

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

Maple Creek - Fietzer Farms Inc.

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

Waupaca County Land & Water Conservation Department

Governmental Unit Web Site Address

<http://www.co.waupaca.wi.us/>

Name of Responsible Government Official - Authorized Signatory
(First Last)
Brian Haase

Title

County Conservationist

Area Code + Phone Number

(715) 258-6482

E-Mail Address

brian.haase@co.waupaca.wi.us

Mailing Address - Street or PO Box

811 Harding St

City

Waupaca

State

WI

ZIP Code

54981

Name of Government Official - Grant Contact Person (First Last)(if different)

Title

Area Code + Phone Number

E-Mail Address

Mailing Address - Street or PO Box

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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Maple Creek - Fietzer Farms Inc.**B. Location of Project**

See [Attachment A](#) and Surface Water Data Viewer (SWDV) at <http://dnrm.wi.gov/SL/?Viewer=SWDV> for assistance in completing this question.

County Waupaca			State Senate District number: 2				State Assembly District number: 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 Lebanon	24 N	14	E	4	SW	SE	44.4902	-88.8076
	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://dnrm.wi.gov/SL/?Viewer=SWDV> for assistance in completing this question.

Watershed Name	DNR Watershed Code	Primary Waterbody Name	Nearest Waterbody Name
Embarrass River (N.Br.&Mainstem)	WR09	Maple Creek	Unnamed Trib. to Maple Creek

12-digit Hydrologic Unit Code (HUC): 040302021302

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://dnrm.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: Waupaca County Land & Water Resource Management PlanDate 04/03/2012

- 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.

2012-2021 Waupaca County LWRM Plan (Pg 53-55 & 72-74)

- 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.

2012-2021 Waupaca County LWRM Plan (Pg 65-70)www.co.waupaca.wi.us/departments/landandwaterconservation.aspx

- ☒ 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 Hansen	04/04/2014	Also contacted 4/10/15 regarding re-submittal of 2014 TRM

- ☒ 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) 3,4,7,9	☐ 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) 12	☐ 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) code = 8
☐ Filter Strips (NR 154.04(13)) R9	Code(s)	☒ Waste Transfer Systems (NR 154.04(36)) R33	Code(s) 4,3,7,9
☐ 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) code = 8
☐ 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) 3,7,9	☐ 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)			

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	B
Detailed List of Project Activities and Sub-activities Eligible for DNR Cost Sharing	Amount Eligible for DNR Cost Sharing (\$)
Construction Components:	
Manure Storage - 16,217 cu yd excavation/fill, 75,240 sq ft 5"/7" concrete liquid tight liner, 1200' fence, 800' silt fence & seeding.	164,800
Manure Transfer - 1 Piston pump, 1 impeller pump, 1 gravity transfer lines, 1 cross channel with auger & reception tanks.	75,600
Barnyard Runoff Control - 10,032 Sq Ft Concrete flat work, 111' walls & excavation/fill.	38,700
Underground Outlets - 2000' of 6", 8" & 12" plastic tile, outlet pipes & trench installation.	11,800
Water & Sediment Control Basin (Clean Water Diversion) - Excavation/fill & seeding.	5,500
Roof Runoff Control - 500' of 6" Aluminum gutters & French drains.	4,800
Nutrient Management Planning - Plan completed through NRCS CNMP process.	
Private Engineering Activities	
1. Construction Subtotal	301,200
2. Local Force Account Activities (Entry is limited to \$10,715 or .05263 of Row 1, whichever is less.)	10,715

Cost-Sharing:

A	B Eligible Project Totals	C Cost-Share %	D Eligible Cost-Share
3. Construction-related Subtotal: [add Rows 1 and 2]	\$ 311,915	70 %	\$ 218,341
4. Property Acquisition: Fee Title & Easement	\$	70 %	\$
5. Project Grand Totals: [add Rows 3 and 4]	\$ 311,915		\$ 218,341

Cap Test:

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

7. Requested State-Share Amount (Enter Requested Grant Amount)	\$ 109,415
8. Local-Share Amount: [row 5, column B less row 7]	\$ 202,500

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.
See Attached

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For each applicable milestone listed below, fill in the appropriate data.

Milestone	Target Completion Date (month/year)	Source of Staff
Completion of design	03/2015	LWCD & DATCP/NRCS Engineering Staff
Obtaining required permits	08/2015	LWCD Staff
Landowner contacts	02/2015	LWCD Staff
CSA signing	04/2016	LWCD Staff
Bidding	04/2015	LWCD Staff
DNR approvals	04/2016	LWCD Staff & DNR Staff
Contract signing	04/2016	LWCD Staff
BMP construction	07/2016	LWCD Staff, Contractor
Site inspection and certification	08/2016	LWCD & DATCP/NRCS Engineering Staff
Project evaluation	10/2016	LWCD Staff
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:

Pollutant Causing Impairment:

- ☒ 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:

ORW - Embarrass River, ASNRI - Maple Creek

- ☐ 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:

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- 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.

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.

- ☐ **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 at Fietzers are phosphorous and nitrogen from barnyard runoff and manure applications. The Barnyard runoff comes primarily from a large concrete feedlot and to a lesser extent from a small earthen lot (see attached pictures). Both lots channelize immediately during medium to large & frozen ground rain events and cross the road via culvert and enter a wetland that is connected to an unnamed tributary to Maple Creek. The concentrated flow path is approximately 800' across a field and down a road ditch to the wetland. The site is a classic example of non-point source pollution that delivers heavy nutrient loads (BARNY score = 84 lbs P) during Spring conditions and is somewhat less risky during the growing season. Manure applications currently occur throughout the winter due to limited storage capacity. Winter/Spring field location for spreading is often limited by snow depth, weather conditions and now by the recent Implements of Husbandry (IOH) laws. The fields available for winter/spring are often higher risk or not in need of nutrients according to a Nutrient Management plan. This leads to over application of nutrients on some fields and an out of balance P Index. The Ag Performance Standards that need to be addressed are NR 151.04, NR 151.05(2), NR 151.055, NR 151.07 and NR 151.08(4). These same resource concerns were also noted in a recent NRCS Comprehensive Nutrient Management Plan (see attached CNMP summary).

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 is construction of long term concrete lined manure storage, 3 waste transfers to include all cattle housing areas and barnyard runoff containment from 2 concrete lots along with clean water removal in the form of roof gutters and water control basins to limit clean water from getting onto barnyards or in manure storage. Concrete manure storage is the only cost effective storage option allowed by NRCS 313 and county ordinance due to the soil types present. Long term storage will allow the owners to meet all nutrient management planning goals. All pollution problems and Performance Standards issues described above will be addressed and completely contained by this system within the time frame of the grant.

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?

This project should be completely effective in eliminating all runoff from animal lot areas of the farm and will give the Fietzers enough storage to comply with their nutrient management plan. Furthermore Fietzers are strongly

considering building 12 months manure storage at their own cost, above the six month level, to give themselves the flexibility to only spread manure prior to planting each year and avoid fall manure applications. Elimination of all barnyard runoff will result in a complete reduction of non-point source runoff, leaving the application of the farm's nutrient management plan as the only environmental variable. Full compliance and certification with the Performance Standards is expected upon completion. The potential for improvement of water quality issues from this farm to receiving waters should be a complete elimination of nutrient runoff from barnyard sources and about a 50% improvement in P Index from nutrient management planning.

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 proposed total containment barnyard and 180 day manure storage system are the only means that are reasonably guaranteed to end animal waste runoff from this facility and give the operators the ability to meet Performance Standards by only spreading manure during appropriate times on appropriate locations. All other design options include winter spreading of manure and some continued feedlot runoff. Designs are based on 20% growth (allowable DNR "insignificant" growth) over existing animal numbers. See attached design sheet and Animal Unit calculations for current and allowable growth needs. Cost of manure storage was prorated to reflect the operations current 43 days of storage. Site feasibility only allows for concrete lined or Slurrystore type storage structures due to soil tests per the NRCS 313 Standard. Slurrystore type storage is the least cost effective. Soil test show that all subsoil within the depth of the proposed manure storage are coarse grain sand. Multiple waste transfer systems are planned per NRCS 638 and 533 to gather all sources of manure from several animal housing structures.

- 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.

See attached design sheets. Included is a design sheet for a manure storage that is for 180 days for current animal numbers plus 20% expansion (DNR's allowable insignificant growth). Also included is the same sheet for 137 days storage which takes into consideration the existing 43 days (~80,000 Cu Ft) of on-site storage which still can be used by the operation. All cost estimates are based off the 137 day design and have taken into account available EQIP funding. EQIP funding did not include any significant amount of cost share for waste transfer systems.

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

The alternative management measure already exists in the form of inadequate winter manure storage. Currently monthly or bi-monthly hauling of manure is the least cost alternative to long term manure storage, but is no longer considered feasible due to a shortage of 590 approved, winter spreadable land that can be accessed throughout winter conditions and during Spring when road limits and Implements of Husbandry (IOH) permits restrict access. Nutrient distribution and P indexing becomes uneven due to a large percentage of this farm's manure being spread in accessible areas during winter. Also, the addition of barnyard runoff into the existing storage further diminishes the overall capacity. Without introducing the barnyard runoff to the existing structure the runoff will continue to reach surface waters during runoff events. Buffers and filter strip alternatives would have limited success due to the slope of the land at the existing site.

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.

Project goal monitoring strategy will consist of an annual review of the farm's nutrient management plan (NR 151.04 & NR 151.07) which is required by Waupaca County ordinance to be submitted to Waupaca County annually after

completion of a manure storage facility. Soil nutrient levels, application levels and P index will be reviewed within the plan. Before and after BARNY modeling will be done on the surface runoff (NR 151.08(4)) from the outdoor barnyard area for reporting purposes. Additionally, it is anticipated that this farm will participate in the Farmland Preservation Program and therefore be subject to routine compliance checks that occur once per four years.

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(s)/land operator are attached.

If a., b. or c. is checked above, provide details here.

Waupaca County LWCD and NRCS have worked with the landowner on a detailed plan for manure storage, manure transfer, barnyard runoff, clean water removal and roof runoff designs at the farmstead in order to be in compliance with all performance standards. A Comprehensive Nutrient Management Plan (CNMP) has been completed by a private engineer/agronomist and also identifies manure storage barnyard runoff and clean water diversion as resource concerns and recommends the above listed practices be implemented.

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 has funded a completed Comprehensive Nutrient Management Plan and Nutrient Management Planning. The landowner has a signed EQIP contract with NRCS for manure storage and clean water removal practices. NRCS is committed to working with Waupaca County LWCD to implement the needed Best Management Practices.

- ☒ 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 Waupaca County Animal Waste Management Plan(1985) identifies this watershed as second highest out of nine watersheds within the county that should have manure management issues addressed.

Additionally the Waupaca County Comprehensive Management Plan (2007)(Ch 5 & Ch 8) identifies manure management issues as a top concern when relating the interaction of rural farm and non-farm landowners. See Waupaca County Website for plans. <http://www.co.waupaca.wi.us/>

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).
www.co.waupaca.wi.us/departments/landandwaterconservation.aspx
- ☐ 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.

When the project is complete, the farmstead will comply with all NR 151 Agricultural Performance Standards and will be issued a certificate of compliance by Waupaca County LWCD. A copy will be forwarded to the DNR Agricultural Runoff Management Specialist.

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

Small-Scale Ag. TRM Grant Application

Form 8700-300 (R 1/15)

Page 12 of 13

TRM Grant Project Name:

Maple Creek - Fietzer Farms Inc.Name (*Please Print*)

Brian Haase

Title

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 **PDF format 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

Small-Scale Ag. TRM Grant Application

Form 8700-300 (R 1/15)

Page 13 of 13

TRM Grant Project Name:

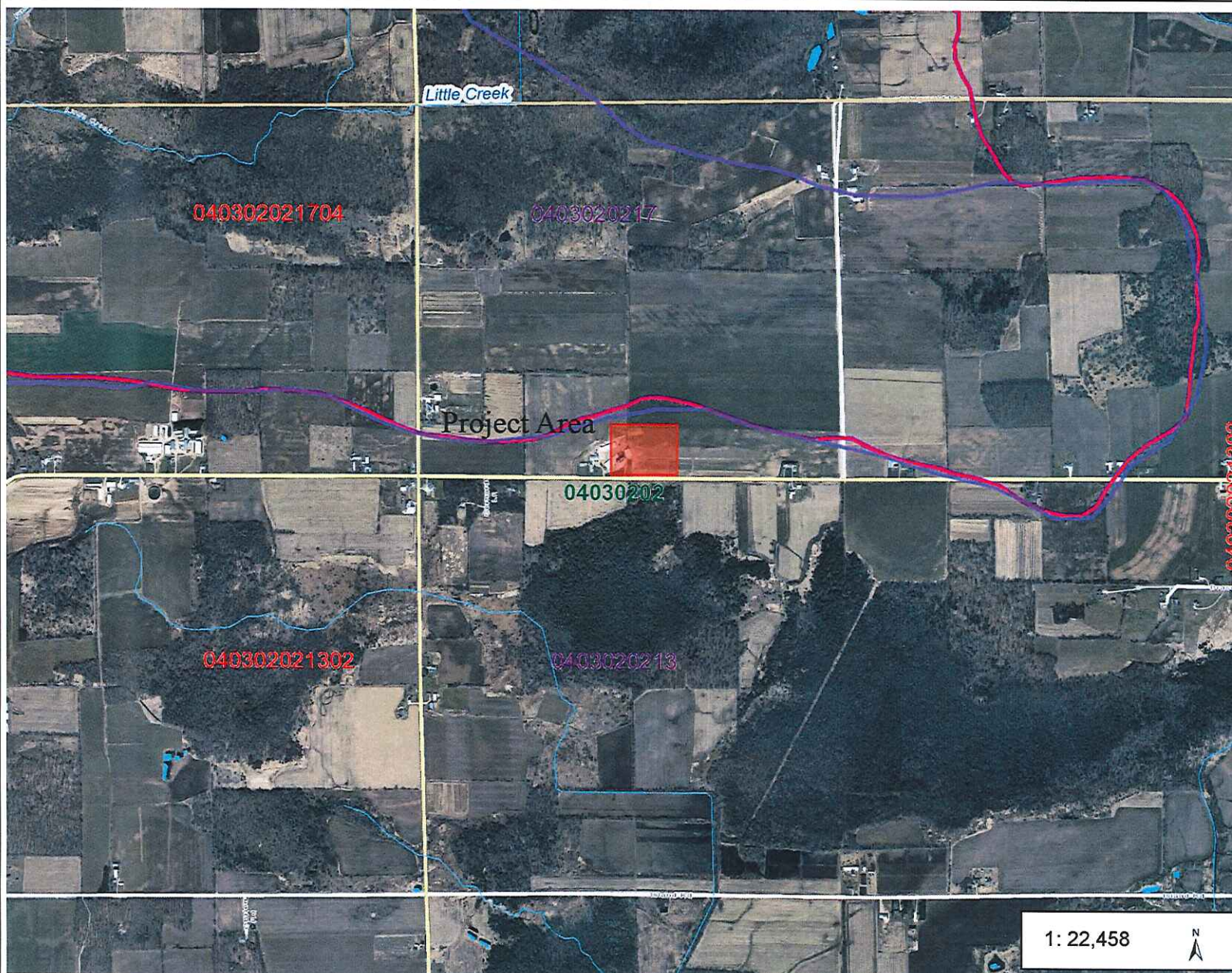
Maple Creek - Fietzer Farms Inc.

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

Thank you.



Fietzer Farms Inc.



Legend

- Watersheds
- Lakes
- Rivers & Streams
- 12-digit HUCs (Subwatersheds)
- 10-digit HUCs (Watersheds)
- 8-digit HUCs (Subbasins)
- Cities, Towns & Villages
 - City
 - Village
 - Civil Town
- Rivers and Streams
- Open Water
- 2010 Air Photos (WROC)

Notes

0.7 0 0.35 0.7 Miles

NAD_1983_HARN_Wisconsin_TM
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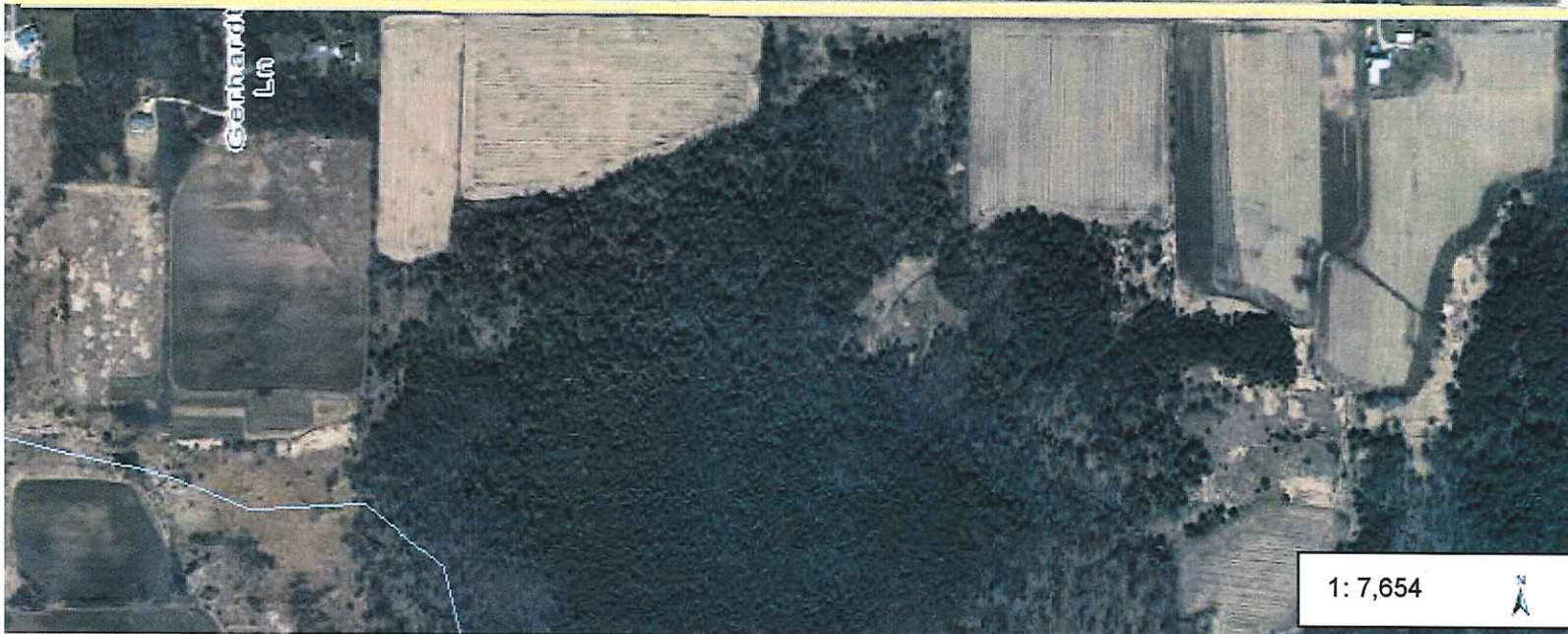


Fietzer Farms, Inc. (Well Location)



Legend

- Rivers and Streams
- Open Water
- 2010 Air Photos (WROC)



1: 7,654



0.2 0 0.12 0.2 Miles

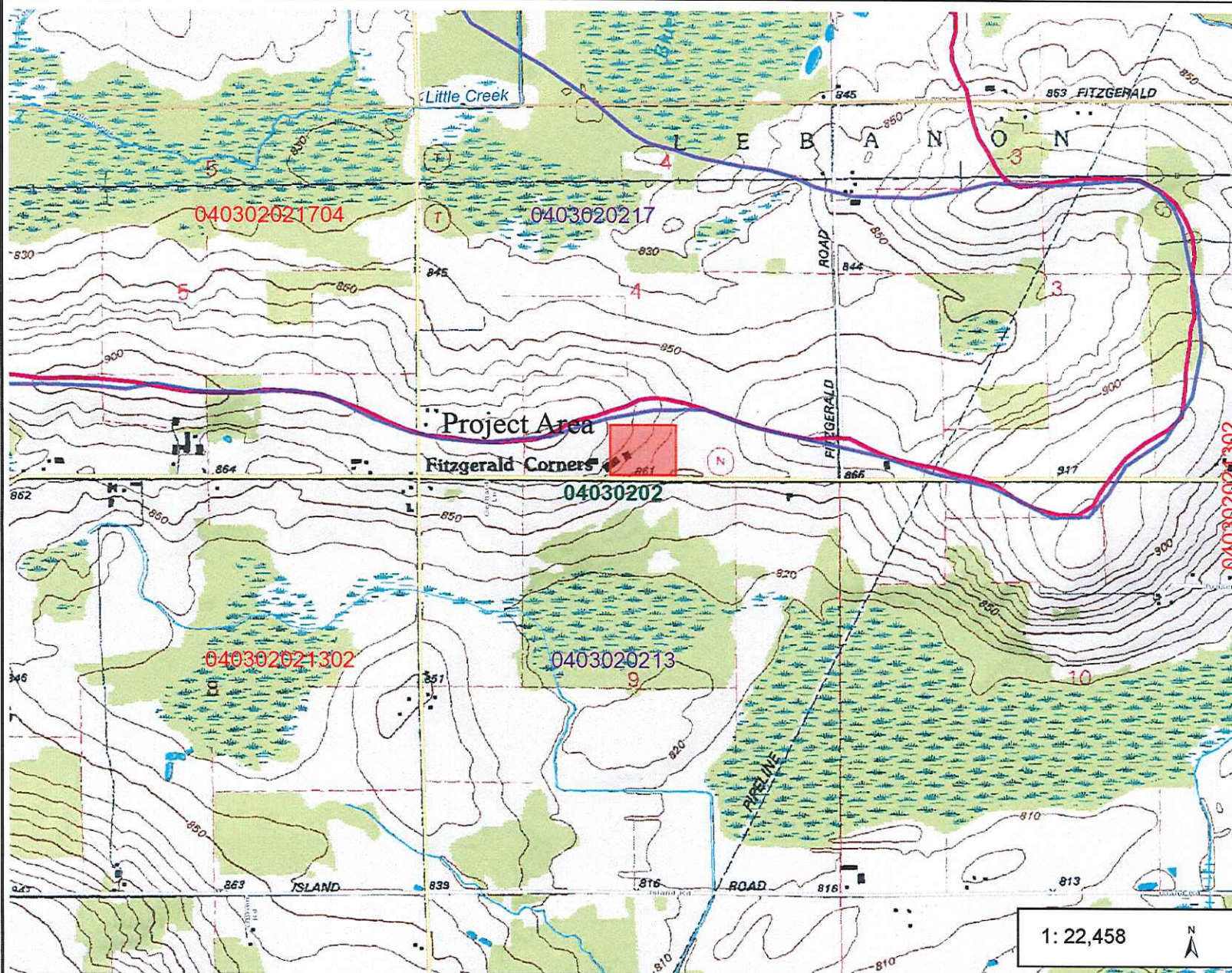
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Notes



Fietzer Farms Inc.



Legend

- Watersheds
- Lakes
- Rivers & Streams
- 12-digit HUCs (Subwatersheds)
- 10-digit HUCs (Watersheds)
- 8-digit HUCs (Subbasins)
- Cities, Towns & Villages
 - City
 - Village
 - Civil Town
- Rivers and Streams
- Open Water

1: 22,458



Notes

0.7 0 0.35 0.7 Miles

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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: Fietzer Farms, Inc.							
Animal Type	I. Mixed Animal Units			II. Non-mixed Animal Units			
	b. Equiv. Factor	c. Current Number	d. No. of Animals	e. Equiv. factor	f. Current Number	g. No. of Animals	
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	30	= 6	<i>Fed. numbers in this column comply with 40 CFR s. 122.23</i>			
Dairy Cattle	Milking & Dry Cows	1.40 x	285	= 399	1.43 x	285	= 407.55
	Heifers (800 lbs to 1200 lbs)	1.10 x	150	= 165			
	Heifers (400 lbs to 800 lbs)	0.60 x	115	= 69	1.00 x	265	= 265
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 = 639 (add all rows above)			Total Non-Mixed Animal Units = 407.55 (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.

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: Fietzer Farms, Inc

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	100	= 20	Fed. numbers in this column comply with 40 CFR s. 122.23		
Dairy Cattle	Milking & Dry Cows	1.40 x	385	= 539	1.43 x	385	= 550.55
	Heifers (800 lbs to 1200 lbs)	1.10 x	105	= 115.5			
	Heifers (400 lbs to 800 lbs)	0.60 x	105	= 63	1.00 x	210	= 210
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 = 737.5 (add all rows above)			Total Non-Mixed Animal Units = 550.55 (Enter the single highest number from any row above; DO NOT add the totals)		

Date of Proposed Expansion (MM/YY): 2016

Notice: This form must be completed and approved by the DNR before grant funds can be expended for land acquisition. Please complete all sections. Use additional page if necessary. Collection of this information is authorized under ss. 23.0915 - 23.0917, Wis. Stats. Failure to provide this information may result in denial or repayment of grant awards. Personal information collected on this form will be used for management of DNR programs and grants. Information may be made available to requesters under Wisconsin's Open Records laws (ss. 19.31-19.39, Wis. Stats.).

1. General Information

Applicant Name	Project / Parcel	County
Fietzer Farms, Inc.	11-04-43	Waupaca
Property Owner Name	Property Street Address	
Fietzer Farms, LLC	E8272 Cty Hwy N Manawa, WI 54949	
Close / Intersecting Roads		
Cty Hwy N and Cty Hwy T		

Legal Description:	1/4 1/4	1/4	Section(s)	Township	Range	E / W
	SE	SW	4	23 N	14E	

2. Environmental Condition Statement of Property

Complete the checklist to the best of your knowledge through inspection of the site. Indicate if any of the following conditions currently exist on site:

Yes	No	
☐	☒	Known spills, release of chemicals, hazardous substances or fuels
☐	☒	Dumps, debris piles, stockpiles of waste, containers, barrels or drums
☐	☒	Sludge
☐	☒	Discolored or odorous soil
☐	☒	Areas of stressed vegetation, absence of vegetation, areas previously burned
☐	☒	Unusual or noxious odors
☐	☒	Discolored, polluted, foul water (in standing water, wells, or wetlands)
☒	☐	Is an existing well located on site? If yes, where is it located? <u>The well is located approximately 30 feet west of the free stall barn. See attached map.</u>
☐	☒	Old pipes, electrical equipment
☐	☒	Unusual or irregular depressions or mounds on surface
☐	☒	Other evidence of possible contamination - If yes, describe: _____

If the answer to any question above is yes:

- Attach description or explanation and site map showing location of item(s) checked.
- The property may require a Phase I or further investigation/inspection. Talk to your regional grant specialist listed in the application form.

3. Land Use History

A. Current Uses of the Property:

☐ Industrial	☐ Commercial	☒ Agriculture	☐ Orchards	☐ Railroads and Railroad Spurs	☐ Landfills
☐ Other - Explain: _____					

B. Historical Uses of the Property (for the past 20 years):

☐ Industrial	☐ Commercial	☒ Agriculture	☐ Orchards	☐ Railroads and Railroad Spurs
☐ Suspected Former Landfills ☐ Other - Explain: _____				

C. To the best of your knowledge does the property have evidence of the following?

Yes	No	
☐	☒	Has the site been used for the storage or warehousing of commercial or industrial materials?
☐	☒	Are there areas with a history or likelihood of underground storage tanks?
☐	☒	Are there monitoring wells on site?
☐	☒	Is there any history of contamination on the property?
☐	☒	Is there any history of contamination on any adjacent properties?

If you checked any boxes in Sections 3A or 3B above, or answered yes to any question in Section 3C, the property may require a Phase I or further investigation/inspection. Talk to your regional grant specialist listed in the application form.

Environmental Hazards Assessment

Form 1800-001 (R-10/08)

Page 2 of 2

4. Site Investigation DocumentationHas a Phase I or Phase II Site Investigation been completed on the property? ☐ Yes ☒ No

If yes, attach a copy of the conclusions.

5. Certification

I hereby certify that I have inspected the property and contacted the current owner regarding environmental contamination. The information provided is a full disclosure of my findings and is true and complete to the best of my knowledge.

Printed Name of Preparer

Brian Haase

Title

County Conservationist

Signature of Preparer



Date Signed

04/13/2015

If you are submitting this form as a condition of a Nonpoint Targeted Runoff Management or Nonpoint Urban Storm Water-Construction grant, please also indicate the following:

Printed Name of Authorized Representative

Brian Haase

Title

County Conservationist

Signature of Authorized Representative



Date Signed

04/13/2015

Leave Blank - DNR Use Only

6. Search of DNR Records

A. Does the property appear on the most recent version of the Bureau of Remediation and Redevelopment Tracking System (BRRTS)?

☐ Yes ☐ No

If Yes, Site Name:

BRRTS Activity #:

B. Does the property appear on the most recent version of the DNR Registry of Waste Disposal Sites in Wisconsin?

☐ Yes ☐ No

If Yes, Site Name:

C. Does the property appear on the most recent version of the Solid and Hazardous Waste Information Management System (SHWIMS)?

☐ Yes ☐ No

If Yes, Site Name:

7. Conclusions☐ Based on the information available in DNR's Regional files at this time, no additional investigation recommended☐ Further Investigation Needed; Consult with Region R&R Program for Recommendation

Printed Name of DNR Reviewer

Title

Signature of DNR Reviewer

Date Signed

WASTE STORAGE FACILITY DESIGN - 313 STANDARD

existing

CLIENT: CF	COUNTY: Waupaca	DATE:
DSN BY: bh	CHK BY:	DATE:

COMMENT Prorated 4 existing

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

For Dairy: Rolling Herd Average 26,000 lbs/cow/yr Is it a stanchion barn? n (Y or N)

MANURE AND WASTEWATER

LIVESTOCK		AVG. WT.	DAILY OUTPUT, CU FT			DAYS OF STORAGE	VOLUME REQUIRED	ANIMAL UNITS
KIND	NUMBER	PER HEAD	MANURE	BEDDING	TOTAL			
Cows	340	1,400	2.59	0.20	947.2	137	129,772	476
Heifers	315	700	1.12	0.00	352.8	137	48,334	221
Calves	30	350	0.56	0.00	16.8	137	2,302	11

WASTEWATER: 2546 GAL/DAY= 340.4 CU FT/DAY 707 TOT. A.U.

TOTAL DAILY VOLUME: 1657.2 CU FT / DAY

Total Manure and Wastewater Expected % solids in waste (Includes runoff and precip.)	1,698,247	GALLONS
	227,038	CU FT
	9.0	%

RUNOFF VOLUME

MONTHLY RUNOFF

RCN 95 8.1 IN. X 20,000 Ft2 Drainage Area= 13,500 CU FT
12 (Do not include storage area)

25-Year, 24-HOUR RUNOFF

RCN 95 3.92 IN. X 20,000 Ft2 Drainage Area= 6,541 CU FT
12 (Do not include storage area)

Total for Manure, Milking Center, Runoff Volume, and 25 Yr Runoff	1,848,155	GALLONS
	247,080	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

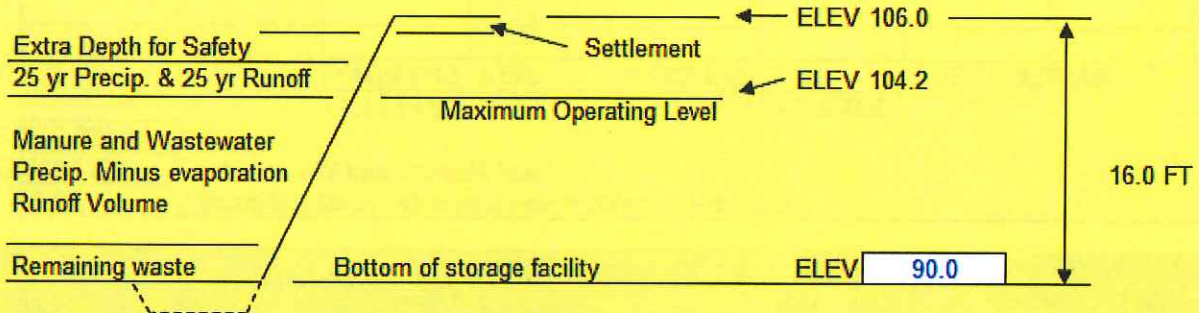
Average Precipitation on Storage Surface	7.0 INCH	0.6 FT
Average Evaporation from Storage Surface	3.3 INCH	0.3 FT
Net Precipitation on Storage Surface	3.7 INCH	0.3 FT

25-Year, 24-Hour Precipitation on Storage Surface 4.5 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)	0.2 FT
DEPTH	(Depth to hold Manure, Wastewater, Runoff Volume, and 25 yr Runoff)	14.1 FT
Total Depth of the Storage Facility		16.0 FT

Print down to here

STORAGE FACILITY ELEVATIONS



STORAGE DIMENSIONS AND SIZING

SIDE SLOPES OF STORAGE	(Use "0" for walls)	2.5 :1
CHOOSE A BOTTOM WIDTH		100 FT
BOTTOM LENGTH REQUIRED		91 FT
ROUND STORAGE BOTTOM DIAMETER		114 FT

247,080 CU FT
NEEDED

BOTTOM SIDE 1:	100	FT
BOTTOM SIDE 2:	115	FT
DESIGN VOLUME PROVIDED:		292,898 CU FT
DAYS STORAGE PROVIDED:		162 DAYS
TOTAL VOLUME FROM BOTTOM TO SETTLED TOP:		2,608,656 GALLONS
CHOOSE BOTTOM:	107	FT DIAM
DESIGN VOLUME:		229,081 CU FT
DAYS STORAGE:		127 DAYS

Print to here

STA.	ELEV.	OUT Z	TOP W.
0	98.0	3	10
600	98.0	3	10

[illegible]

1

98.0

BOTTOM WIDTH:	100	FT (From G81)
BOTTOM LENGTH:	115	FT (From G82)
INSIDE SLOPE:	2.5	:1 (From G70)

90.0

TOP ELEVATION: 106.0

EXCAVATION (finished grades and lines)		AVERAGE STRIPPING DEPTH	12	INCHES
		STRIPPING IN POND	777	CU YD
		POND EXC. BELOW STRIPPING	4,063	CU YD
		STRIPPING UNDER DIKE	1,262	CU YD
		SUMP EXCAVATION	0	CU YD
SUMP				
BOTTOM LENGTH		FT		
BOTTOM WIDTH		FT		
SUMP DEPTH		FT		
AVERAGE SIDE SLOPE	1	:1		
			TOTAL STRIPPING	2,039 CU YD
			TOTAL EXC. BELOW STRIPPING	4,063 CU YD
FILL	FILL LOSS FACTOR	30	%	
		DIKE FILL	9,035	CU YD
EXTRA FILL:		-4972	CU YD	(Based on total excavation and dike fill including loss factor)

Print to here

LINER COMPUTATIONS

DIMENSIONS FOR USE IN CONSTRUCTION

CLAY LINERS

LINER THICKNESSES

BOTTOM IN.
SIDES IN. THICK

LINER WIDTH (on side slopes) FEET
EXCAVATION OFFSET (for liner excavation) FEET
BOTTOM EXCAVATION DIMENSIONS: Width FEET
Length FEET

LINER VOLUMES (CU YD)

COMPACTION & OTHER LOSSES %
(Recommend 70% min. for trucked clay)

TOP PORTION LINER ONLY? (Y or N)

TOP ELEVATION FOR CLAY LINER

INSIDE SIDE SLOPE :1 (From G70)

	LINER TO TOP		LINER TO ELEV.	
	CLAY LINR	EXTRA EXC	106.0	EXTRA EXC
BOTTOM	3,036	1,786	3,036	1,786
SIDES	8,732	5,137	8,732	5,137
TOTAL	11,768	6,923	11,768	6,923

CONCRETE LINERS**BOTTOM DIMENSIONS:**

WIDTH 100 FT, (From G81)

LENGTH 115 FT, (From G82)

TOP ELEVATION OF CONCRETE THICKNESS OF CONC., Bottom INCHESTHICKNESS OF CONCRETE, Sides INCHES

	AREA	VOLUME
BOTTOM	11,500 SQ FT	177 CU YD
SLOPE	25,418 SQ FT	392 CU YD
TOTAL	36,918 SQ FT	570 CU YD

STEEL AMOUNTS

	BAR SIZE (3,4,5,etc)	SPACING (IN)	GRADE	BAR END LAP, IN.	LENGTH IN FACILITY	LIN FT	NUMBER OF 20' BARS	BAR SIZE	LBS
WIDTH	3	18	60	12	186.2	25,152	1325	3	9,962
LENGTH	3	18	60	12	201.2	25,167	1326	3	9,968

[Print Concrete Liner](#)**HIGH DENSITY POLYETHYLENE (HDPE)**(This area only works for rectangular ponds at this time.
Therefore C105 must be "1".)**DIMENSIONS:**

BOTTOM WIDTH 100 FEET

BOTTOM LENGTH 115 FEET

DEPTH 16 FEET

HDPEMATERIAL NEEDED SQ FTEXTRA FOR SEAMS AND PATCHES %EXTRA LENGTH FOR TRENCHES FEET[Print HDPE
Liner Data](#)**GCL's (Geosynthetic Clay Liners)**(GCL's are covered by 12" of material in the bottom
and 24" of material on the slopes.)**STORAGE FACILITY DIMENSIONS**

BOTTOM WIDTH 100 FEET

BOTTOM LENGTH 115 FEET

DEPTH 16 FEET

(This area only works for rectangular ponds at this time.
Therefore C105 must be "1".)EXTRA FOR SEAMS AND PATCHES %EXTRA LENGTH FOR TRENCHES FEETCOVER MATERIAL LOSSES %

(Recommend 40% min. for trucked cover material)

GCL			
MATERIAL NEEDED	47,273	SQ FT	
COVER MATERIAL NEEDED			
BOTTOM	662	CU YD	
SLOPES	2,848	CU YD	
TOTAL	3,511	CU YD	

[Print GCL Data](#)

WASTEWATER

CLIENT: CF

DATE:

General- In each category you can use default values or enter your own values in the blanks.
If you say Y, that you want the default values, any values in the white cells will be ignored.

340 Cows being milked

Days of Storage: 137

Parlor WaterDo you want to use the default values? ☒ Y Y=yes; N=no

Default Values

Cleaning parlor floors, cows and milkers

gal/day

gal/day/cow gal/day

2.0 680

Cleaning bulk tank and pipelines

gal/day

0.8 272

Plate cooler water if not reused

gal/day

0.7 238

Other

gal/day

0.7 238

0 total gal/day

3.5 1190

1190 gal/day

Holding area cleaningDo you want to use the default values? ☒ Y Y=yes; N=noIs the holding area flushed? ☒ N Y=yes; N=no

Default Values

Your entered values

gal/day/cow gal/day

Flushed holding area

gal/day

4.0 1360

Non-flushed holding area

gal/day

2.0 680

680 gal/day

Sprinklers/Misters

(It is assumed that half of water used for sprinklers goes to storage.)

Do you want to use the default values? ☒ Y Y=yes; N=no

Default Values

Your entered values

gal/day/cow

How often are sprinklers used in holding area?

days

12 40

days

Daily sprinkler volume used in holding area

gal/day

12 4080

gal/day

How often are sprinklers used in barn?

days

12 0

days

Daily sprinkler volume used in barn

gal/day

12 4080

gal/day

Gallons per day when sprinklers are in use

0 total gal/day

4080

total gal/day

Note: The water use and collection comes during the days shown.
It is apportioned out to the storage period shown in cell H5 above.

596 gal/day
to storage**Waterers**Do you want to use the default value? ☒ Y Y=yes; N=no

Default Value

If not, enter your choice here:

gal/day/cow

1.8

612 gal/day

SUMMARY

Total Gallons per day: 3078 gal/day

(Goes to Waste Storage Design tab, D17)

411 cu ft/day

9.1 gal/day/cow

Planned

WASTE STORAGE FACILITY DESIGN - 313 STANDARD

CLIENT: CF COUNTY: Waupaca DATE: _____
 DSN BY: bh CHK BY: _____ DATE: _____
 COMMENTS: _____

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

For Dairy: Rolling Herd Average 26,000 lbs/cow/yr Is it a stanchion barn? n (Y or N)

MANURE AND WASTEWATER

LIVESTOCK		AVG. WT. PER HEAD	DAILY OUTPUT, CU FT			DAYS OF STORAGE	VOLUME REQUIRED	ANIMAL UNITS
KIND	NUMBER		MANURE	BEDDING	TOTAL			
Cows	340	1,400	2.59	0.20	947.2	180	170,503	476
Heifers	315	700	1.12	0.00	352.8	180	63,504	221
Calves	30	350	0.56	0.00	16.8	180	3,024	11

WASTEWATER: 2546 GAL/DAY= 340.4 CU FT/DAY 707 TOT. A.U.

TOTAL DAILY VOLUME: 1657.2 CU FT / DAY

Total Manure and Wastewater
 Expected % solids in waste (Includes runoff and precip.)

2,231,273 GALLONS
 298,299 CU FT
 8.9 %

RUNOFF VOLUME

MONTHLY RUNOFF

RCN 95 12.2 IN. X 20,000 Ft2 Drainage Area= 20,333 CU FT
 12 (Do not include storage area)

25-Year, 24-HOUR RUNOFF

RCN 95 3.92 IN. X 20,000 Ft2 Drainage Area= 6,541 CU FT
 12 (Do not include storage area)

Total for Manure, Milking Center, Runoff Volume, and 25 Yr Runoff

2,432,295 GALLONS
 325,173 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

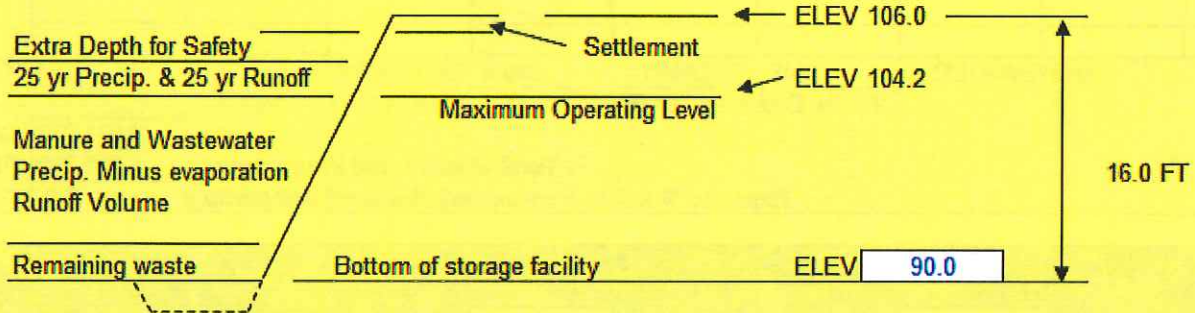
Average Precipitation on Storage Surface 9.7 INCH 0.8 FT
 Average Evaporation from Storage Surface - 4.8 INCH - 0.4 FT
 Net Precipitation on Storage Surface 4.9 INCH 0.4 FT

25-Year, 24-Hour Precipitation on Storage Surface 4.5 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)	0.2 FT
DEPTH	(Depth to hold Manure, Wastewater, Runoff Volume, and 25 yr Runoff)	14.0 FT
Total Depth of the Storage Facility		16.0 FT

Print down to here

STORAGE FACILITY ELEVATIONS



STORAGE DIMENSIONS AND SIZING

SIDE SLOPES OF STORAGE	(Use "0" for walls)	2.5 :1
CHOOSE A BOTTOM WIDTH		100 FT
BOTTOM LENGTH REQUIRED		134 FT
ROUND STORAGE BOTTOM DIAMETER		137 FT

SECTION FOR FIGURING VOLUME OF A CHOSEN OR EXISTING STORAGE FACILITY

325,173 CU FT
NEEDED

BOTTOM SIDE 1: FT
 BOTTOM SIDE 2: FT
 DESIGN VOLUME PROVIDED: 289,741 CU FT
 DAYS STORAGE PROVIDED: 160 DAYS
 TOTAL VOLUME FROM BOTTOM TO SETTLED TOP: 2,608,656 GALLONS
 CHOOSE BOTTOM: FT DIAM
 DESIGN VOLUME: 226,611 CU FT
 DAYS STORAGE: 125 DAYS

Print to here

EMBANKMENT DIMENSIONS

STA.	ELEV.	OUT Z	TOP W.
0	98.0	3	10
600	98.0	3	10

STA.	ELEV.	OUT Z	TOP W.

1=RECT, 2=CIRC: AVG.GRADE FOR CUT:

BOTTOM WIDTH: 100 FT (From G81)
 BOTTOM LENGTH: 115 FT (From G82)
 INSIDE SLOPE: 2.5 :1 (From G70)

BOTTOM ELEVATION:
 TOP ELEVATION:

EXCAVATION

(finished grades and lines)

AVERAGE STRIPPING DEPTH INCHES

STRIPPING IN POND 777 CU YD

POND EXC. BELOW STRIPPING 4,063 CU YD

STRIPPING UNDER DIKE 1,262 CU YD

SUMP EXCAVATION 0 CU YD

SUMP

BOTTOM LENGTH FTBOTTOM WIDTH FTSUMP DEPTH FTTOTAL STRIPPING CU YDAVERAGE SIDE SLOPE TOTAL EXC. BELOW STRIPPING CU YDFILL FILL LOSS FACTOR %DIKE FILL CU YDEXTRA FILL: CU YD

(Based on total excavation and dike fill including loss factor)

LINER COMPUTATIONS**CLAY LINERS****LINER THICKNESSES**

BOTTOM IN.
SIDES IN. THICK

COMPACTION & OTHER LOSSES %
(Recommend 70% min. for trucked clay)

TOP PORTION LINER ONLY? (Y or N)

TOP ELEVATION FOR CLAY LINER

INSIDE SIDE SLOPE 2.5 :1 (From G70)

DIMENSIONS FOR USE IN CONSTRUCTION

LINER WIDTH (on side slopes) 13.5 FEET
EXCAVATION OFFSET (for liner excavation) 6.0 FEET
BOTTOM EXCAVATION DIMENSIONS: Width 111.9 FEET
Length 126.9 FEET

LINER VOLUMES (CU YD)

	LINER TO TOP		LINER TO ELEV.	
	CLAY LINR	EXTRA EXC	106.0	EXTRA EXC
BOTTOM	3,036	1,786	3,036	1,786
SIDES	8,732	5,137	8,732	5,137
TOTAL	11,768	6,923	11,768	6,923

[Print Clay Liner](#)**CONCRETE LINERS****BOTTOM DIMENSIONS:**

WIDTH 100 FT, (From G81)

LENGTH 115 FT, (From G82)

TOP ELEVATION OF CONCRETE

THICKNESS OF CONC., Bottom INCHES
THICKNESS OF CONCRETE, Sides INCHES

	AREA	VOLUME
BOTTOM	11,500 SQ FT	177 CU YD
SLOPE	25,418 SQ FT	392 CU YD
TOTAL	36,918 SQ FT	570 CU YD

STEEL AMOUNTS

	BAR SIZE (3,4,5,etc)	SPACING (IN)	GRADE	BAR END LAP, IN.	LENGTH IN FACILITY	LIN FT	NUMBER OF 20' BARS	BAR SIZE	LBS
WIDTH	3	18	60	12	186.2	25,152	1325	3	9,962
LENGTH	3	18	60	12	201.2	25,167	1326	3	9,968

[Print Concrete Liner](#)

HIGH DENSITY POLYETHYLENE (HDPE)

(This area only works for rectangular ponds at this time.
Therefore C105 must be "1".)

DIMENSIONS:

BOTTOM WIDTH 100 FEET
BOTTOM LENGTH 115 FEET
DEPTH 16 FEET

HDPE
MATERIAL NEEDED 45,718 SQ FT

EXTRA FOR SEAMS AND PATCHES 10 %

EXTRA LENGTH FOR TRENCHES 6 FEET

Print HDPE
Liner Data

GCL's (Geosynthetic Clay Liners)

(This area only works for rectangular ponds at this time.
Therefore C105 must be "1".)

(GCL's are covered by 12" of material in the bottom
and 24" of material on the slopes.)

STORAGE FACILITY DIMENSIONS

BOTTOM WIDTH 100 FEET
BOTTOM LENGTH 115 FEET
DEPTH 16 FEET

GCL
MATERIAL NEEDED 47,273 SQ FT

EXTRA FOR SEAMS AND PATCHES 10 %

EXTRA LENGTH FOR TRENCHES 6 FEET

COVER MATERIAL NEEDED
BOTTOM 662 CU YD
SLOPES 2,848 CU YD
TOTAL 3,511 CU YD

COVER MATERIAL LOSSES 40 %

(Recommend 40% min. for trucked cover material)

Print GCL Data

WASTEWATER

CLIENT: CF

DATE:

General- In each category you can use default values or enter your own values in the blanks.
If you say Y, that you want the default values, any values in the white cells will be ignored.

340 Cows being milked

Days of Storage: 180

Parlor Water

Do you want to use the default values?

Y

Y=yes; N=no

Default Values

Cleaning parlor floors, cows and milkers

gal/day

gal/day/cow gal/day

2.0 680

Cleaning bulk tank and pipelines

gal/day

0.8 272

Plate cooler water if not reused

gal/day

0.7 238

Other

gal/day

0.7 238

0 total gal/day

3.5 1190

1190 gal/day

Holding area cleaning

Do you want to use the default values?

Y

Y=yes; N=no

Is the holding area flushed?

N

Y=yes; N=no

Default Values

Your entered values

Flushed holding area

gal/day

gal/day/cow gal/day

4.0 1360

Non-flushed holding area

gal/day

2.0 680

680 gal/day

Sprinklers/Misters

(It is assumed that half of water used for sprinklers goes to storage.)

Do you want to use the default values?

Y

Y=yes; N=no

Default Values

Your entered values

How often are sprinklers used in holding area?

days

gal/day/cow

12 40

days

Daily sprinkler volume used in holding area

gal/day

12 4080

gal/day

How often are sprinklers used in barn?

days

0

days

Daily sprinkler volume used in barn

gal/day

12 4080

gal/day

Gallons per day when sprinklers are in use

0 total gal/day

4080 total gal/day

Note: The water use and collection comes during the days shown.
It is apportioned out to the storage period shown in cell H5 above.

453 gal/day
to storage**Waterers**

Do you want to use the default value?

Y

Y=yes; N=no

If not, enter your choice here:

gal/day/cow

Default Value

1.8

612 gal/day

SUMMARY

Total Gallons per day: 2935 gal/day
(Goes to Waste Storage Design tab, D17)

392 cu ft/day
8.6 gal/day/cow

April 11, 2014

Waupaca County Land & Water Conservation Dept.
Courthouse
811 Harding St
Waupaca, WI 54981

To: Waupaca County Land Conservation Dept.

We are writing to request financial assistance to build a new manure storage facility and barnyard runoff control system on our dairy farm. Our current manure storage provides less than three months storage, making it impossible to make it through the winter months without spreading manure on frozen ground and snow or to fully comply with our nutrient management plan. This becomes especially problematic during late springs or when road limits prevent us from hauling manure to the proper fields. Furthermore we recently completed a Comprehensive Nutrient Management Plan through NRCS that identified a lack of manure storage and barnyard runoff as resource concerns and we wish address those concerns. Additionally we would like to install roof gutters or some type of clean water diversion to direct water away from our barnyard area.

We are willing to sign a cost share contract to build the manure storage, barnyard runoff control and other water quality improvements that Land Conservation staff has proposed and designed if we are offered cost sharing.

Thank You,



Craig Fietzer



Melissa Fietzer



Kyle Fietzer

Fietzer Farms, Inc.

United States Department of Agriculture



Natural Resources Conservation Service

1337C Royalton Street
Waupaca, WI 54981
Ph: 715-258-8380
Fax: 855-814-3121

April 13, 2015

Brian Haase, County Conservationist
Waupaca Co. LWCD
811 Harding St.
Waupaca, WI 54981

Dear Brian:

The USDA-Natural Resources Conservation Service has committed staff time and financial support to the Fietzer Dairy Farm. We recently funded a comprehensive nutrient management plan on their farm in order to assess the resources concerns that should address. The completed plan identified the need for manure storage, barnyard improvements and various clean water practices. The Fietzers subsequently applied for and were granted an E.Q.I.P. contract to address these concerns. The contract includes Waste Storage, Waste Transfer, Roof Runoff System, Water and Sediment Control Basin, Underground Outlets and Cover Crops. We are firmly committed to continued work with the Fietzers to address the resource concerns on their farm.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lisa Neuenfeldt".

Lisa Neuenfeldt
District Conservationist
Waupaca Field Office

CONSTRUCTION PLAN

PRACTICE WASTE STORAGE FACILITY(313)
 LANDOWNER FLETZER FARMS INC.
 ADDRESS E8276 CTY HWY N MANAWA, WI 54949
 LANDOWNER PHONE NO. 920-359-0974 COUNTY WAUPACA
 TOWNSHIP LEBANON T 23 N, R 14 EW, Sec. 4
 FIELD OFFICE Waupaca TELEPHONE NO. 715-258-6483

DIGGERS HOTLINE

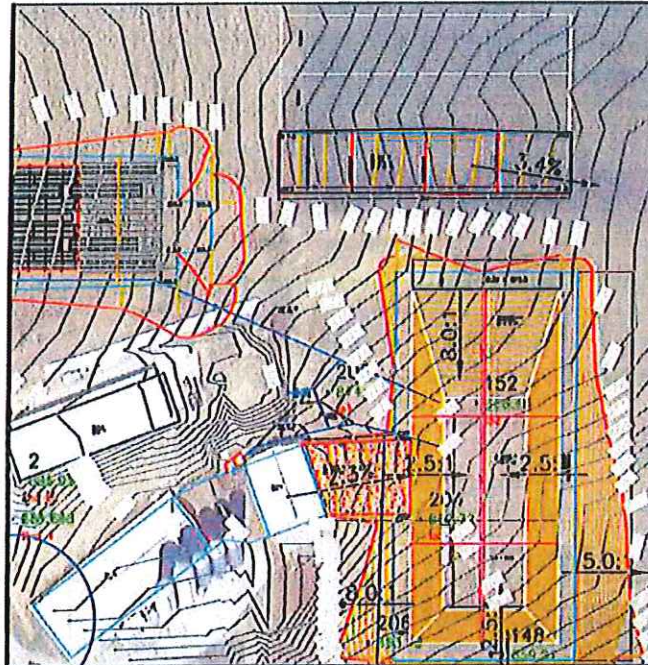
Call 3 Work Days
Before You Dig!

Nationwide
811

Toll Free
1-800-242-8511

TDD
1-800-542-2289

Website
www.diggershotline.com



Not to
Scale

LOCATION MAP

NOTICE TO LANDOWNERS AND EXCAVATORS

Any representation made by the USDA, Natural Resources Conservation Service, or the WAUPACA County LCD, as to the approximate location or nonexistence of above or under ground hazards does not relieve the owner of the property or the excavator that is hired to complete construction, from notifying Diggers Hotline of the pending construction. You will be liable for damages resulting from construction activities.
 Call Diggers Hotline! Ticket Number _____

CONSTRUCTION DRAWINGS AND SPECIFICATIONS ACCEPTANCE

I have reviewed and understand the construction plans and specifications and agree to complete the work accordingly. Failure to meet these plans and specifications may jeopardize any continued NRCS technical assistance or program cost sharing applied for. I understand that it is my responsibility to secure all necessary permits and licenses, and to complete the work in accordance with all local, state, and federal laws. Modification of these construction plans or specifications must be approved by the NRCS before installation. I assume all responsibility for negotiations and contract agreements with the construction contractors.

Signed: _____	Date: _____
Designed by: <u>DAN MCFARLANE</u>	Date: <u>3/2015</u>
Checked by: <u>[Signature]</u>	Date: <u>3/15</u>
Approved by: <u>[Signature]</u>	Date: <u>3-15</u>

The installed practices comply with applicable NRCS technical standards and specifications. The "redlined" construction plans (as-built drawings) reflect changes made during construction.

Construction Approved by: _____ Date: _____

Job Approval Class IV

Sheet 1 of 19

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY	SHEET NUMBER	WI. CONSTRUCTION SPEC. OR JOB SHEET NUMBER
STRIPPING	CU. YD.			
EXCAVATION (MANURE STORAGE & HUAP)	CU. YD.	16,217	7-9	2. EXCAVATION
MANURE STORAGE (RAMP @ BTM) 7" CONCRETE w/#4 rebar 15" o.c.	SQ. FT.	42,920	8,12	4. CONCRETE
MANURE STORAGE (SIDE SLOPES) 5" CONCRETE w/#4 rebar 18" o.c.	SQ. FT.	32,320	8,12	4. CONCRETE
HEAVY USE AREA PROTECTION 5" CONCRETE W/#4 REBAR 18" O.C.	SQ. FT.	10,032	8,12	4. CONCRETE
10"x24" CONCRETE WALL	LIN. FT.	111	17	4. CONCRETE
MANURE PIT FENCE	LIN. FT.	1,196	17	10. FENCES
SILT FENCE	LIN. FT.	800	16	5. CONSTRUCTION SITE POLLUTION CONTROL
SEEDING	ACRES	2	15	
VERTICAL PISTON PUMP	EACH	1		MANUFACTURER'S SPECS
4" CHOPPER PUMP	EACH	1		MANUFACTURER'S SPECS
12" PVC TRANSFER PIPE (INSTALLED) D-2241 (SDR 21) OR D-1785 (SCH 80)	LIN. FT	590	7-10	634 WASTE TRANSFER
12" PVC 22.5 DEG ELBOW (INSTALLED) D-2241 (SDR 21) OR D-1785 (SCH 80)	EACH	1	7,8	634 WASTE TRANSFER
24" HDPE TRANSFER PIPE (INSTALLED)	LIN. FT	247	7-10	634 WASTE TRANSFER
24" HDPE 22.5 DEG ELBOW (INSTALLED)	EACH	1	7,8	634 WASTE TRANSFER
8' TANK WALL (2-CELL TANK) WITH 12" FOOTING	LIN FT	84		4. CONCRETE
16"x16"x120' TANK WALL (CROSS- CHANNEL	LIN FT	120		4. CONCRETE
4' WALL W/9" FOOTING (AUGER MOTOR HOUSING	LIN FT	12		4. CONCRETE
12" PVC BLOWOUT	LIN FT	12		634. WASTE TRANSFER

Quantities are estimated to the neat lines and grades of in-place materials shown on the construction plan unless otherwise stated. Truck yardage, loose fill, shrinkage, etc., must be calculated and compensated for by the contractor preparing a bid or constructing the project.



ESTIMATED QUANTITIES

CLIENT: FIETZER FARMS INC.
COUNTY: WAUPACA

Designed DM Date JAN-2015
Drawn _____
Checked _____
Approved _____

Drawing Name
WI-005A

Date
5/09

Sheet 2 of 19

ARM

Comprehensive Nutrient Management Plan

For

Fietzer Farm, Inc
E8276 County Road N
Manawa, WI 54949

Craig Fietzer, Owner/Manager
Mobile: (920) 359-0974

Certified CNMP Providers:
Ag Resources Management, LLC
856 North Main Street
Seymour, Wisconsin 54165
920-833-2822

<i>Item</i>	<i>Name</i>	<i>Email</i>	<i>Telephone</i>
⇒ Total Plan	John Roach	john@jmroach.com	920-833-2822
⇒ Manure & Wastewater Storage & Handling	John Roach	john@jmroach.com	920-833-2822
⇒ Feed Management	John Roach	john@jmroach.com	920-833-2822
⇒ Land Treatment Practices	Jeff Polenske	jpolenske@aol.com	920-843-2676
⇒ Nutrient Management	Jeff Polenske	jpolenske@aol.com	920-843-2676
⇒ Engineering Planner, P.E.	Richard Seas	richard@jmroach.com	920-833-2822

Resource Concern Summary

CNMP Agronomic Resource Concerns Summary Fietzer Farm, Inc

ACTION ITEMS

Action items should be implemented to meet applicable laws, cost share requirements or ensure adequate operation and maintenance.

Item #	Action Item	Tab #	Page #	Implementation Timeframe				
1	Less than 180 days of manure storage	3	7		X			X
2	Contaminated runoff from the Y1 yard	3	12			X		X
3	Erosion and contaminated runoff from the E1 lot	3	13			X		X
4	No system to store leachate from the number 6 tower silo	3	14 & 15		X			X
5	Storm water flow causing erosion	3	16		X			
6	Clean storm water mixing with contaminated runoff	3	16			X		
				1-Unsure	2-2014	3-2015	4-2016	5-Cost Share Available

Details of Action Items and Identified Alternatives

Action Item #1: 180 day's storage

Refer to Tab 3, Page 7 in CNMP document for additional details.

Description of Identified Resource Concern: Currently, long-term manure and wastewater storage is contained in the T1 and T2 concrete tanks. The two tanks provide for 59 days of storage. An expansion is planned in 2014. As part of the expansion a new waste storage facility will be constructed (SEE Tab 11, Exhibit 15). A minimum of 180 days of waste storage is recommended to eliminate the need for land spreading during the winter months and early spring when runoff is likely to occur. The new calculations assume that a new 4-row barn will be added to the L2 barn (See Tab 11, Exhibit 15). ARM suggests that the minimum size of the new WSF should be 4,432,467 gallons. This in conjunction with the T1 and T4 tanks will provide for 416 days of waste capacity.

This assumes that the runoff will be collected and stored from the Y1 yard. Volume will be reduced due to the need to collect and storage leachate and first flush runoff from a proposed feed bunker. The location of the bunker has yet to be determined.

Waupaca County Land Conservation Department and NRCS will design a new waste storage facility. At the time of the CNMP, Fietzer Dairy, Inc. intended to construct the new WSF to the east of the L3 barn. Test pits have been excavated and appear in Tab 11, Exhibit 15 along with other design data. The new WSF will have a Table 5 concrete with waterstop water tight liner.

Applicable Regulation/Code/Standard Reference:

- NRCS, FOTG, Section IV, Standard 313, Waste Storage Facility
- NRCS, FOTG, Section IV, Standard 634, Manure Transfer

Suggested Actions:

- A qualified engineer should conduct a comprehensive site assessment, including soils investigations to evaluate the soil characteristics and separation distances from groundwater and bedrock when designing a new waste storage system. The design calculations should include the volume of leachate and first flush runoff from the proposed feed bunker. Calculations have been included and appear in Exhibit 15.

Planned Date: 2014

Action Item #2: There is contaminated runoff flowing from the Y1 yard.

Refer to Tab 3, Page 12 in CNMP document for additional details.

Description of Identified Resource Concern: Contaminated runoff from the Y1 yard flows into a concentrated flow channel to the north of the yard. The runoff flows east and then south.

Applicable Regulation/Code/Standard Reference:

- NRCS, FOTG, Section IV, Standard 313 Waste Storage Facility
- NRCS, FOTG, Section IV, Standard 634 Manure Transfer
- NRCS, FOTG, Section IV, Standard 342 Critical Area Planting

Suggested Actions:

Option 1:

- Construct a new waste storage facility and channel the runoff into the T3 tank. Store all of the runoff from the Y1 yard in the new waste storage facility.

Option 2:

- Construct a new freestall barn to house heifers and abandon the Y1 yard.

Option 3:

- Roof the Y1 yard and channel the roof water into the concentrated flow channel to the north

Planned Date: 2014 or 2015

Action Item #3: Contaminated runoff flowing from the E1 earthen lot. Erosion is occurring in the E1 lot.

Refer to Tab 3, Page 15 in CNMP document for additional details.

Description of Identified Resource Concern: Contaminated runoff from the E1 lot is flowing into a concentrated flow channel. In addition roof water from the commodity building is causing erosion in the E1 earthen lot. Manure solids are leaving the lot.

Applicable Regulation/Code/Standard Reference:

- NRCS, FOTG, Section IV, Standard 313 Waste Storage Facility
- NRCS, FOTG, Section IV, Standard 634 Manure Transfer
- NRCS, FOTG, Section IV, Standard 342 Critical Area Planting

Suggested Actions:

Option 1:

- Construct a new freestall barn to house heifers and abandon the E1 lot. Vegetate the area and design stormwater flow to prevent erosion.

Option 2:

- Abandon the E1 lot and retain the cattle on the Y1 yard or send a greater number of heifers to the custom grower to reduce numbers to meet the existing housing facilities...

Planned Date: 2015

Action Item #4: Leachate storage system for leachate generated from the number 6 tower silo.

Refer to Tab 3, Page 16 in CNMP document for additional details.

Description of Identified Resource Concern: Leachate generated by the number 6 tower silo flows into a tile line those outlets along the east side of the E1 lot fence and flows into a concentrated flow channel.

Applicable Regulation/Code/Standard Reference:

- NRCS, FOTG, Section IV, Standard 313 Waste Storage Facility
- NRCS, FOTG, Section IV, Standard 634 Manure Transfer

Suggested Actions:

- Design a leachate transfer system to pump the leachate into the new waste storage facility that will be located to the east of the L3 barn.

Planned Date: 2014

Action Item #5: Storm water is flowing onto the field road to the east of the L2 barn and causing gully erosion.

Refer to Tab 3, Page 16 in CNMP document for additional details.

Description of Identified Resource Concern: Roof water from the north side of the L2 flows to the east. Water flows through a culvert under a road on the east end of the L2 barn. Water from the culvert flows to the east and down a road creating gully erosion.

Applicable Regulation/Code/Standard Reference:

- NRCS, FOTG, Section IV, Standard 412, Grassed Waterway
- NRCS, FOTG, Section IV, Standard 410, Grade Stabilization Structure
- NRCS, FOTG, Section IV, Standard 484, Mulching
- NRCS, FOTG, Section IV, Standard 561, Heavy Use Area Protection
- NRCS, FOTG, Section IV, Standard 342 Critical Area Planting

Suggested Actions:

Option 1

- Construction a Heavy Use Area Protection road and allow the flow from the culvert to flow on top of the road. At the bottom of the hill develop a spreader that will sheet flow the water into the crop field.

Option 2

- Create a grassed waterway along the road and outlet the culvert into the waterway. Check dams can be installed to prevent erosion.
- Concentrated flow channel. In addition construct a hard surface road with a curb that will prevent sand that falls from the skidsteer bucket from flowing into the concentrated flow channel.

Option 3

- Outlet the flow from the culvert into a below grade tile and convey the water to the bottom of the hill.
- Design an outlet structure to sheet flow the water into the crop land.

Planned Date: 2014

Action Item #6: Clean storm water mixing with contaminated runoff

Refer to Tab 3, Page 17 in CNMP document for additional details.

Description of Identified Resource Concern: Roof water from the north half of the roof from the Li barn enters a concentrated flow channel and is conveyed to the east. At the point where the contaminated runoff from the Y1 yard enters the concentrated flow channel both are contaminated...

Applicable Regulation/Code/Standard Reference:

- NRCS, FOTG, Section IV, Standard 313 Waste Storage Facility
- NRCS, FOTG, Section IV, Standard 634 Manure Transfer

Suggested Actions:

- See Action Item #2. If the contaminated runoff does not enter the concentrated flow channel the Resource Concern is corrected.

Planned Date: 2014

SUGGESTED ITEMS

Suggested items are recommended but implementation is not required

Suggested Item	Tab #	Page #
Install bollards around the W1 and W2 wells	4	18
Construct mortality storage facility to hold dead animals	4	18
Properly dispose of the medical waste	4	18
Have MSDS sheets available in the utility room or milk house for all of the chemicals used.	4	19
Implement Biosecurity Plan	4	20
Implement Conservation Plan recommendations	5	22
Implement nutrient management plan recommendations	6	23-25
Implement record keeping system recommendations	7	26
Implement Feed Management recommendations	8	28-30

RESOLUTION NO. 33 (2014-2015)
RUNOFF MANAGEMENT GRANTS

WHEREAS Waupaca County Land & Water Conservation Department is interested in acquiring a grant from the Wisconsin Department of Natural Resources for the purpose of implementing a project to control agricultural or urban stormwater runoff pollution sources pursuant to ss. 281.65 or 281.66, Wis. Stats., and chs. NR 151, 153 and 155; and

WHEREAS a cost-sharing grant is required to carry out the project; and

WHEREAS the project implementation, for which the grant is being applied for, is necessary for Waupaca County to achieve the goals within its 2012-2021 Land & Water Resource Management Plan.

NOW THEREFORE BE IT RESOLVED that the Waupaca County Board of Supervisors hereby authorizes the position of County Conservationist within the Land & Water Conservation Department to:

1. Submit and sign an application to the State of Wisconsin Department of Natural Resources for any financial aid that may be available,
2. Sign a grant agreement between the local government (applicant) and the Department of Natural Resources,
3. Submit reimbursement claims along with necessary supporting documentation,
4. Submit signed documents,
5. Take necessary action to undertake, direct and complete the approved project.

BE IT FURTHER RESOLVED that Waupaca County shall comply with all state and federal laws, regulations and permit requirements pertaining to implementation of this project and to fulfillment of the grant document provisions.

Passed this 17th day of
March, 2015

24 Ayes 0 Nays

ATTEST:

Mary A. Robbins
Mary A. Robbins
Waupaca County Clerk

RECOMMENDED FOR INTRODUCTION
BY THE WAUPACA COUNTY
LAND & WATER CONSERVATION COMMITTEE &
LEGISLATIVE, JUDICIAL, ETHICS, SAFETY &
SECURITY COMMITTEE

Dwayne Federnig
John Much
Robert K. ...

Walter Stube
Donald Peterson

Patricia Craig
Dennis Kussmann

[Signature]
Mary Kay Lockman
Dona Dahurt
[Signature]