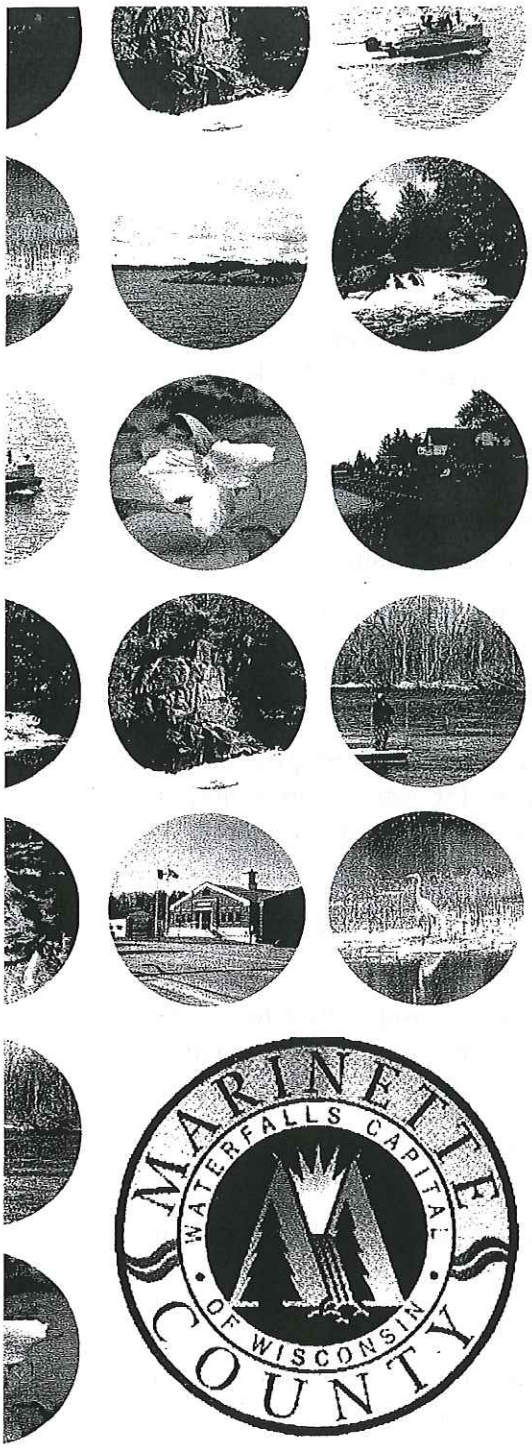
This letter is to directly support the work of the Marinette County Land & Water Conservation Department related to their application for Targeted Runoff Management funds. These funds are necessary to allow the affected Marinette County farms to eliminate nutrient loading into the surface and ground waters of Marinette County. Due to the inherent nature of Marinette County soils and surface water presence, the completion of all five of these projects will definitely have a positive environmental effect through reduction of phosphorus runoff and/or nitrate leaching.

Due to the substantial benefits to the environment of these projects, UW-Extension pledges our support to assist the producers in understanding how and why to most effectively utilize the nutrients in the captured manure/runoff. We will invite all the producers to take part in the multi-day Nutrient Management Farmer Education Training. Past training participants from Marinette County have consistently reported that they understand nutrient management much better because of these training sessions, as well as actually implementing their nutrient management plans more completely.

I will also be available to work with producers individually as they change their management practices to account for new systems they are putting into place. In some cases, these changes necessitate cropping rotation switches, soil tillage changes, and other similar practice changes.

Sincerely,

Scott A. Reuss
Marinette County UW-Extension Agriculture Agent



Marinette County
20-Year Comprehensive Plan
Volume I: County Plan
December 2009

NATURAL RESOURCES

Goal: To protect, enhance, and promote a healthy and thriving natural environment in which to live, work, and recreate.

Objective: Promote preservation and enhancement of the county's environmentally sensitive areas; such as wetlands, floodplains, shorelands, river/creeks, open spaces, woodlands, steep slopes, and floodplains.

Policies:

- Promote cooperative efforts with local communities as well as state and federal agencies to enhance understanding of natural resource location, type, and importance.
- Maintain a current environmental corridor map as well as other resource maps as reference tools in implementing the county's Future Land Use.
- Promote access to natural resources.
- Direct growth away from environmentally sensitive areas in order to protect the benefits and functions they provide while limiting the need for future public and/or private dollars spent on flood control, stormwater management, habitat restoration, erosion control, and water quality improvements.
- Maintain familiarity with local, county, state, and federal regulations that regulate the county's natural resources.
- Work cooperatively with WDNR, US Army Corps of Engineers, and USDA to ensure continued and consistent protection and enhancement of environmentally sensitive areas.
- Continue to review, update, and implement the recommendations of the Marinette County Land and Water Resource Management Plan.

Objective: Preserve, enhance, and promote the quality of the lakes, rivers and streams of Marinette County.

Policies:

- Work cooperatively with local communities, local associations, state and federal agencies to ensure protection and improvement of surface water resources.
- Support educational efforts that promote sustainable land use practices within the watersheds.
- Work cooperatively with local communities as well as state and federal agencies to address known and potential contamination problems and to pursue additional protection and remediation measures.
- Support and promote the development of plans and land use regulations that promote surface water quality.
- Support cooperative efforts with state agencies to properly inspect, maintain, repair, and plan for the future of Marinette County owned and operated dams.

- Work with UW-Extension to provide information and education regarding Best Management Practices (BMPs) and other measures local communities and property owners can implement to improve water quality.
- Support efforts and programs that assist property owners with the installation of BMPs to protect against animal waste runoff.
- Support efforts and programs that require periodic evaluations and maintenance for all POWTS systems.
- Continue to support the review, updating, and implementation the Marinette County Animal Waste Ordinance.
- Support efforts that promote the use of sound agricultural and soil conservation methods that minimize erosion impacting surface waters.
- Support communities in the maintenance of existing sanitary districts and in the establishment of sanitary districts in more densely developing areas.
- Cooperatively work with federal, state, county agencies and other non-governmental organizations for control of non-native invasive species.

Objective: Preserve, enhance, and promote the quantity and improve the quality of Marinette County groundwater resources.

Policies:

- Support studies that monitor the number of wells being constructed, closed, and measure the level of general water quality within Marinette County.
- Promote and support the development of wellhead protection plans and ordinances that prohibit uses with the potential to contaminate municipal wells.
- Work cooperatively with local communities as well as state and federal agencies to address known, existing, and potential contamination problems and to pursue additional protection and remediation measures.
- Support efforts to identify what and where certain agricultural practices are occurring in the county (i.e. pesticide application, manure spreading, etc.)
- Support cooperative efforts to provide educational opportunities and incentives for groundwater friendly types of agriculture.
- Promote and support the development of land use regulations that promote groundwater quality.
- Promote and support identification existing and maintenance of all Private Onsite Wastewater Treatment System (POWTS) within the county.
- Work with UW-Extension to provide information and education regarding Best Management Practices, water testing, and other measures local communities and property owners can implement to improve water quality.
- Support cooperative efforts to identify and close abandoned wells.

RESOLUTION No. 433-15

SUPPORTING TARGETED RUNOFF MANAGEMENT GRANTS

WHEREAS, Marinette County is interested in acquiring multiple grants from the Wisconsin Department of Natural Resources (WDNR) for the purposes of implementing measures to control agricultural pollution sources as described in the applications and pursuant to §281.65 or 281.66, Wis. Stats., and Administrative Code NR151, 153, and 155; and,

WHEREAS, the projects are located in Marinette County at:

Dunbar T37N R19E Section 27	Parcel Number 010-01950.000
Grover T30N R21E Section 25	Parcel Number 014-00528.000
Lake T31N R21E Section 5	Parcel Number 016.00147.000
Middle Inlet T33N R21E Section 30	Parcel Number 018-00710.000
Pound T30N R20E Section 1	Parcel Number 028-00015.003
Pound T30N R21E Section 33	Parcel Number 028-00793.000
Stephenson T32N R19E Section 28	Parcel Number 032-01682.001

WHEREAS, each grant application is in the amount of $150,000.00; for each project Marinette County receives five percent (5%) to a maximum of $5,000.00 for technical services and charges a $500.00 permit fee.

NOW, THEREFORE, BE IT RESOLVED the Marinette County Board of Supervisors authorizes the County Conservationist to apply for, accept if awarded and administer the above referenced grants; and

BE IT FURTHER RESOLVED in the event it becomes necessary to change projects, the County Conservationist is authorized to find new program participants meeting Wisconsin Department of Natural Resources guidelines for substitution. The Marinette County Land Information Committee shall approve the new project prior to submittal; and

BE IT FURTHER RESOLVED Marinette County hereby authorizes the County Conservationist or designee to sign and submit *Environmental Hazard Assessment* forms.

BE IT FURTHER RESOLVED Marinette County will comply with all state and federal laws, regulations and permit requirements pertaining to the projects and to fulfillment of the grant document provisions.

Adopted this 31st day of March 2015 by a majority vote of a quorum of the Marinette County Board.

Vilas Schroeder, Chairperson

Kathy Brandt

Kathy Brandt, Clerk

Submitted by: Marinette County Land Information Committee – 3/9/2015