



**BUREAU OF WATER QUALITY
BUREAU OF WATERSHED MANAGEMENT**

GUIDANCE DOCUMENT

WDNR

**Total Maximum Daily Load (TMDL)
Landspreading Work Group**

**Mixing Septage into Manure Storage Units:
How to Review and Approve**

July 31, 2018

EGAD Number: 3500-2017-04

This document is intended solely as guidance and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

APPROVED:

Sharon L. Gayan

Sharon Gayan, Director
Bureau of Water Quality

08/23/2018

Date

Mike Thompson

Mike Thompson, Director
Bureau of Watershed Management

23 AUG 18

Date

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1.0 Definitions

1. By-product solids: means waste materials from the animal product or food processing industry including, but not limited to, remains of butchered animals, paunch manure, and vegetable waste materials such as leaves, cuttings, peelings, and actively fermenting sweet corn silage (referenced from s. NR 214.03(4), Wis. Adm. Code).
2. Centralized septage treatment facility: means a treatment facility which accepts septage from multiple sources and treats the septage before discharge or disposal (referenced from s. NR 204.03(11), Wis. Adm. Code) pursuant to ch. NR 204, Wis. Adm. Code.
3. Department: means the department of natural resources (referenced from s. NR 113.03(12), Wis. Adm. Code).
4. Grease interceptor (aka grease trap): means a watertight receptacle designed to intercept and retain grease or fatty substances contained in kitchen and other food wastes (referenced from s. NR 113.03(21), Wis. Adm. Code). This term should not be confused with a receptacle for used grease collected from fryers (and similar cooking processes), and retained in onsite containers for removal/reuse.
 - A) Industrial/process grease interceptor (aka food processing grease): a watertight receptacle designed to intercept and retain grease that enters the interceptor from process piping (not sanitary plumbing). See s. NR 214.18, Wis. Adm. Code.
 - B) Sanitary grease interceptor: a watertight receptacle designed to intercept and retain grease that enters the interceptor from sanitary plumbing in or from kitchens and restaurants. Sanitary grease contains human pathogens. See ch. NR 113, Wis. Adm. Code.
5. Holding tank: means an approved watertight receptacle for the collection and holding of sewage (referenced from s. NR 113.03(26), Wis. Adm. Code).
 - A) Domestic holding tank: a watertight receptacle for the collection and holding of domestic wastewater [See definition of wastewater-domestic below].
 - B) Nondomestic or mixed (domestic + nondomestic) holding tank: a watertight receptacle for the collection and holding of nondomestic wastewaters or a mix of domestic/nondomestic wastewaters [See definition of wastewater-nondomestic below].
6. Industrial/Commercial septage: For the purposes of this document, storage or land application of these wastes are regulated under chs. NR 213 and 214, Wis. Adm. Codes. See definition of industrial liquid wastes and nondomestic wastewater below.
7. Industrial liquid waste or industrial wastewater: means process wastewater and waste liquid products, including silage leachate, whey, whey permeate, whey filtrate, contact cooling water, cooling or boiler water containing water treatment additives, and wash water generated in

industrial, commercial, and agricultural operations (referenced from s. NR 214.03(27), Wis. Adm. Code).

8. Land application (landspreading): means the spraying or spreading of septage onto the land surface, the injection of septage below the land surface, or the incorporation of septage into the soil, so that the septage can either condition the soil or fertilize crops or vegetation grown in the soil (referenced from s. NR 113.03(31), Wis. Adm. Code).

Note: Specific landspreading requirements (including by not limited to: soil criteria and setbacks) are referenced in the applicable waste code(s).

9. Land Application Geodatabase (LAG): an ArcGIS geodatabase used to review and catalog industrial, municipal (sewage sludge), and septage landspreading fields (regulated under chs. NR 214, 204, and 113, Wis. Adm. Code, respectively).

10. Manure (animal waste): means a material that consists primarily of litter or excreta, treated or untreated, from livestock, poultry or other animals. Manure includes material mixed with runoff, bedding contaminated with litter or excreta, or process wastewater (referenced from s. NR 243.03(36), Wis. Adm. Code).

11. Manure storage unit: any above or below ground unit approved by an appropriate land county conversation department and/or DNR (department) to store manure.

Note: For the purposes of this document, a manure storage unit is a single structure. Section NR 113.12, Wis. Adm. Code, refers to “septage storage facilities” as single and multiple units. Section NR 243.03(63), Wis. Adm. Code, defines a “storage facility” for manure containment as a single unit – i.e., an excavated or diked pond, walled structure or platform designed to contain manure. When reviewing a request to discharge septage into a manure storage facility, each manure storage unit must be approved prior to accepting septage into that specific manure storage unit.

12. Non-permitted farm: means a farm without a WPDES permit. (The WPDES permit should not be confused with a DATCP farm permit).

13. Nutrient management plan: means any of the following (reference from s. ATCP 50.01(28), Wis. Adm. Code):

- A) A plan required under s. ATCP 50.04(3) or 50.62(5)(f), Wis. Adm. Code,
- B) A non-permitted nutrient plan prepared or approved, for a landowner, by a qualified nutrient management planner (plan must comply with s. ATCP 50.04(3), Wis. Adm. Code), or
- C) A permitted nutrient plan prepared by a qualified nutrient management planner and approved by the department (pursuant to s. NR 243.14, Wis. Adm. Code).

14. Permitted farm: means a farm possessing a WPDES permit (for example, a licensed concentrated animal feeding operation or CAFO).

15. Privately onsite wastewater treatment system: means a sewage treatment and disposal system serving a single structure with a septic tank and soil absorption field located on the same parcel as the structure. This term also means an alternative sewage system approved by the department including a substitute for the septic tank or soil absorption field, a holding tank, a system serving more than one structure or a system located on a different parcel than the structure. A private sewage system may be owned by the property owner or by a special purpose district (referenced from s. NR 145.01(12), Wis. Adm. Code).

Note: The definition for a "Private Onsite Wastewater Treatment System" (POWTS), in s. Comm 81.01(194), Wis. Adm. Code, states that a POWTS has the same meaning as that given for a "private sewage system" defined under s. 145.01 (12), Wis. Stats. The statutory definition of a private sewage system includes broad language that the Department of Natural Resources and Department of Safety and Professional Services have interpreted and clarified in interagency Memorandum of Understanding (MOU). The definition of a POWTS, and a "Large POWTS", and applicable regulatory procedures are based on the following general factors: type of wastewater, type of discharge into the environment, and size of system ("large" vs. "small").

16. Publicly owned wastewater treatment work: means a treatment works which is owned by a municipality and any sewers that convey wastewater to such a treatment works. This definition includes any devices or systems used by a municipality in the storage, treatment, recycling, and reclamation of municipal sewage or liquid industrial wastes. The term also means the municipality or local unit of government which has jurisdiction over the indirect discharges to, and the discharges from, such a treatment works (referenced from s. NR 211.03(11), Wis. Adm. Code).

17. Portable restroom: means fixtures, incorporating holding tank facilities, designed to directly receive human excrement. Portable restrooms are self-contained units, may be designed for one or more person's use at a given time and are readily transportable (referenced in s. NR 113.03(41), Wis. Adm. Code).

18. Privy: means a cavity in the ground or a portable above-ground device constructed for toilet uses which receive human excrement either to be partially absorbed directly by the surrounding soil or stored for decomposition and periodic removal (referenced in s. NR 113.03(43), Wis. Adm. Code).

19. Septage: means the wastewater or contents of septic or holding tanks, dosing chambers, grease interceptors, seepage beds, seepage pits, seepage pits, seepage trenches, privies, or portable restrooms (referenced from s. NR 113.03(55), Wis. Adm. Code).

Note: This does not include non-domestic wastewater/septage (non-domestic examples include, but are not limited to, process grease, car wash waste, catch basin waste, etc.) regulated pursuant to s. NR 214.02(1) and (3)(c), Wis. Adm. Code.

20. Servicing: means removing the scum, liquid, sludge, or other wastes from a private sewage system such as septic or holding tanks, dosing chambers, grease interceptors, seepage beds,

seepage pits, seepage trenches, privies, or portable restrooms and properly disposing or recycling of the contents as provided in ch. NR 113 (referenced from s. NR 113.03(57), Wis. Adm. Code).

21. Sewage sludge (or biosolids): means the solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes scum or solids removed in primary, secondary or advanced wastewater treatment processes and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works. (referenced from s. NR 204.03(55), Wis. Adm. Code)

Note: A centralized septage treatment facility is regulated pursuant to ch. NR 204, Wis. Adm. Code as well as other regulatory requirements.

22. Sludge (industrial sludge): means the accumulated solids generated during the biological, physical or chemical treatment, coagulation or sedimentation of water or wastewater (referenced from s. NR 214.03(34), Wis. Adm. Code).

23. Total Volume: means the total gallons of manure currently retained in the storage unit just prior to land application.

24. Wastewater-Domestic: means wastewater originating solely from human and domestic activities such as sanitary, bath, laundry, dishwashing, garbage disposal, and the cleaning of domestic areas or utensils. Wastewater from restaurants is considered domestic wastewater. [clarified pursuant to DSPS (DComm) and DNR Memo of Understanding dated December 16, 1999].

25. Wastewater-Non-Domestic: means wastes collected from non-residential garages used for storage, maintenance, or washing of motor vehicles, commercial food processing, commercial laundromats, animal shelters or kennels, animal rendering, metal fabricating, electronic component manufacturing, chemical manufacturing, milkhouses and include other industrial and commercial process water. [clarified pursuant to DSPS (DComm) and DNR Memo of Understanding dated December 16, 1999].

Note: Nondomestic wastewater may include a mix of nondomestic and domestic wastes.

26. Wastewater Treatment Facilities: means facilities that are permitted through the WPDES program to accept and treat septage, and may include, POTWs.

2.0 Acronyms

1. BOD₅: Biochemical oxygen demand
2. CAFO: Concentrated Animal Feeding Operation
3. CSTF: Centralized Septage Treatment Facility

4. DATCP: Wisconsin Department of Agriculture, Trade, and Consumer Protection
5. DNR: Department of Natural Resources
6. DSPS: Department of Safety and Professional Services (former Dept. of Commerce-DComm)
7. LAG: Land Application Geodatabase
8. NMP: Nutrient Management Plan
9. POTW: Publicly Owned (Wastewater) Treatment Works (reference from s. NR 113.03(45), Wis. Adm. Code)
10. POWTS: Private Onsite Wastewater Treatment System
11. SOP: Standard Operating Procedure
12. WPDES: Wisconsin Pollutant Discharge Elimination System
13. WWTF: Wastewater Treatment Facility

3.0 Applicability

These procedural instructions address the mixing of septage (regulated under ch. NR 113, Wis. Adm. Code) into manure storage units for storage.

For purposes of this document and pursuant to ch. NR 243, Wis. Adm. Code, manure digesters are considered manure storage units, but some manure digesters are not included within the scope of this document. Manure digesters that are *not* within the scope of this statement include, but are not limited, to:

- Non-farm WPDES permitted digesters (including industrial digesters that use manure as influents) that may already be permitted to accept industrial liquid wastes;
- Non-WPDES permitted digesters that do not discharge to the waters of the state (i.e., digestate discharged to collection system of POTWs such as an energy digester); and
- Public Service Commission (PSC) consortium digester [Integrated Anaerobic Digester System Program request for proposal issued January 3, 2017] and similar digester systems.

This document does NOT address the mixing into manure storage units of other non-farm and/or farm wastes including, but not limited to:

- 1) Industrial liquid wastes;
- 2) By-product solids;
- 3) Industrial sludge (including food processing sludge and grease, etc.);
- 4) Sewage sludge (biosolids);

- 5) Mixed wastes (examples include, but are not limited to, mixed industrial sludge/industrial liquid wastes, industrial/municipal, and industrial/septage wastes); and
- 6) Farm process wastewater regulated per ch. NR 243, Wis. Adm. Code.

Note: Process wastewater (milkhouse waste, silage leachate, etc.) generated at an agricultural facility (permitted or non-permitted) and mixed into a manure storage unit is typically classified as an agricultural waste.

4.0 Background

The Department of Natural Resources (department) regulates the servicing and disposal of domestic septage under ch. NR 113, Wis. Adm. Code. The purpose of the regulations is to prevent impacts to public health, surface water, and groundwater that may be caused by human pathogenic wastes.

Septage includes the contents from private onsite wastewater treatment systems (POWTS) such as septic tanks, holding tanks, grease interceptors as well as from portable restrooms and privies. License septage business “service” these entities by removing, transporting, and then disposing of the septage (reference “servicing” definition in Section 1.0). Occasionally, septage is temporarily stored prior to disposal.

Disposal options most often include land application for beneficial use or treatment at a wastewater treatment facility commonly referred to as a POTW or to a WPDES permitted storage facility.

Septage storage requirements of s. NR 113.12, Wis. Adm. Code provide requirements for the different storage options available. One option includes the ability to mix small amounts of septage into manure storage units approved by the department under s. NR 113.12(4), Wis. Adm. Code., The main purpose for this allowance is to help liquefy manure, reducing bulking and thus, aid the farmer in more easily pumping the manure out of the manure storage unit. Cropland also may benefit from additional nutrients and organic matter present in the septage.

These manure storage units may be owned and operated by non-WPDES permitted farms or WPDES permitted farms (CAFOs). Manure storage units must meet the requirements in NRCS 313 or chs. NR 110, Wis. Adm. Code, and must be approved under s. NR 113.12(4), Wis. Adm. Code, for businesses to mix septage into manure storage. Details for various discharge scenarios are in Section 6.0.

Note: Chapter NR 110, Wis. Adm. Code references ch. NR 108, Wis. Adm. Code regarding storage plan and specification submittals.

General septage and/or manure storage requirements include:

1. Septage wastes mixed with sewage sludge(biosolids) are regulated pursuant to ch. NR 204, Wis. Adm. Code.

2. Centralized septage treatment facilities (CSTFs) are regulated pursuant to ch. NR 204, Wis. Adm. Code.

3. Septage may only be mixed to a manure storage unit that actively receives manure.

Note: A manure storage unit may be repurposed as a septage (only) storage unit provided the septage business obtains proper department approval.

4. Septage storage addition for the purpose of reducing bulking is limited to 25,000 gallons or 10% of the total volume of the manure storage unit whichever is less (per s. NR 113.12(4)(i) Wis. Adm. Code).

A. 25,000 Gallon Limitation Example: A 500,000 gallon manure store unit is limit to 25,000 gallons of septage waste until removal of entire manure storage unit content has been completed per s. NR 113.12(4)(i) Wis. Adm. Code.

B. 10% Limitation Example: A 100,000 manure storage unit is limited to 10,000 gallons septage waste until removal of entire manure storage unit content has been completed per s. NR 113.12(4)(i) Wis. Adm. Code.

5. Septage storage additions for the purpose of disposal exceeding 10% total volume or 25,000 gallons requires a WPDES permit or permit modification per s. NR 113.12(2), Wis. Adm. Code.

6. Septage wastes cannot be stored in manure storage units located under a building where animals are housed per s. NR 113.12(4), Wis. Adm. Code.

7. Septage cannot be stored for more than two years in a manure storage unit per s. NR 113.12(5), Wis. Adm. Code.

8. **IMPORTANT DAIRY FARM GRADE A & B CERTIFICATION PROHIBITION:**

A. Section ATCP 65.22(6)(c), Wis. Adm. Code, prohibits mixing of human waste or septage with animal manure on a dairy farm. [Effective date September 1, 2016].

B. This provision was added to prevent the recurrence of observed situations in which transmission of human fecal pathogens via dairy farm facilities was clearly possible.

C. There are specific situations in which the department may approve mixing of ch. NR 113, Wis. Adm. Code, septage to manure storage units on dairy farms. These situations and mixing requirements are outlined in Section 6.3 of this document.

Note: The department recommends that the manure storage unit owner consult with DATCP to determine if acceptance of septage waste will impact the dairy's grade prior to submitted a storage unit request package to the department.

Note: The department recommends that the manure storage unit owner receive approval, in writing, from DATCP allowing the mixing of ch. NR 113, Wis. Adm. Code, septage to manure storage units on dairy farms.

Protecting public health from unsanitary and unhealthful practices and conditions is a significant component of ch. NR 113, Wis. Adm. Code. For this reason, pathogen control and vector attraction reduction methods are required before land applying septage. Because human pathogens mix with animal wastes when septage is mixed to a manure storage unit, proper pathogen control and vector attraction reduction are required pursuant to ss. NR 113.07(3) (d) and (e), Wis. Adm. Code. The department may approve injection or incorporation of the commingled waste (septage + manure) as an alternative form of pathogen control and vector attraction reduction, or alkali can be added to the septage raise and keep its pH to 12 or higher for 30 minutes before discharging it into the manure storage unit.

Historically, the department has had difficulty tracking approved manure storage units. Further, inconsistencies in the review process as well as cross program information dissemination have been challenging. These procedural instructions are intended to address these issues by outlining:

1. Guidelines for submitting a manure storage unit request package;
2. The respective roles and responsibilities (submittal review and compliance) of staff from the department's Wastewater and Runoff Management Programs; and
3. Post-approval responsibilities of the septage business and/or permitted farm.

5.0 Manure Storage Unit Request Package

For a licensed septage business may mix septage into a manure storage unit, it must submit a complete request package (operations report) to the department for review and obtain department approval to mix as required by s. NR 113.12(4), Wis. Adm. Code. A complete request package includes:

- 1) *Request Form.* A completed Form # 3400-137 "Septage Storage Facility Permit Application" (see Appendix A);
- 2) *Design Documentation.* Stamped and signed documentation (depending on mixing scenario):
 - A. Construction and sealing details and site characteristics for the manure storage unit. This information is contained within a typical NRCS 313 design standard approval, and may be available from county conservation staff. *Note: This scenario applies to a manure storage unit where <10% total volume of the mixture in the unit is septage and <25,000 gallons of septage are in the mixture in the unit., OR*
 - B. Construction and sealing details and site characteristics for the manure storage unit. This information is contained in a typical ch. NR 110, Wis. Adm. Code plan and

specification approval. *Note: This scenario applies to a manure storage unit where >10% total volume of the mixture in the unit is septage or where >25,000 gallons of septage are in the mixture in the unit).*;

- 3) *Contract.* Description of any contractual agreement between the septage business and manure storage unit owner. *Note: The applicant may submit the actual signed contract between the septage business and manure storage unit owner. The department recommends that the applicant redact monetary and personal information.*;
- 4) *Map Location.* Aerial photograph identifying relative location of storage unit;
- 5) *Photographs.* Current photographs of storage unit;
- 6) *Waste Type.* Potential septage wastes mixing into storage unit (grease interceptor, holding tank, portable toilet, privy, etc.);
- 7) *Land Application Method.* Description of method (surface application, injection, incorporation) used to landspread septage mixture;
- 8) *Waste Source(s).* Provide a complete list of all waste sources (examples include, but are not limited to: industrial wastes, sewage sludge, and septage) mixed into the manure storage unit.

Note: For non-permitted farms receiving >25,000 gallons of septage, it is likely the department would issue a WPDES permit pursuant to s. NR 113.12(2), Wis. Adm. Code. For non-permitted farms receiving >10% total volume of septage and/or industrial wastes, it is likely that the department would issue a WPDES permit pursuant to chs. NR 113.12 and/or NR 214.17, Wis. Adm. Code, and include additional terms similar to a contract hauler WPDES permit. A WPDES permit is required for all storage units receiving sewage sludge pursuant to ch. NR 204, Wis. Adm. Code. A WPDES permit is required for all manure storage units receiving industrial sludge and byproduct solids pursuant to ss. NR 214.17 and NR 214.18, Wis. Adm. Code.

- 9) *Multiple Storage Units.* For multiple manure storage units, the septage business must submit an individual request package for each manure storage unit (including manure storage units in the same general location); and
- 10) *Permitting Application.* If necessary, the septage business must submit a WPDES permit application or request a WPDES permit modification.

In addition, if the septage business is discharging to a manure storage unit located on a CAFO, the request package must contain authentication of the CAFO facility's storage capacity (180 day storage) via a calculation spreadsheet (Appendix B). This calculation spreadsheet includes all waste types mixed into the storage unit including manure, leachate, collected stormwater, industrial liquid wastes, septage, etc.

6.0 Manure Storage Unit Requirements

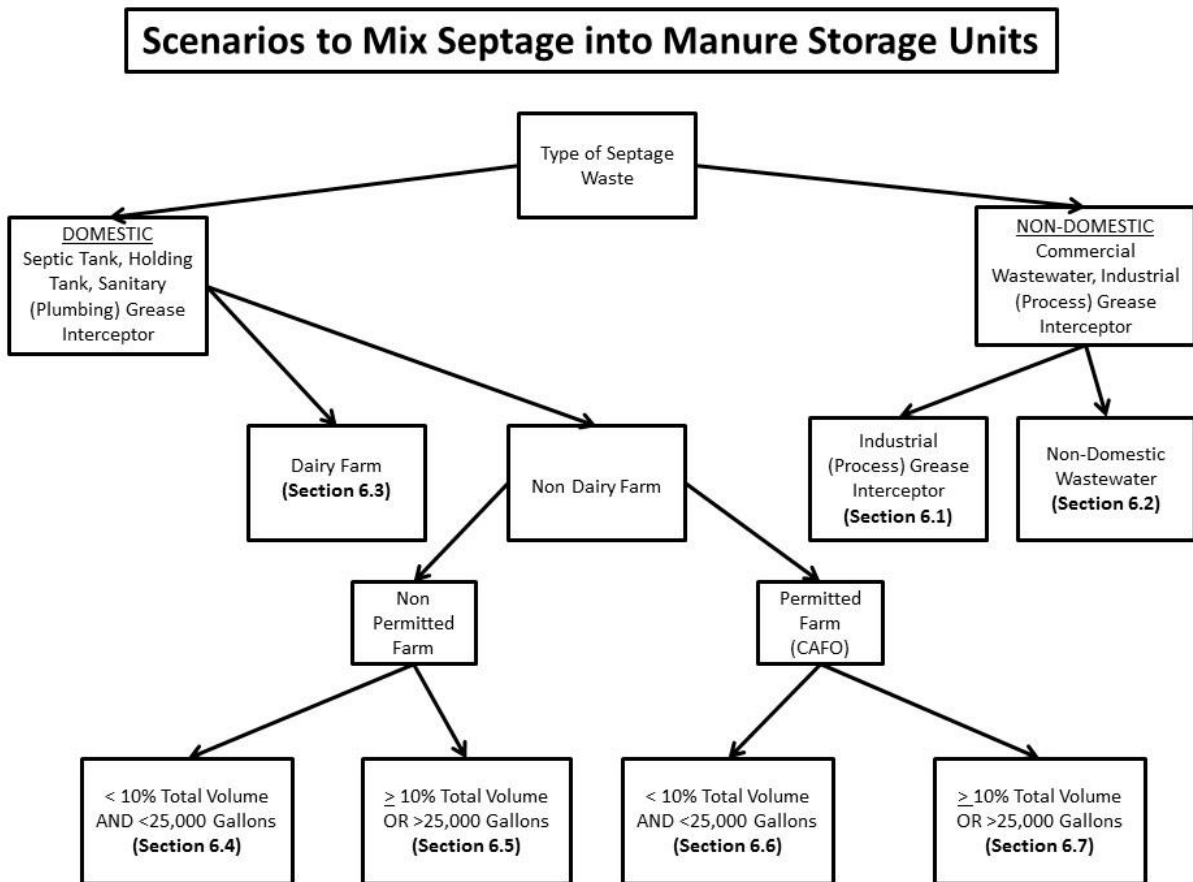
Three main factors determine how the mixing of septage into a manure storage unit is regulated:

- 1) Waste category (domestic or non-domestic),
- 2) Farm classification (WPDES permitted farm, nonpermitted farm, or dairy farm), and
- 3) Volume (percent intake of non-farm waste and total volume of septage in the stored mixture).

The scenarios provided below outline specific request package submittal requirements, review and approval process for department staff, and responsibilities of the septage business and/or permitted farm once the manure storage unit has been approved by the department.

Note: Typically, small septage storage facilities (< 25,000 gallon capacity) that meet ch. SPS 383 or chs. NR 108 and 110, Wis. Adm. Codes, standards are not issued a WPDES permit whether the septage is solely stored or comingled with manure (per s. NR 113.12(3), Wis. Adm. Code). The department does not intend to issue WPDES permits to all small septage storage units, but reserves the ability to require a WPDES permit on a case-by-case basis when determined necessary to protect public health or the environment.

The mixing scenarios are shown below.



- 1) Industrial (Process) Grease Interceptor Waste (Section 6.1)
- 2) Nondomestic Wastewater (Section 6.2)
- 3) Dairy Farm—Prohibited Septage Mixing (Section 6.3)
- 4) Non-Permitted Farm with Septage <10% Total Volume AND <25,000 Gallons (Sect. 6.4)
- 5) Non-Permitted Farm with Septage ≥10% Total Volume OR ≥25,000 Gallons (Sect. 6.5)

- 6) Permitted Farms with Septage <10% Total Volume AND <25,000 Gallons (Section 6.6)
- 7) Permitted Farms with Septage \geq 10% Total Volume OR \geq 25,000 Gallons (Section 6.7)

6.1 Industrial (Process) Grease Interceptor Waste [Non-NR 113 Wastes]

For the purposes of regulating grease, there are two types of grease interceptor installations: sanitary and process (industrial).

Sanitary grease is grease that accumulates in a sanitary grease interceptor installed in or connected to a plumbing system. Typically, a restaurant or food retail preparation business must have a grease interceptor installed in or connected to its plumbing system to connect to a sanitary sewer or POTS system. Examples of businesses that generate sanitary grease include, but are not limited to: commercial kitchens, restaurants, cafés, rural churches, and grocery stores. Because the grease interceptor installation is installed in or connects to the plumbing system, it is regulated by the plumbing code. Sanitary grease may contain human pathogens from employees washing their hands before, during, or after food preparation, or from water in a sewer line backing up into the grease interceptor.

Note: Sanitary grease is a domestic waste excluded from s. NR 214.02(3)(c), Wis. Adm. Code. Because this waste contains human pathogens, it is regulated pursuant to ch. NR 113, Wis. Adm. Code. Mixing of sanitary grease to a manure storage unit must be in accordance with the mixing scenarios detailed in Section 6.0.

Process (industrial) grease is generated from large-scale food production. Numerous meat and poultry processors generate industrial/process grease. Grease generated by the industrial food production process enters a grease interceptor installed in or connected to process pipes, not sanitary plumbing pipes. Non-domestic septage (including process grease) is regulated pursuant to ch. NR 214, Wis. Adm. Code. In addition, process piping is not regulated by the plumbing code; therefore, this waste is exempt from ch. NR 113, Wis. Adm. Code requirement. This waste is regulated as an industrial sludge pursuant to s. NR 214.18, Wis. Adm. Code.

Industrial (process) grease is frequently mixed into WPDES permitted animal waste digesters (storage units per s. NR 243.03(63), Wis. Adm. Code) for treatment. Digesters accept the industrial (process) grease because of its high energy (BOD₅) content. When mixed into these animal waste digesters, the industrial (process) grease is regulated under s. NR 214.18 Wis. Adm. Code (industrial sludge).

Note: For the mixing of industrial (process) grease to manure storage units, please refer to the “Mixing Industrial Sludge in Manure Storage Units: How to Review and Approve” procedural instructions. Mixing guidelines may differ depending on the farm classification (non-permitted farms and permitted CAFOs).

Note: If a facility wants to mix industrial sludge into a manure storage unit the waste generator needs a WPDES permit (or WPDES permit modification) f, and the manure storage unit must obtain DNR approval under applicable administrative codes.

6.2 Nondomestic Wastewater [Non-NR 113 Wastes]

Non-domestic wastewater may include wastewater from any other source including industries, food processing operations, vehicle service facilities, vehicle storage facilities, kennels, car washes, and milkhouses [clarified pursuant to DSPPS (DComm) and DNR Memo of Understanding dated December 16, 1999]. These wastes are also known as industrial liquid waste, by-product solids, and industrial sludges. These wastes are regulated pursuant to chs. 281 and 283 Wis. Stats. and ch. NR 213 Wis. Adm. Code. If wastes are land applied for beneficial reuse (nutrients, organic matter, etc.) and are non-hazardous (per s. NR 660.10(52) Wis. Adm. Code), then ch. NR 214 Wis. Adm. Code, applies.

While food processing waste is the most common non-domestic wastewater land applied or mixed to manure storage units, other non-domestic wastewater may also be approved. Department staff may refer to the fact sheet for DNR General Permit No. WI-0055867 (“Land Application of Industrial Liquid Wastes”) for further information regarding the land disposal option. The practicality of sampling, monitoring, and reporting land application of non-domestic wastes may make it less costly to dispose of the wastewater at a WWTF.

If the waste generator obtains a WPDES permit and desires to mix to a manure storage unit, then refer to the “How to Review and Approval Requests to Mix Industrial Liquid Wastes in Manure Storage Units” procedural instructions.

Note: When industrial/commercial waste is comingled with domestic wastewater, the Department considers this a mixed waste. Chapters NR 113 and NR 214, Wis. Adm. Codes, govern land application of those waste. Additionally, chs. NR 204 and NR 206, Wis. Adm. Codes, may apply as well. A specific WPDES permit is required because when this document was finalized the Department had not issued a general permit governing land application of mixed waste. The individual permit requirement plus the practicality of sampling, monitoring, and reporting land application of mixed wastes may make it less costly to dispose of the wastewater at a WWTF.

The three examples below illustrate permissible and prohibited mixing of non-domestic wastes to manure storage units.

A) A small cheese facility installs a below ground holding tank to collect and store industrial wastewater. No domestic wastes are mixed to this holding tank. This unit is considered an industrial/non-domestic storage unit. The facility obtains a WPDES permit and landspreads the wastewater pursuant to ch. 214 Wis. Adm. Code. The facility could also request approval to mix industrial wastewater to a manure storage unit.

B) A town builds a vehicle maintenance garage, and installs a below ground, non-domestic holding tank. The plan/specification submittal is approved by the department. This tank collects truck wash water, salt drippings, oil, etc. Domestic waste is mixed separately to a DSPPS approved POWTS. No domestic wastes are mixed to the non-domestic (commercial) holding tank. Testing of the wastewater indicates limited

beneficial reuse and potential detrimental impacts to soil and groundwater. Landspreading of this wastewater is prohibited. Even if landspreading is permitted, the ongoing sample collection, monitoring, and WPDES permitting requirements outweigh the cost of disposal to a WWTF. Mixing of this wastewater to a manure storage unit is prohibited. Disposal to a WWTF is most likely the only practical/permissible disposal option in this case.

C) A rural town builds a vehicle maintenance garage, and installs a below ground, non-domestic holding tank. The plan/specification submittal is approved by the department in concurrence with a DSPPS plan approval and sanitary permit. This tank collects truck wash water, salt drippings, oils, and domestic wastewater. The contents of the tank are considered mixed wastewater as the result of the mixing of non-domestic and domestic wastewater. A specific WPDES permit is required to land apply this waste. Testing of the wastewater indicates limited beneficial reuse. The ongoing sample collection, monitoring, and WPDES permitting requirements outweigh the cost of disposal to a WWTF. Disposal to a WWTF is most likely the only practical/permissible disposal option in this case. Because a WPDES permit has not been issued, and ongoing characterization of waste has not occurred, mixing of the waste to a manure storage unit is prohibited.

6.3 Dairy Farms—Prohibited Mixing Locations

Chapter ATCP 65.22(6)(c) prohibits the mixing of human waste or septage with animal manure on a dairy farm. This provision was added to prevent the recurrence of observed situations in which transmission of human fecal pathogens via dairy farm facilities was clearly possible.

There are specific situations in which the department may approve mixing of ch. NR 113, Wis. Adm. Code, septage to manure storage units on dairy farms. These situations and mixing requirements are outlined in Section 6.3 of this document.

Note: The department recommends that the manure storage unit owner consult with DATCP to determine if acceptance of septage waste will impact the dairy's grade prior to submitted a storage unit request package to the department.

Note: The department recommends that the manure storage unit owner receive approval, in writing, from DATCP allowing the mixing of ch. NR 113, Wis. Adm. Code, septage to manure storage units on dairy farms.

Below are the situations, as interpreted by DATCP, in which the department may approve the mixing of septage into manure storage units on a dairy farm.

- A. Off-site manure storage units. Septage is mixed into an off-site manure storage unit that is not located within or at an adjacent property to a farm's milking center.; or

- B. Manure digesters. Digestate contain comingled septage and manure is not returned to a manure storage unit located within or at an adjacent property to a farm's milking center; or

Note: The licensed septage business must maintain a daily disposal log for each load mixed into manure storage unit [see Appendix D].

6.4 Non-Permitted Farms: Septage Addition <10% Total Volume AND <25,000 Gallons

Provided the licensed septage business submits an operations report pursuant to s. NR 113.12(4)a-i Wis. Adm. Code, and obtains approval from the department, a low volume mixing of septage wastes may be allowed to a non-permitted farm's manure storage unit.

Note: A NMP may be required by the county or local municipality. This NMP may further restrict the addition of waste to the manure storage unit, the land application of comingled waste (manure + septage) from the unit, or both.

A. Wastewater Program—Internal Review Process.

1. *New requests for mixing septage wastes into manure storage units.* For a new request to mix septage into a manure storage unit, the review may be completed by either a wastewater specialist or wastewater engineer. Once the review is complete, the wastewater specialist/engineer sends an approval or denial letter to the septage business (see Appendix C). A copy of this letter is transmitted to the appropriate department non-point source coordinator and County Land Conservationist. The wastewater specialist/engineer enters the manure storage unit information into SWAMP's "Site" tab and the LAG "Storage Structure" layer.

In subsequent years, the assigned department regulator reviews the septage business' 3400-052 (Other Methods of Disposal) reports for volume restrictions, responds to complaints regarding the storage unit, verifies compliance, and provides and addresses internal and external information requests.

2. *Manure Storage Unit Reauthorizations.* All previously approved storage units are re-evaluated during the next business septage audit. The septage business resubmits a request package (as outlined above) for each manure storage unit.

Department staff reviews the reauthorization request packages. Once the review is complete, wastewater specialist/engineer sends an approval or denial letter to the septage business (see Appendix C). A copy of this letter is transmitted to the appropriate department non-point source coordinator and County Land Conservationist. The wastewater specialist/engineer enters the manure storage unit information into SWAMP and the LAG "Storage Structure" layer.

B. Septage Business Responsibilities (Post Manure Storage Unit Approval)

Upon approval, requirements for the septage business include:

- 1) *Standard Operating Procedure*. Update the facility's SOP to include the manure storage unit.
- 2) *Waste Type Notification*. Notify the manure storage unit owner of any change of septage waste type mixed to the storage unit.
- 3) *Daily Log Report*. Maintain a daily disposal log for each load mixed into manure storage unit [see Appendix D].
- 4) *Vector Attraction Reduction (VAR)*.
 - A. *Alkali Addition*. Adjust septage pH (pH >12.0 for period of 30 minutes) prior to mixing into the manure storage structure. Note: proper alkali addition meets pathogen and vector attraction reduction requirements of s. NR 113.07(3)(d)(1)(b) and NR 113.07(3)(e)(3) Wis. Adm. Code, respectively.
 - B. *Alternate VAR*. Update the septage business's SOP to verify that farmer incorporates or injects comingled waste (manure + septage) from the manure storage unit.
- 5) *Percentage Calculations*. Verify total septage contents is <25,000 gallons and <10% of the total volume of mixture [see Appendix E].
- 6) *Annual Report*. Submit the 3400-052 "Other Methods of Disposal" report to include the septage volume mixed to each manure storage unit.
- 7) *Additional Non-Farm Waste*. With manure storage unit owner, discuss, confirm, and document that no additional non-farm waste source(s) are mixed into the storage unit.

6.5 Non-Permitted Farms: Septage Addition $\geq 10\%$ Total Volume OR $\geq 25,000$ Gallons

If a request for storage is $\geq 10\%$ total volume or $\geq 25,000$ total gallons/year storage, then the manure storage unit is regulated under a WPDES permit. The manure storage unit must meet ch. NR 108 and ch. NR 110, Wis. Adm. Code requirements. The entire storage unit contents will be regulated under ch. NR 113 or NR 204, Wis. Adm. Code, and landspreading fields must have prior department approval. Note: a NMP may be required by the county or local municipality. This NMP may further restrict waste addition to the manure storage unit as well as restrict the land application of comingled waste (manure + septage) from the unit.

There are three types of WPDES permit that may be issued for septage wastes $\geq 10\%$ total volume or $\geq 25,000$ gallons. The facility determines the permit type that best suits their needs. These permit types include:

- 1) WPDES Permit Option#1: septage as septage on low use fields
 - A. Limited to 100 pounds N/acre/year (per s. NR 113.09(1), Wis. Adm. Code)
 - B. Site approval (no onsite field evaluation required)
 - C. No nutrient soil testing
 - D. Annual comingled waste sample (per s. NR 113.12(4)(g), Wis. Adm. Code)
- 2) WPDES Permit Option #2: septage as septage on high use fields
 - A. Limited nitrogen to predicted crop need (per NR 113.09(1), Wis. Adm. Code)
 - B. Site approval (onsite field evaluation required)
 - C. Nutrient soil testing required

D. Annual comingled waste sample (per s. NR 113.12(4)(g), Wis. Adm. Code

3) WPDES Permit Option #3: septage as biosolids (sewage sludge)

- A. Limited to nitrogen to predicted crop need (per s. NR 204.07(8), Wis. Adm. Code)
- B. Site approval (no onsite field evaluation required)
- C. Nutrient soil testing required
- D. Waste testing required (metals and nutrients)

A. Wastewater Program—Internal Review Process

1. *New requests for mixing septage wastes into manure storage units.* For a new request to mix septage into a manure storage unit, wastewater staff reviews the request package. Review must be completed by a wastewater engineer (review meets ch. NR 108 and NR 110, Wis. Adm. Code requirements). Once the review is complete, wastewater engineer sends an approval or denial letter to the wastewater generator. If the manure storage unit is approved, then the letter includes a WPDES permit application request form. *Note: a department permit drafter may be needed to draft the permit application. The septage business cannot use this storage unit until the WPDES permit has been issued to the business. See SWAMP permit drafting instructions titled “Draft Permit Septage Storage” for more information on drafting these WPDES permits.*

Upon WPDES permit issuance, a copy of the permit is provided to the department non-point source coordinator and County Land Conservationist. The wastewater engineer or department regulator enters the manure storage unit information into SWAMP’s “Site” tab and the LAG “Storage Structure” layer.

In subsequent years, the assigned department regulator reviews the WPDES facility’s 3400-055 (Annual Land Application) and 3400-052 (Other Method of Disposal) reports, responds to complaints regarding the storage unit, verifies compliance, and provides and addresses internal and external information requests.

B. Septage Business Responsibilities (Post Manure Storage Unit Approval)

Upon approval, requirements for the septage business include:

- 1) *Standard Operating Procedure.* Update the facility’s SOP to include the storage unit.
- 2) *Waste Type Notification.* Notify the manure storage unit owner of any change of septage waste type mixed to the storage unit.
- 3) *Daily Log Report.* Maintain a daily disposal log for each load mixed into storage unit [see Appendix D].
- 4) *Vector Attraction Reduction (VAR).* Pending the method used for land application of comingled waste (septage + manure), alkali addition, injection, or incorporation may be required. Alkaline addition is required when the waste is not injected or incorporated within six hours. Alkali Addition requires pH adjustment of septage (pH >12.0 for period of 30 minutes) prior to septage being mixed into the manure storage unit or prior to land application of the comingled mixture.

Note: proper alkali addition meets pathogen and vector attraction reduction requirements of s. NR 113.07(3)(d)(1)(b) and NR 113.07(3)(e)(3), Wis. Adm. Code, respectively. If the

storage contents are regulated by ch. NR 204, Wis. Adm. Code, then other VAR treatment options are available.

5) *Pathogen Control*. Crop restrictions, grazing restrictions, and public access limitations are required when landspreading pursuant to NR 113.07(07)(3)(d,) Wis. Adm. Code.

6) *Sampling*. Sampling methods vary based on permit type (see above)

A) Options #1 and #2 require and annual comingled waste analysis,

B) Option #2 requires soil nutrient testing (Note: a field may not be used for land application unless the soil on the field has been tested at least once in the four years prior to land application).

C) Option #3 requires waste characterization per WPDES permit conditions and soil nutrient testing.

7) *Annual Reports*. Submit the 3400-055 “Annual Land Application and 3400-052 “Other Methods of Disposal” reports.

8) *Additional Non-Farm Waste*. Verify with manure storage unit owner that only authorized waste sources are mixed into manure storage unit.

9) *Maintenance*. Regularly inspect and maintain the storage unit per chs. NR 108 and NR 110, Wis. Adm. Codes, requirements.

Additional Considerations: Often the septage business license operates in conjunction with the WPDES permit. Both the license and WPDES must continue meet all conditions of chs. NR 113 and/or NR 204, Wis. Adm. Code, and its WPDES permit. The requirements of both license and WPDES permit are briefly outlined below.

1) Septage Business License

A. Log Requirements (refer to s. NR 113.11(3)(c)(3), Wis. Adm. Code)

B. Land Application (refer to ss. NR 113.07(3) and NR 113.11, Wis. Adm. Code)

1. Sites/fields must be approved and registered to septage license

2. Report on septage license 3400-055 report

C. Disposal (refer to ss. NR 113.07 and NR 113.11, Wis. Adm. Code)

1. Haul to a WWTF or other WPDES permitted entity

2. Report on septage license 3400-052 report

2) Septage WPDES Permit

A. Log Requirements

1. Inflow to storage (see WPDES permit requirements)

2. Land Application (see WPDES permit requirements)

3. Other disposal activities (see WPDES permit requirements)

B. Land Application

1. Sites must be approved and registered to WPDES permit

2. Report comingled waste report (Options #1 and #2)

3. Report 3400-049 report (Option #3 only)

4. Report 3400-055 report

5. Report nutrient soil test report (Options #2 and #3)

C. Disposal

1. Haul to a WWTF or other permitted entity

2. Report on WPDES permit 3400-052 report

6.6 Permitted Farm: Septage Addition <10% total volume AND <25,000 gallons total

A low volume mixing of septage wastes is allowed to a WPDES permitted manure storage unit, provided the septage business submits an operations report pursuant to s. NR 113.12(4)a-i., Wis. Adm. Code, and obtains approval from the department.

IMPORTANT: S. ATCP 65.22(6)(c), Wis. Adm. Code, prohibits the mixing of human waste or septage with animal manure on a dairy farm unless the septage is mixed into an off-site manure storage unit. See Section 6.3 above for more details.

A. Wastewater Program—Internal Review Process. For a new request to mix septage into a manure storage unit, wastewater staff contacts the assigned department CAFO regulator to make them aware of the request, and then initially reviews the request package. This initial review may be completed by either a wastewater specialist or wastewater engineer. Once the review is complete, comments are sent to the CAFO regulator. The CAFO regulator is responsible for formally approving/denying the request (see below). If approved, the wastewater specialist/engineer enters the manure storage unit information into SWAMP’s “Site” tab and the LAG “Storage Structure” layer.

In subsequent years, the assigned department regulator reviews the septage business’ 3400-052 (Other Methods of Disposal) reports for volume restrictions, notifies the CAFO regulator on any complaints regarding the storage unit, verifies compliance, and provides and addresses internal and external information requests.

B. Runoff Management Program—Internal Review Process

1. *New requests for mixing septage wastes into manure storage units.* For new manure storage unit requests, the assigned CAFO specialist coordinates with wastewater staff to review the request package. Once the review is complete, the CAFO specialist sends an approval or denial letter to the septage business and copies relevant wastewater staff (see Appendix F). The CAFO regulator also reviews the updated NMP and 180 storage calculation submitted by the permitted farm that accounts for the new waste source added to the manure storage unit.

Considerations for approval include but are not limited to the following:

- 1) CAFO’s current and past compliance status regarding manure and non-farm waste source management,
- 2) CAFO’s verification to maintain both a minimum of 180 days of storage capacity and adequate land base to support acceptance of non-farm wastes,
- 3) CAFO’s use of alternative treatment systems (i.e. digester) prior to disposal of non-farm wastes into manure storage units, and
- 4) Potential DATCP certification issues.

In subsequent years, the CAFO specialist evaluates and verifies that septage wastes taken into a CAFO’s storage is unit \leq 10% total volume (Appendix E) and 25,000 total gallons. This evaluation will likely occur during the permit reissuance process or during annual report review.

The CAFO specialist also responds to complaints (if applicable), and verifies that no unauthorized sources are being mixed into the storage unit. The CAFO specialist is responsible for any land application complaints regarding the CAFO's manure storage unit.

C. Septage Business Responsibilities (Post Manure Storage Unit Approval)

Upon approval, requirements for the septage business include:

- 1) *Standard Operating Procedure*. Update the facility's SOP to include the manure storage unit.
- 2) *Waste Type Notification*. Notify the CAFO authorized representative of any change of septage waste type mixed to the storage unit.
- 3) *Daily Log Report*. Maintain a daily disposal log for each load mixed into storage unit [see Appendix D].
- 4) *Vector Attraction Reduction (VAR)*. Proper VAR can be achieved the following ways:
 - A. *Alkali Addition*. pH adjust septage (pH >12.0 for period of 30 minutes) prior to mixing septage into the storage unit. Note: proper alkali addition meets pathogen and vector attraction reduction requirements of s. NR 113.07(3)(d)(1)(b) and NR 113.07(3)(e)(3) Wis. Adm. Code, respectively.
 - B. *Alternate VAR*. Update the septage business SOP to verify that permitted farm incorporates or injects comingled waste (manure + septage) from the manure storage unit.
- 5) *Percentage Calculations*. Verify total septage contents of manure storage unit are <10% and <25,000 gallons of the total volume of mixture [see Appendix E].
- 6) *Annual Reports*. Submit the 3400-052 "Other Methods of Disposal" report. This 3400-052 report must detail the total septage volume mixed to each manure storage unit (during that calendar year that mixing occurred).
- 7) *Additional Non-Farm Waste*. Verify with permitted farm's authorized representative that mixing into each manure storage unit includes only authorized wastes and appropriate waste volumes.

D. Permitted Farm Responsibilities (Post Manure Storage Unit Approval)

The permitted farm is required to update their NMP to account for the increased waste volume to be land applied as well as update the farm's 180 day storage calculation (Appendix B). The permitted farm shall annually sample the mixed waste (manure + septage) pursuant to its WPDES permit. In addition, the permitted farm requests disposal logs from the septage business to verify that the total wastewater contents of the storage are $\leq 10\%$ and <25,000 gallons septage wastes. The permitted farm should regularly inspect and maintain the storage unit (per NRCS 313 or chs. NR 108 and NR 110, Wis. Adm. Code, requirements).

6.7 Permitted Farm: Septage Addition $\geq 10\%$ total volume OR $\geq 25,000$ gallons

At a minimum, the contents of the entire storage unit are regulated pursuant to ch. NR 243, Wis. Adm. Codes. Most often ch. NR 113, Wis. Adm. Code, applies. However, when solids are treated and concentrated, additional requirements of ch. NR 204 Wis. Adm. Code are required.

Each manure storage unit receiving septage wastes must meet chs. NR 108 and NR 110, Wis. Adm. Codes, requirements. A WPDES permit modification is needed as intake of septage wastes is considered a significant change to the permitted farm's permit.

When the requirements of ch. NR 113, Wis. Adm. Code apply, the permitted farm is required to meet landspreading requirements including land disposal (s. NR.113.07(3), Wis. Adm. Code), vehicle licensing (s. NR 113.06, Wis. Adm. Code), and discharge limitations (s. NR 113.09, Wis. Adm. Code). All fields must be approved, registered in the SWAMP "site tab," and cataloged in the LAG "Permitted Fields" layer. The permitted farm does not need a septage business license as it already possesses a WPDES permit. A commercial septage vehicle operator certification is not required if land application only occurs from the manure storage unit (containing comingled septage + manure). Servicing septic, holding tank, grease interceptors, etc. and disposing into a manures storage unit requires ch. NR 114, Wis. Adm. Code, certification.

A permitted farm may be considered a Centralized Septage Treatment Facility (CSTF). A CSTF utilizes a digester and/or treatment process to treat septage wastes. These treatment processes concentrate solids, and potentially concentrate metals in the sludge. Metal monitoring is required. Other treatment processes for alternative pathogen control and vector attraction reduction may be utilized pursuant to s. NR 204.07, Wis. Adm. Code. Further, ch. NR 204 includes harvesting, grazing, and access restrictions for sites where waste is land applied.

Note: Currently there are no permitted farms facilities registered as CSTFs in Wisconsin.

7.0 Other Agency Approvals

The department recommends prior to the submittal of the septage request package (Section 5.0) that septage businesses and/or manure storage unit owners seek additional approvals or notify applicable state, county, and/or local agencies, including but not limited to:

- Department of Agriculture, Trade, and Consumer Protection
- County Zoning Department
- County Land and Water Conservation
- County Health/Environmental Health/Sanitary/Land Use Department(s)
- Municipal Zoning Department
- Municipal Heath Department

Note: Approvals and notifications may include updates to NMP, manure storage capacity requirements, dairy certification, zoning approvals such as conditional use permits, septage volumes mixed into manure storage, etc.

8.0 Enforcement Recommendations

The Wisconsin DNR Wastewater and Runoff Management Programs are authorized to rescind manure storage unit approvals any time requirements of chs. NR 108, NR 110, NR 113, or a

WPDES permit (in the case of septage individual permits), or any of the above, are violated. The department may implement stepped enforcement including issuing citations (per ss. 281.48(5s), and 23.50 to 23.99, Wis. Stats.) on a case-by-case basis.

Appendices

9.1 Appendix A. Form 3400-137 [last revised 2/2006]. *Note: This form will be subject to periodic review and revision.*

State of Wisconsin, DNR Septage Certification PO Box 7921 Madison, WI 53707-7921	Septage Storage Facility Permit Application Form 3400-137 (R 2/06)
<p>Notice: Use of this form is required by the Department for any application filed for septage storage pursuant to Chapters NR 113 and NR 200, Wis. Adm. Code. Storage facilities with a volume less than 25,000 gallons are allowed to be used for septage storage if they have been approved under ch. Comm 83 or meet the standards of ch. NR 110, if this form is completed and duly submitted to the department. It is not the department's intent to issue a WPDES permit for these small facilities although the department retains the authority to do so if it is determined necessary to protect public health or the environment. This form must also be completed and submitted for storage facilities greater than 25,000 gallons in volume as well as other information as required to complete a plan review and to process the application. A WPDES permit will be issued for facilities greater than 25,000 gallons in volume. No storage facility may be located under a building where animals are housed. Personal information collected on this form will be used for management of DNR programs. Information may be made available to requesters under Wisconsin's Open Records laws (ss. 19.32-19.39, Wis. Stats.) and requirements.</p> <p>Send the completed application to the appropriate Department of Natural Resources Regional Office listed on the reverse.</p>	
Owner / Applicant Information	
Storage Facility Owner Name	
Telephone Number (include area code)	
Mailing Address	City
	State
	ZIP Code
Applicant Name (if different from owner)	
Telephone Number (include area code)	
Mailing Address	City
	State
	ZIP Code
Sanitary License Number	To whom should correspondence be addressed?
Storage Facility Information	
Location of Storage Facility: Attach a map (i.e., plat book map) with the facility identified.	
1/4 / 1/4	Section
	Township
	Range
	E / W
Type:	Is it Portable?
<input type="checkbox"/> Above Ground	<input type="checkbox"/> Below Ground
<input type="checkbox"/> Yes	<input type="checkbox"/> No
Volume in Gallons	If less than 25,000 gallons, describe the secondary seal or other means of containment, if provided.
Dimensions (in feet):	
Height	Length
	Width
	Diameter (if round)
Type of Wastewater Stored: (select all that are appropriate)	
<input type="checkbox"/> Septic Tank	<input type="checkbox"/> Grease Trap
<input type="checkbox"/> Holding Tank	<input type="checkbox"/> Portable Toilets
Materials Used in Construction (i.e., soil, steel, concrete, etc.)	
Tank Manufacturer Name or Contractor Name if not Prefabricated	
Depth to Groundwater (in feet)	
Depth to Bedrock (in feet)	
Distance to Nearest Residence or Business (in feet)	Distance to the Nearest Well (in feet)
	Distance to Nearest Surface Water, including wetlands (in feet)
	Approximate Volume in Gallons of Wastewater Stored Annually
Disposal / Recycling Method and Locations	
<input type="checkbox"/> Wastewater Treatment Plant – If selected, list: _____	

<input type="checkbox"/> Land Applied – If selected, do you have sufficient acreage approved by the department? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Signature	
I hereby certify that the proposed storage tank, if less than 25,000 gallons in volume, has the necessary structural integrity for storing the described waste and, as a precaution, the necessary secondary containment (i.e., bermed area, secondary seal, etc.) in case of unforeseen structural failure. If the proposed storage tank is greater than 25,000 gallons in volume, a design report and formal plans and specifications shall be submitted by the registered Professional Engineer to the department for approval.	
Signature of Applicant	Title
	Date Signed
Leave Blank - For Department of Natural Resources Use Only	
<input type="checkbox"/> Accepted	<input type="checkbox"/> Denied
Reviewer Name	
Date Reviewed	

9.2 Appendix B. Day Storage Verification Worksheet

Liquid Waste Storage Volume Calculation Worksheet							
		Client:	Dsn by:	Date:	03/22/2016		
Total Annual Liquid Waste Generation		Total Liquid Waste Storage Capacity (gallons)					
Liquids Collected/Stored	Annual Gallons	Waste Storage	Total Vol. from Settled Top to Bottom	-Solids Storage	-25-yr, 24-hr Precip. on Storage	-Freeboard Vol.	Max. Operating Level (MOL) Vol.
Manure and Bedding		#1					0
Parlor Wastewater		#2					0
Feed Storage Leachate		#3					0
Feed Storage Runoff Collected *		#4					0
Feedlot Runoff		#5					0
Net Precipitation on Storage Surface(s) **		#6					0
Offsite Wastes						Total MOL Vol:	0
Other						Days of Storage:	#DIV/0!
Other						Meets Days of Storage Criteria:	#DIV/0!
Other							
Other							
Other							
TOTAL:	0						

Feb. 2014

* Feed storage runoff volume can be calculated in the NRCS "Feed Storage Area Runoff - Treatment" spreadsheet, Tab 5.

** Net annual precipitation on storage depth can be calculated in the NRCS "Waste Storage Design" spreadsheet and then multiplied by the storage top area to get the net annual precipitation volume.

NOTE 1: Formula for days of storage: $(\text{Total Storage Capacity} / \text{Annual Liquid Waste Generation}) * 365 = \text{Days of storage}$

NOTE 2: The NRCS "Waste Storage Design" spreadsheet can be used to calculate the days of storage as well. Feed storage leachate and feed storage collected runoff volumes should be added to the average daily wastewater volume in cell D17, Tab 1 since there is no separate location to enter this. The storage sizing calculations work only for rectangular and circular storages. Calculations for net precipitation volumes are month specific and more precise than the average annual volume shown above.

NOTE 3: The NRCS "Waste Storage Design" and "Feed Storage Area Runoff - Treatment" spreadsheets may be downloaded from the Wisconsin NRCS Engineering Resources website:
http://www.nrcs.usda.gov/wps/portal/nrcs/detail/wi/technical/engineering/?cid=nrcs142p2_025422

9.3 Appendix C. Template approval letter for mixing of septage wastes into a manure storage unit.

[Enter Date]

[Enter Operator-in-Charge Name]

[Enter Septage Business Name]

[Enter Mailing Address]

[Enter City, State, Zip Code]

RE: Approval of mixing of septage wastes into [enter manure storage name] under [enter septage business name] (Septage License # [enter septage license #])

Dear [Enter name],

Thank you for submitting a request to store septage wastes (grease trap, holding tank, and septage) into the [enter manure storage unit name] located at [enter legal description or address of manure storage unit].

The Wisconsin Department of Natural Resources (WDNR) has reviewed and approved this request, provided the following provisions are met.

1. [Enter business name] will maintain a daily disposal log for all septage mixed into this manure storage unit. An example daily mixing log is attached with this letter.
2. [Enter business name] will pH adjust septage wastes (pH >12.0 for period of 30 minutes) prior to mixing septage into the manure storage structure. Note: proper alkali addition meets pathogen and vector attraction reduction requirements of s. NR 113.07(3)(d)(1)(b) and NR 113.07(3)(e)(3), Wis. Adm. Code, respectively.
3. [Enter business name] will verify that the total contents of the storage unit are <10% total volume and <25,000 total gallons.
4. Total volume mixed to this manure storage unit will be reported on the 3400-052 ("Other Methods of Disposal" report)
5. [Enter business name] will periodically communicate with the storage owner to verify that no additional waste sources other than manure are being mixed into this storage unit.
6. Annually, [Enter business name] will request from the manure storage unit owner an analysis of comingled septage/manure waste. This information will be retained with the disposal logs, and will be made available to the department upon request.

If you have any questions regarding this approval letter, please call me at *[enter phone number]* or email me at *[enter email address]*. Thank you for your attention to this matter.

Sincerely,

[Enter Signature Block]

Attachments: Example daily disposal log

cc. license file

[Enter Wastewater Supervisor]

[Enter all applicable contacts, including, but not limited to: DATCP, County Land and Water Conservation, County Health/Sanitary/Land Use, and/or Municipal Zoning/Health Departments]

9.4 Appendix D Example daily disposal log for septage wastes to manure storage unit. Note: the septage business can utilize any service log as long as information required per ch. NR 113, Wis. Adm. Code, is recorded in the log.

Facility Name:						
Month/Year:						
Disposal Date and Time	Manure Storage Unit Name / Location	Volume (Gal/Day) Waste Type (S, HT, GT)	Time/Temp	pH Temp Corr. Adj. pH	Time/Temp	pH Temp Corr. Adj. pH
Total Month Volume:						
<u>Key</u> S=Septage Waste HT=Holding Tank Waste GT= Grease Interceptor Waste PR=Portable Restroom						

9.5 Appendix E. Calculating septage wastes (grease trap, holding tank, septage tank, etc.) volume for manure storage units.

DETERMING SEPTAGE WASTE VOLUME IN MANURE STORAGE UNITS

Manure Storage Unit

1) Volume of Manure Storage Unit: _____ gallons

Note: The volume of manure storage is not the total volume of the storage unit but rather the volume up to the maximum operating level (MOL).

2) Typical Number of Times Emptied Each Year: _____/year

3) Decimal Percent Full when Emptied: _____

Example: If the pit is emptied when it's 75% full the decimal percent would be 0.75.

4) Annual Maximum Allowable Septage Waste Volume: _____ gallons

-- (Line 1 * Line 2 * Line 3 * 0.10)

5) Is Line 4 greater than 25,000 gallons? If yes, then septage is limited to 25,000 gallons. If no, then use Line 4 volume.

In order to be applicable for NR 113.12(4)i., Wis. Adm. Code, exemption, septage wastes must be <10% of the mixture and < 25,000 gallons total.

6) Max. Septage Waste Volume Between Hauling Events: _____ gallons

-- (Line 4 / Line 2)

OR

Nutrient Management Plan (NMP) Records

1) Annual Manure Applied based on NMP: _____ gallons

Note: It is recommended that the manure estimate be an average of the last three years records. For a new/proposed farm, the department will accept an estimate for annual manure generation.

2) Typical Number of Hauling Events Each Year: _____/year

3) Annual Max. Septage Waste Volume: _____ gallons

-- (Line 6 * 0.10)

4) Is Line 3 greater than 25,000 gallons? If yes, then septage is limited to 25,000 gallons. If no, then use Line 4 volume.

5) Max. Septage Waste Volume between Hauling Events: _____ gallons

-- (Line 8 / Line 7)

9.6 Appendix F. Template approval letter for mixing of septage wastes into CAFO manure storage unit (note: $\leq 10\%$ AND $< 25,000$ gallons total volume). Note: Yellow highlighted areas can be kept/delete as necessary. *Note: This is an example approval letter from the Runoff Management Program and may be modified without notification.*

[Enter Date]

[Enter CAFO Contact Information]

SUBJECT: Nutrient Management Plan (NMP) Non-Substantial Revision Approval, Acceptance of Offsite Septage Waste $\leq 10\%$ and $< 25,000$ gallons total volume, [Farm Name], WPDES Permit No. [Permit #]

Dear Mr./Ms./Messrs. [Enter Last Name]:

After completing our review of [Farm Name's] NMP non-substantial revision request to add off site waste to the farm's manure lagoon the Wisconsin Department of Natural Resources (department) is providing conditional approval that is consistent with Ch. NR 243. The NMP non-substantial revision request was submitted by [Applicant Name, Applicant Company], and received by the department on [Date Received].

FINDINGS OF FACT

The department confirms that:

1. [Farm Name] will be able to maintain at least 180 days of storage for liquid manure and process wastewater with the addition of the offsite waste.
2. [Farm Name] has an adequate land base to account for the increased volume of waste.
3. Alkali addition of septage wastes will occur prior to mixing septage into the manure storage unit (to satisfy pathogen control and vector attraction reduction requirements of s. NR 113.07(3)(d)(1)(b) and NR 113.07(3)(e)(3), respectively).
4. [Farm Name] is not accepting any other offsite wastes into [Manure Storage Name].

CONDITIONAL NUTRIENT MANAGEMENT PLAN NON-SUBSTANTIAL REVISION APPROVAL

The department hereby approves the [Date Received] NMP non-substantial revision request to modify [Farm Name's] nutrient management plan subject to the following conditions:

1. [Farm Name] will accept [Waste Type] from [Waste Generator Name].
2. [Waste Type] will only be mixed into [Manure Storage Name].
3. At any given time, the percent of [Waste Type] in [Manure Storage Name] will not exceed [Enter xx%].

This conditional approval does not limit the department's regulatory authority to require NMP revisions (based upon new information or manure irrigation research findings) or request additional information in order to confirm or ensure your farm operation remains in compliance

with ch. NR 243, Wis. Adm. Code, and your WPDES permit conditions. If additional information, project changes or other circumstances indicate a possible need to modify this approval, the department may ask you to provide further information relating to this activity.

Please keep in mind that approval by the department of Natural Resources – Runoff Management Program does not relieve you of obligations to meet all other applicable federal, state or local permits, zoning and regulatory requirements.

If you have any questions regarding this approval I can be reached at [*Enter Phone Number or Email Address*].

Sincerely,

[*Enter Signature Block*]

cc: [*Enter Supervisor Name*], WDNR Watershed Field Supervisor, [*Enter Email*]
[*Enter Name*], WDNR Runoff Management Section Chief, [*Enter Email*]
[*Enter Name*], WDNR Nutrient Management Program Coordinator, [*Enter Email*]
[*Enter Specialist Name*], WDNR Wastewater Specialist, [*Enter Email*]
[*Enter County Contact, Title, Email*]
[*Enter Crop Consultant, CCA, Company Name, Email*]
File

10.0 Acknowledgements: This document was developed by the TMDL WDNR Landspreading Work Group. This group is composed of members from the Groundwater (Mary Vollbrecht and Bill Phelps), Runoff Management (Mary Anne Lowndes, Casey Jones, and Joe Baeten), and Wastewater (Fred Hegeman, Tim Ryan, Mike Vollrath, Alan Hopfensperger, and Steve Warrner) programs. The Landspreading Work Group would also like to thank the following staff for assistance drafting this document: Alison Canniff, Heidi Schmitt Marquez, Alexis Peter, Danielle Luke, Emily James, Doris Thiele, and Gretchen Wheat. For any questions regarding these procedural instructions please contact the TMDL Landspreading Work Group coordinator, Steve Warner.



WISCONSIN DEPARTMENT OF NATURAL RESOURCES NOTICE OF FINAL GUIDANCE & CERTIFICATION

Pursuant to ch. 227, Wis. Stats., the Wisconsin Department of Natural Resources has finalized and hereby certifies the following guidance document.

DOCUMENT ID

WY-19-0015

DOCUMENT TITLE

Mixing of Septage into Manure Storage Units: How to Review and Approve

PROGRAM/BUREAU

Water Quality

STATUTORY AUTHORITY OR LEGAL CITATION

Ch. NR 113, Wis. Adm. Code

DATE SENT TO LEGISLATIVE REFERENCE BUREAU (FOR PUBLIC COMMENTS)

12/23/2019

DATE FINALIZED

01/14/2020

DNR CERTIFICATION

I have reviewed this guidance document or proposed guidance document and I certify that it complies with sections 227.10 and 227.11 of the Wisconsin Statutes. I further certify that the guidance document or proposed guidance document contains no standard, requirement, or threshold that is not explicitly required or explicitly permitted by a statute or a rule that has been lawfully promulgated. I further certify that the guidance document or proposed guidance document contains no standard, requirement, or threshold that is more restrictive than a standard, requirement, or threshold contained in the Wisconsin Statutes.

A handwritten signature in black ink, appearing to read "Paul Steh".

1/14/2020

Signature

Date