ORIGINAL

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: Singler Beef Farm

Governmental Unit Applying (name and type) (e. g. Dane County Land and Water Resources Department): Outagamie County Land Conservation Department

Governmental Unit Web Site Address: http://www.outagamie.org/index.aspx?page=64

Name of Responsible Government Official - Authorized Signatory (First Last)	Name of Government Official - Grant Contact Person (First Last)(if different)
Gregory J. Baneck	
Title: County Conservationist	Title:
Area Code + Phone Number: (920) 832-5073	Area Code + Phone Number:
E-Mail Address: greg.baneck@outagamie.org	E-Mail Address:
Mailing Address - Street or PO Box: 3365 West Brewster St.	Mailing Address - Street or PO Box:
City: Appleton; State: WI; ZIP Code: 54914	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).

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.

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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:
Outagamie	2	6

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)
Town of Bovina	23 N	16	E	8	SW	SW	44.4758	-88.5935
	N							
	N							
	N							

Method for Determining Latitude & Longitude (check one)

○ GPS ◉ DNR Surface Water Data Viewer

○ Other (specify):

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 Wolf River	WR14	Wolf River	Unnamed Tributary to Wolf Rivr

12-digit Hydrologic Unit Code (HUC): 040302020904

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.)

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☒ 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: 2010-2015 Outagamie County Land and Water Resource Management Plan (Plan extension to 2017)	Date 02/25/2014

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.

Implementation of Agricultural Performance Standards

1. Annually Inventory the top 10% of farms yet to be inventoried from the list (list generated based on several environmental factors)

2. Bring non-compliant "priority" farms into compliance (as funding permits). Enforce as necessary to achieve compliance.

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.

http://www.outagamie.org/index.aspx?page=208 Pages 46-67

☒ 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	03/27/2015	Singler Beef Farm TRM Application

☒ 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)

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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) 4,9,11,12	☐ 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) 8,12	☒ Roof Runoff Systems (NR 154.04(27)) R24	Code(s) code = 8
☐ 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) code = 8
☐ Filter Strips (NR 154.04(13)) R9	Code(s)	☒ Waste Transfer Systems (NR 154.04(36)) R33	Code(s) code = 4
☐ Grade Stabilization (NR 154.04(14)) R10	Code(s)	☒ Wastewater Treatment Strips (NR 154.04(37)) R34	Code(s) code = 12
☐ 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)	☐ 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)			

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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:	
Excavation - 10400 cubic yards	31,200
Concrete walls - 8' - 574 linear feet	63,140
Concrete floor and footing - 21060 square feet	77,922
Heavy use concrete - 3650 square feet	10,950
Vegetated treatment area - 26648 square feet	5,330
Roof gutters - 210 linear feet	2,100
Underground outlet - 6" tile - 800 feet	2,000
Private Engineering Activities	
1. Construction Subtotal	192,642
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]	$ 192,642	70 %	$ 134,849
4. Property Acquisition: Fee Title & Easement	$	70 %	$
5. Project Grand Totals: [add Rows 3 and 4]	$ 192,642		$ 134,849

Cap Test:	
6. Maximum State Share: [row 5, column D or $150,000, whichever is less]	$ 134,849
State and Local Share:	
7. Requested State-Share Amount (Enter Requested Grant Amount)	$ 133,500
8. Local-Share Amount: [row 5, column B less row 7]	$ 59,142

A.2. Use of Additional Funding

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

- 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.

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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	1/2016	LCD
Obtaining required permits	2/2016	LCD, Landowner
Landowner contacts	1/2016	LCD
CSA signing	3/2016	LCD
Bidding	3/2016	LCD, Landowner
DNR approvals	2/2016	LCD, DNR
Contract signing	3/2016	Landowner, Contractor
BMP construction	5/2016	LCD, Contractor
Site inspection and certification	6/2016	LCD
Project evaluation	12/2016	LCD
Other (specify)		

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:
Wolf River
Pollutant Causing Impairment:
"Pollution sources along the Wolf River are nonpoint in nature; animal wastes and cropland runoff."

○ 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:

○ 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/.)

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

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).

- ☐ 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.

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○ **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 for the site are nutrients (phosphorus) running off the site as manure runoff directly into a nearby intermittent channel which flows into the Wolf River 1 1/4 miles away. The main PS&P's include discharge of barnyard runoff to waters of the state as well as the requirement to divert clean water within a WQMA. The 3 separate lots on the site cumulatively deliver approximately 178.1# of P annually into the adjacent stream and ultimately the Wolf River. Barnyard runoff becomes channelized immediately after it leaves the yards and flows approximately 200' before entering the adjacent intermittent stream. The attached air photos and additional photographs show the direct runoff and channelized flow to the stream. Frequency of discharge events is directly tied to precipitation and snow melt events. Additionally, the soils within the entire area are classified as "hydric". During periods of frozen and snow covered ground, as well as during the period when crops are growing, manure is required to be headland stacked at various locations around the farm, increasing the liklihood of surface runoff from the piles which has a direct impact on the nearby Wolf River.

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?

The project includes roof gutters and underground outlets on all of the buildings which discharge across the animal lots. Barnyard runoff control systems will be installed to contain remaining runoff from the yards and associated waste water treatment strips will be installed to manage the remaining runoff. A manure storage structure will also be constructed to contain manure from the facility during periods of frozen and snow covered ground to greatly reduce the risk of runoff associated with daily hauling manure during these periods. Due to the wet nature of the soils for the area, an additional 2 months of storage (8 months total) is being requested for the site to further reduce potential for the need to spread or haul manure during periods of saturation.

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?

Upon completion of the proposed projects, barnyard modeling shows a reduction of nearly 95% of phosphorus discharge from the animal lots for the site (pre - 178.1# post - 9.6#) annually. Construction of the manure storage facility will enable the farm to come into compliance with it's nutrient management plan and will greatly reduce the risk of unconfined piling over hydric soils with extensive drainage. Once implemented, the proposed practices will bring the site into 100% compliance with PS&P's.

Due to the nearly direct discharge for the site into an intermittent channel which feeds into the Wolf River, any improvements for this site will have direct positive water quality improvements for the receiving water.

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.

Based on the tight physical limitations for construction on the site with the close proximity of the intermittent channel, the proposed runoff control practices are the most cost-effective means to achieve compliance for the site. The high percentage of reduction that will be achieved as a result of the practices make it a sound investment of state funding. The project directly addresses the identified non-point concerns identified for this stretch of the Wolf River.

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.

The high percentage of "hydric" soils on fields that this farm operates tend to leave fewer "spreadable" days available annually where application of manure can be done with limited risk of runoff. For this reason, we are requesting an additional 2 months of volume for the project to lengthen the window available for "safely" applying nutrients under ideal soil conditions. As mentioned earlier, part of the CSA will include language that farm must always maintain a minimum of 8 months of storage volume for livestock from this point forward. (The LCD promotes 12 months storage for all farms to provide maximum flexibility if conditions in a fall or spring are too wet to reasonable spread).

Monitoring data for Lower Fox TMDL has shown that up to 75% of the total P load is related to 5 major runoff events/year most of which fall between March - June. This can be partially attributed to manure being spread during "less than ideal" soil conditions. The fall of 2013 had particularly saturated or nearly saturated soil conditions throughout the area. Monitoring results during spring of 2014 showed some of the highest spikes in Total P delivery recorded since the monitoring stations were installed. The additional 2 months of storage volume allows more flexibility to help avoid these times. While this farm is not in the Lower Fox where this monitoring was completed, it does have the same soil characteristics and similar conclusions can be drawn.

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

Alternatives considered included moving the animal lots for the site, however due to the "tight" nature of the facility between the County Highway and the intermittent channel, there is limited space for such a move.

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.

Pre and post evaluation for the barnyards has preliminarily been completed using the BARNY model. The model will again be run to reflect the final constructed project to confirm reduction numbers. Note that preliminary calculations show a 95% reduction in annual P loading (178.1 down to 9.6 lb/yr.). The manure storage structure will be

documented as complete and constructed per specifications, it's benefits can be measured in the number of acres brought into compliance with Nutrient Management as a result of its construction.

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

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.
The department has been working with the landowner of the site to address the runoff issues for the farm. The landowner is aware that this is a non-compliant site and that not addressing the situation is not an option. The County will carry out enforcement if the landowner withdraws his commitment to complete the project.

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).
NRCS, DATCP

☒ 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.)

TRM Grant Project Name:
Singler Beef Farm

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.)

State of the Wolf River Basin Report - Aug. 2001, page 147 - References the Lake Winnebago Comprehensive Management Plan - "The Winnebago Comprehensive Management Plan ranked the Middle Wolf River watershed a "high"
priority due to animal waste problems and soil erosion rates of 3.1 tons/acre/year. The data search for the Wolf River Basin Plan found that streams of this watershed, including the mainstem Wolf River, are suffering from streambank erosion and animal waste problems."

Lake Winnebago Comprehensive Management Plan - 1989, pg. 56

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.outagamie.org/modules/showdocument.aspx?documentid=121
- ☐ 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.

The landowner is also applying for EQIP funding through NRCS for the same practices identified under this grant application. If successful, TRM funding would serve as a secondary funding source for completing the project.

NOTE - The HUC 12 lines are incorrect on SWDV. This site flows into the Middle Wolf River and the HUC 12 of 040302020904. The landowner of 30+ years also concurred that the water flowed north to the Wolf.

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.

TRM Grant Project Name:
Singler Beef Farm

Signature of Authorized Government Official.	Date Signed
	4/9/15
Name (*Please Print*)	Title
Gregory J. Baneck	County Conservationist

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

Submittal Directions

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

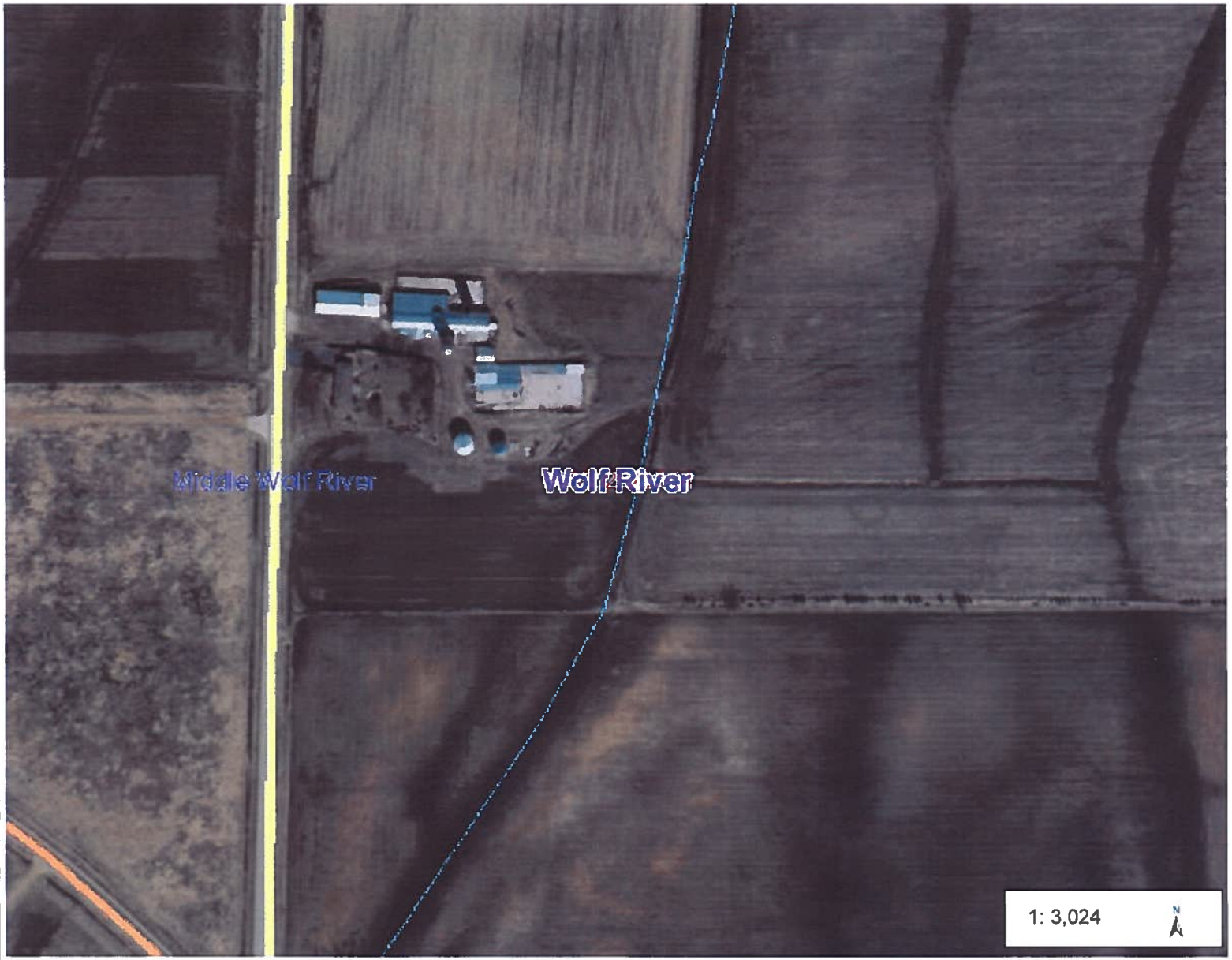
or

PO Box 7921
Madison WI 53707-7921

TRM Grant Project Name:
Singler Beef Farm

Please use this page to write any constructive comment(s) you might have to improve this application.
Thank you.

Singler Beef Farm



Legend

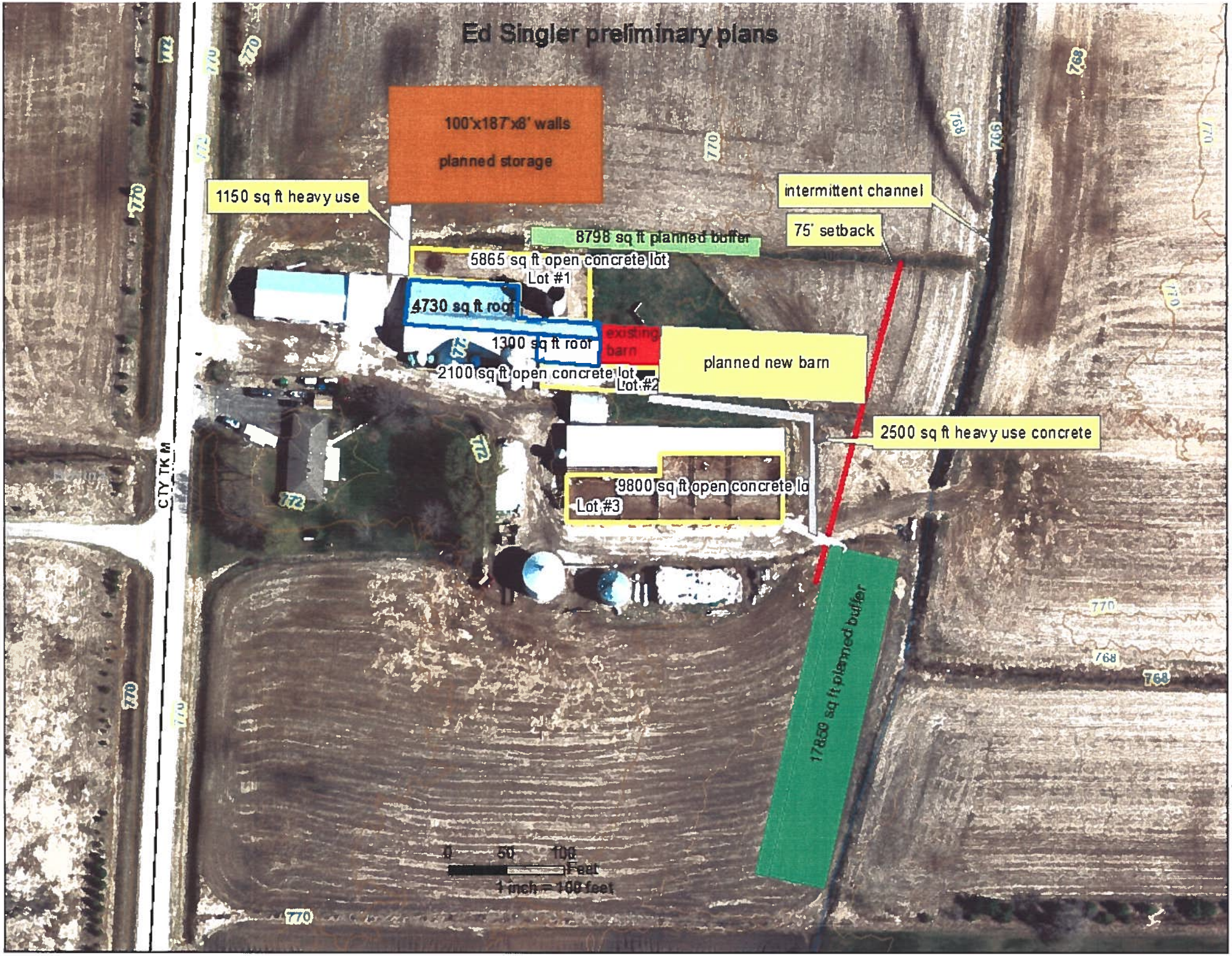
- Watersheds
- DNR Water Management Units
- Lakes
- Rivers & Streams
- 12-digit HUCs (Subwatersheds
- Rivers and Streams
- Open Water
- 2010 Air Photos (WROC)

Notes

0.1 0 0.05 0.1 Miles

NAD_1983_HARN_Wisconsin_TM

DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made aregarding accuracy, applicability for a particular use, completemenss, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: http://dnr.wi.gov/org/legal/


Ed Singler preliminary plans
100'x187'x8' walls
planned storage
1150 sq ft heavy use
intermittent channel
75' setback
8798 sq ft planned buffer
5865 sq ft open concrete lot
Lot #1
4730 sq ft roof
1300 sq ft roof
existing barn
planned new barn
2100 sq ft open concrete lot
Lot #2
2500 sq ft heavy use concrete
9800 sq ft open concrete lo
Lot #3
17859 sq ft planned buffer
CTY TK M
0 50 100 Feet
1 inch = 100 feet

Ed Singler Barnyard #1 discharge-north yard looking east

Ed Singler Barnyard #3 discharge-south yard looking north

Ed Singler Barnyard #3 discharge-south yard looking east

Singler Barn [illegible]

Ed Singler Barnyard #2 discharge-middle yard looking north

Singler Beef Farm Pg 20

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:

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		=	*Fed numbers in this column comply with 40 CFR s. 122.23*		
Dairy Cattle	Milking & Dry Cows	1.40 x		=	1.43 x		=
	Heifers (800 lbs to 1200 lbs)	1.10 x		=			
	Heifers (400 lbs to 800 lbs)	0.60 x		=	1.00 x		=
Beef	Steers or Cows (400 lbs to market)	1.00 x	300	= 3			
	Bulls (each)	1.40 x		=	1.00 x	30	= 300
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 =** 300 (add all rows above)			**Total Non-Mixed Animal Units =** 300 (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.

Single Beef farm

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:

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		=	*Fed.numbers in this column comply with 40 CFR s. 122.23*		
Dairy Cattle	Milking & Dry Cows	1.40 x		=	1.43 x		=
	Heifers (800 lbs to 1200 lbs)	1.10 x		=			
	Heifers (400 lbs to 800 lbs)	0.60 x		=	1.00 x		=
Beef	Steers or Cows (400 lbs to market)	1.00 x	500	= 500			
	Bulls (each)	1.40 x		=	1.00 x	500	= 500
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 = 500 (add all rows above)

Total Non-Mixed Animal Units = 500 (Enter the single highest number from any row above; DO NOT add the totals)

Date of Proposed Expansion (MM/YY):

Singler Dell Farm

WASTE STORAGE FACILITY DESIGN - 313 STANDARD

CLIENT: Singler | COUNTY: OUTAGAMIE | DATE: 4/13/15

DSN BY: QK | CHK BY: _____ | DATE: _____

COMMENTS: sizing for TRM gran

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

N/A | N/A

MANURE AND WASTEWATER

LIVESTOCK KIND	LIVESTOCK NUMBER	AVG. WT. PER HEAD	DAILY OUTPUT, CU FT MANURE	DAILY OUTPUT, CU FT BEDDING	TOTAL	DAYS OF STORAGE	VOLUME REQUIRED	ANIMAL UNITS
Beef	300	1,300	1.30	0.1	420.0	240	100,800	390

WASTEWATER: 0 GAL/DAY 0.0 CU FT/DAY — 390 TOT. A.U.

TOTAL DAILY VOLUME: 420.0 CU FT / DAY

	753,984	GALLONS
Total Manure and Wastewater	**100,800**	**CU FT**
Expected % solids in waste (Includes runoff and precip.)	10.2	%

RUNOFF VOLUME (ENTIRE DRAINAGE AREA)

MONTHLY RUNOFF

RCN 98 — 26.99 / 12 IN. X 0 Ft2 Drainage Area= 0 CU FT

(Do not include waste storage facility area)

25 Year, 24-HOUR RUNOFF

RCN 98 — 4.00 / 12.00 IN. X 0 Ft2 Drainage Area= 0 CU FT

'(Do not include waste storage facility area)

LEACHATE VOLUME 0 CU FT

	Area #1	Area #2	Area #3
Length =			
Width =			
Height =			

	753,984	GALLONS
Total for Manure, Milking Center, Runoff Volume, and 25 Yr Runoff	**100,800**	**CU FT**

PRECIPITATION

Does the facility collect precipitation? (No roof or lid): 1 (1 for yes, 2 for no)

Beginning Month for Precip. Collection: 4 (1=Jan, 2=Feb, etc.)

Precipitation minus evaporation

Average Precipitation on Storage Surface	27.4 INCH	2.3 FT
Average Evaporation from Storage Surface	- 12.2 INCH	- 1.0 FT
Net Precipitation on Storage Surface	15.2 INCH	1.3 FT
25-Yr, 24-Hr Precip on Storage Surface	4.2 INCH	0.4 FT

REMAINING WASTE

(If no sump, use these minimums: ponds -2', tanks-1') 0.0 FT

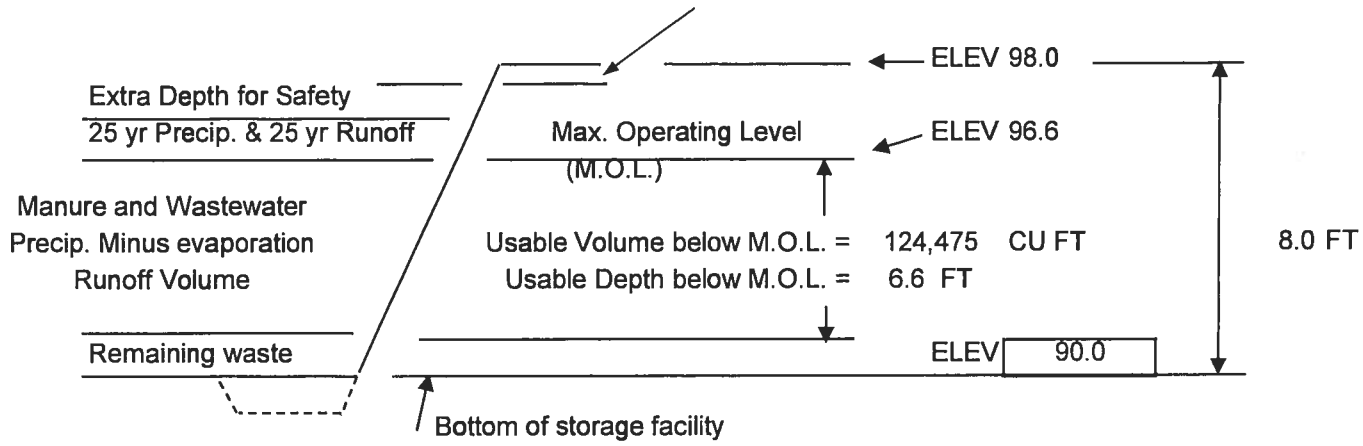
EXTRA DEPTH FOR SAFETY

(1-ft. Minimum) 1.0 FT

SETTLEMENT	(5% of Embankment Height)	0.0	FT
M.O.L. DEPTH	(Depth to hold Manure, Wastewater, Runoff, and Precip.)	6.65	FT
	Total Depth of the Storage Facility	**8.0**	FT

STORAGE FACILITY ELEVATIONS

Design Storage Volume 131,092 cu ft
Manure Produced per yr 153,300 cu ft



STORAGE SIZING			
IS STORAGE RECTANGULAR OR ROUND ?	1	(1= Rectangular; 2= Round)	
SIDE SLOPES OF STORAGE	0.0	:1	(Use "0" for walls)
CHOOSE A BOTTOM WIDTH	100	FT	
BOTTOM LENGTH REQUIRED	187	FT	
ROUND STORAGE BOTTOM DIAMETER REQUIRED	N.A.	FT	

STORAGE SIZING SUMMARY

RECTANGULAR	BOTTOM SIDE 1:	100	FT		
	BOTTOM SIDE 2:	187	FT		
	M.O.L. VOLUME PROVIDED:	124,475	CU FT	931,069	GALLONS
	DAYS STORAGE PROVIDED:	240	DAYS		
	TOTAL VOLUME FROM BOTTOM TO SETTLED TOP:	149,819	CU FT	1,120,645	GALLONS
ROUND	CHOOSE BOTTOM:	N.A.	FT DIAM		
	M.O.L. VOLUME PROVIDED:	0	CU FT	0	GALLONS
	DAYS STORAGE PROVIDED:	0	DAYS		
	TOTAL VOLUME FROM BOTTOM TO SETTLED TOP:	0	CU FT	0	GALLONS

EMBANKMENT DIMENSIONS

STA.	ELEV.	OUT Z	TOP W.
		3	10

STA.	ELEV.	OUT Z	TOP W.

1=RECT, 2=CIRC: 2

AVG.GRADE FOR CUT:

BOTTOM DIAM. N.A. FT (From G86)

INSIDE SLOPE: 0.0 :1 (From G70)

BOTTOM ELEVATION: 90.0

TOP ELEVATION: 98.0

EXCAVATION
(finished grades and lines)

AVERAGE STRIPPING DEPTH	12	INCHES
STRIPPING IN POND	0	CU YD
POND EXC. BELOW STRIPPING	0	CU YD
STRIPPING UNDER DIKE	0	CU YD
SUMP EXCAVATION	0	CU YD

SUMP

BOTTOM LENGTH		FT
BOTTOM WIDTH		FT
SUMP DEPTH		FT
AVERAGE SIDE SLOPE		:1

TOTAL STRIPPING 0 **CU YD**

TOTAL EXC. BELOW STRIPPING 0 **CU YD**

FILL

FILL LOSS FACTOR: 30 %

DIKE FILL 0 **CU YD**

EXTRA FILL: 0 CU YD (Based on total excavation and dike fill including loss factor)

Lot #1 Before

BUFFER DESIGN USING BARNY

OWNER: Ed Singler DESIGNER: QK DATE: 3/26/2015

CHK BY: _____ DATE: _____

	Input	Output		
			1 Madison	
			2 Appleton	
Closest City of similar climate:	2		3 Wausau	
			4 Eau Claire	
Paved lot area:	5,865		sq ft	
Earth lot area:	0		sq ft	
Animal Lot size:		5,865	sq ft	
Is there a DESIGNED settling basin	2		Yes= 1; No= 2	
Animals on lot:	125 number		number	
Type of animal:	2		(Dairy = 1; Beef=2)	
Ave. Animal Weight:	1,200 lbs		lbs	
Lot Use:	1		1= Heavy; 2= Medium; 3= Light)	

TRIBUTARY AREAS

Tributary area:		sq ft	sq ft
Runoff Curve Number:			
Roof area:	4,730	sq ft	

70.6 lbs P per year at D.S. Lot edge:

Maximum permissible P Output that can be released: 5 lbs — Your choice based on impacted resources- Max is 15

BUFFERS - Size by trial and error

First Buffer	Length:	225	ft (See Note Below)
	Slope:	1	%
	"c" :	0.05	→
Second Buffer	Length:		ft
	Slope:		
	"c" :		

"c" Value Table	
Permanent Meadow	0.59
Woods, Heavy Litter	0.59
Woods, Lt Ltr	0.29
Well managed grazing	0.44
Fair managed grazing	0.29
Good Pasture	0.22
Fair Pasture	0.15
Small Grain	0.29
Legume	0.29
Contoured Row Crop	0.29
Non-contoured row crop	0.05

P (lbs) after the buffers: 19.8 lbs P per year

NO GOOD - Too much P released

BUFFER SIZING

		8,798 sq ft	Min. Acceptable Buffer Area
Chosen Buffer Width	0 feet		
		225 feet	Min. Bfr. Len. Based on BARNY
		#DIV/0! feet	Min. Bfr. Len. Based on Area
Chosen Buffer Length	0 feet		No Good- Less than BARNY length

Lot # 1 w/ Buffer

BUFFER DESIGN USING BARNY

OWNER: Ed Singler DESIGNER: QK DATE: 3/26/2015
CHK BY: DATE:

	Input	Output	
			1 Madison 2 Appleton
Closest City of similar climate:	2		3 Wausau 4 Eau Claire
Paved lot area:	5,865		sq ft
Earth lot area:	0		sq ft
Animal Lot size:		5,865	sq ft
Is there a DESIGNED settling basin	1		Yes= 1; No= 2
Animals on lot:	125 number		number
Type of animal:	2		(Dairy = 1; Beef=2)
Ave. Animal Weight:	1,200 lbs		lbs
Lot Use:	1		1= Heavy; 2= Medium; 3= Light)

TRIBUTARY AREAS

Tributary area:		sq ft	sq ft
Runoff Curve Number:			
Roof area:	0	sq ft	

15.6 lbs P per year at D.S. Lot edge:

Maximum permissible P Output that can be released: 5 lbs — Your choice based on impacted resources- Max is 15

BUFFERS - Size by trial and error

First Buffer	Length:	225	ft (See Note Below)
	Slope:	1	%
	"c" :	0.05	→
Second Buffer	Length:		ft
	Slope:		
	"c" :		

"c" Value Table	
Permanent Meadow	0.59
Woods, Heavy Litter	0.59
Woods, Lt Ltr	0.29
Well managed grazing	0.44
Fair managed grazing	0.29
Good Pasture	0.22
Fair Pasture	0.15
Small Grain	0.29
Legume	0.29
Contoured Row Crop	0.29
Non-contoured row crop	0.05

P (lbs) after the buffers: 4.4 lbs P per year

GOOD - Buffer length, slope, and type is OK; proceed with final area sizing calcs below.

BUFFER SIZING

		8,798	sq ft — Min. Acceptable Buffer Area
Chosen Buffer Width	39	feet	
		225	feet — Min. Bfr. Len. Based on BARNY
		226	feet — Min. Bfr. Len. Based on Area
Chosen Buffer Length	226	feet	Good Design

Singler Off Farm Pg. 2 of 2

Before

BUFFER DESIGN USING BARNY

OWNER: Ed Singler DESIGNER: QK DATE: 3/26/2015

CHK BY: DATE:

	Input	Output	
			1 Madison
			2 Appleton
Closest City of similar climate:	2		3 Wausau
			4 Eau Claire
Paved lot area:	2,100		sq ft
Earth lot area:	6,400		sq ft
Animal Lot size:		8,500	sq ft
Is there a DESIGNED settling basin	2		Yes= 1; No= 2

Animals on lot:	75	number	number
Type of animal:	2		(Dairy = 1; Beef=2)
Ave. Animal Weight:	1,200	lbs	lbs
Lot Use:	1		1= Heavy; 2= Medium; 3= Light)

TRIBUTARY AREAS

Tributary area:		sq ft	sq ft
Runoff Curve Number:			
Roof area:	1,300	sq ft	

36.9 lbs P per year at D.S. Lot edge

Maximum permissible P Output that can be released: 5 lbs — Your choice based on impacted resources- Max is 15

BUFFERS - Size by trial and error

First Buffer	Length:	200	ft (See Note Below)
	Slope:	1	%
	"c" :	0.05	→
Second Buffer	Length:		ft
	Slope:		
	"c" :		

"c" Value Table	
Permanent Meadow	0.59
Woods, Heavy Litter	0.59
Woods, Lt Ltr	0.29
Well managed grazing	0.44
Fair managed grazing	0.29
Good Pasture	0.22
Fair Pasture	0.15
Small Grain	0.29
Legume	0.29
Contoured Row Crop	0.29
Non-contoured row crop	0.05

P (lbs) after the buffers: 11.3 lbs P per year

NO GOOD - Too much P released

BUFFER SIZING

		9,550 sq ft	Min. Acceptable Buffer Area
Chosen Buffer Width	0	feet	
		200 feet	Min. Bfr. Len. Based on BARNY
		#DIV/0! feet	Min. Bfr. Len. Based on Area
Chosen Buffer Length	0	feet	No Good- Less than BARNY length

Singler Beef Farm '15 08

Lot # 2 W/Buffer

BUFFER DESIGN USING BARNY

OWNER: Ed Singler DESIGNER: QK DATE: 3/26/2015

CHK BY: DATE:

	Input	Output	
			1 Madison 2 Appleton
Closest City of similar climate:	2		3 Wausau 4 Eau Claire
Paved lot area:	2,100		sq ft
Earth lot area:	0		sq ft
Animal Lot size:		2,100	sq ft
Is there a DESIGNED settling basin	1		Yes= 1; No= 2
Animals on lot:	75 number		number
Type of animal:	2		(Dairy = 1; Beef=2)
Ave. Animal Weight:	1,200 lbs		lbs
Lot Use:	1		1= Heavy; 2= Medium; 3= Light)

TRIBUTARY AREAS

Tributary area:		sq ft	sq ft
Runoff Curve Number:			
Roof area:	0	sq ft	

5.6 lbs P per year at D.S. Lot edge:

Maximum permissible P Output that can be released: 5 lbs — Your choice based on impacted resources- Max is 15

BUFFERS - Size by trial and error

First Buffer	Length:	200	ft (See Note Below)
	Slope:	1	%
	"c" :	0.05	→
Second Buffer	Length:		ft
	Slope:		
	"c" :		

"c" Value Table	
Permanent Meadow	0.59
Woods, Heavy Litter	0.59
Woods, Lt Ltr	0.29
Well managed grazing	0.44
Fair managed grazing	0.29
Good Pasture	0.22
Fair Pasture	0.15
Small Grain	0.29
Legume	0.29
Contoured Row Crop	0.29
Non-contoured row crop	0.05

P (lbs) after the buffers: 1.7 lbs P per year

GOOD - Buffer length, slope, and type is OK; proceed with final area sizing calcs below.

BUFFER SIZING

		3,150	sq ft — Min. Acceptable Buffer Area
Chosen Buffer Width	16	feet	
		200	feet — Min. Bfr. Len. Based on BARNY
		200	feet — Min. Bfr. Len. Based on Area
Chosen Buffer Length	200	feet	Good Design

Singler Beef Farm

Lot #3

BUFFER DESIGN USING BARNY

Before

OWNER: Ed Singler

DESIGNER: QK

CHK BY:

DATE: 3/26/2015

DATE:

	Input	Output	
Closest City of similar climate:	2		1 Madison, 2 Appleton, 3 Wausau, 4 Eau Claire
Paved lot area:	9,800		sq ft
Earth lot area:			sq ft
Animal Lot size:		9,800	sq ft
Is there a DESIGNED settling basin	2		Yes= 1; No= 2
Animals on lot:	100		number
Type of animal:	2		(Dairy = 1; Beef=2)
Ave. Animal Weight:	1,200		lbs
Lot Use:	1		1= Heavy; 2= Medium; 3= Light)

TRIBUTARY AREAS

Tributary area:	sq ft	sq ft
Runoff Curve Number:		
Roof area:	sq ft	

52.2 lbs P per year at D.S. Lot edge

Maximum permissible P Output that can be released: 5 lbs

Your choice based on impacted resources- Max is 15

BUFFERS - Size by trial and error

First Buffer	Length:	200	ft (See Note Below)
	Slope:	1	%
	"c" :	0.05	→
Second Buffer	Length:		ft
	Slope:		
	"c" :		

"c" Value Table	
Permanent Meadow	0.59
Woods, Heavy Litter	0.59
Woods, Lt Ltr	0.29
Well managed grazing	0.44
Fair managed grazing	0.29
Good Pasture	0.22
Fair Pasture	0.15
Small Grain	0.29
Legume	0.29
Contoured Row Crop	0.29
Non-contoured row crop	0.05

P (lbs) after the buffers: 16.0 lbs P per year

NO GOOD - Too much P released

BUFFER SIZING

		14,700 sq ft	Min. Acceptable Buffer Area
Chosen Buffer Width	0 feet		
		200 feet	Min. Bfr. Len. Based on BARNY
		#DIV/0! feet	Min. Bfr. Len. Based on Area
Chosen Buffer Length	0 feet		No Good- Less than BARNY length

Singler Beef Farms ... Lot #3 w/ Basin

BUFFER DESIGN USING BARNY

OWNER: Ed Singler

DESIGNER: QK DATE: 3/26/2015
CHK BY: DATE:

	Input	Output		
Closest City of similar climate:	2			1 Madison 2 Appleton 3 Wausau 4 Eau Claire
Paved lot area:	9,800		sq ft	
Earth lot area:			sq ft	
Animal Lot size:		9,800	sq ft	
Is there a DESIGNED settling basin	1		Yes= 1; No= 2	
Animals on lot:	100 number		number	
Type of animal:	2			(Dairy = 1; Beef=2)
Ave. Animal Weight:	1,200 lbs		lbs	
Lot Use:	1			1= Heavy; 2= Medium; 3= Light)

TRIBUTARY AREAS

Tributary area: sq ft sq ft

Runoff Curve Number:

Roof area: sq ft

28.1 lbs P per year at D.S. Lot edge.

Maximum permissible P Output that can be released: 5 lbs — Your choice based on impacted resources- Max is 15

BUFFERS - Size by trial and error

First Buffer	Length:	294	ft (See Note Below)
	Slope:	1	%
	"c" :	0.22	→
Second Buffer	Length:		ft
	Slope:		
	"c" :		

"c" Value Table	
Permanent Meadow	0.59
Woods, Heavy Litter	0.59
Woods, Lt Ltr	0.29
Well managed grazing	0.44
Fair managed grazing	0.29
Good Pasture	0.22
Fair Pasture	0.15
Small Grain	0.29
Legume	0.29
Contoured Row Crop	0.29
Non-contoured row crop	0.05

P (lbs) after the buffers: 3.5 lbs P per year

GOOD - Buffer length, slope, and type is OK; proceed with final area sizing calcs below.

BUFFER SIZING

14,700 sq ft Min. Acceptable Buffer Area

Chosen Buffer Width: 50 feet

294 feet Min. Bfr. Len. Based on BARNY
294 feet Min. Bfr. Len. Based on Area

Chosen Buffer Length: 294 feet Good Design

Singler Beef Farm pg. 01

April 9th, 2015

Attn: Greg Baneck
Outagamie County LCD
3365 W. Brewster St.
Appleton, WI 54913

Subject: Targeted Runoff Management Grant Application

Dear Mr. Baneck,

I am writing you to express my interest in seeking funding through the DNR's Targeted Runoff Management Grant Program. Runoff from our animal lots has been a long standing concern for our farm which we would like to address. Additionally, our current daily haul system makes following a nutrient management plan difficult at best. Storage is required to avoid having to spread during periods of frozen and snow covered ground. Our proximity to the Wolf River makes the likelihood of polluted runoff during spring thaw and extreme storm events high.

If there's anything that I can do to further assist with the submission of the application for the TRM program, please contact me.

Sincerely,

Ed Singler

Singler Dairy Farms 19 Sa

USDA United States Department of Agriculture

3369 W. Brewster Street
Appleton, WI 54914
Phone: (920) 733-1575 ext. 3
www.wi.nrcs.usda.gov

April 9, 2015

Greg Baneck – County Conservationist
Outagamie County Land Conservation Dept.
3365 West Brewster Street
Appleton, WI 54914

Subject – 2016 Targeted Runoff Management Grant Applications

Dear Mr. Baneck:

NRCS and the Outagamie County Land Conservation Department have a long history of working cooperatively towards protecting and improving the soil and water resources of Outagamie County. To that end, NRCS supports the LCD's 2016 TRM small scale grant applications for Albert, Verhasselt, Singler, Schroth, and Steffens farms. NRCS will assist where we can in the implementation of these grants.

Sincerely,

Lynn Szulczewski
NRCS District Conservationist
Appleton NRCS Service Center