COMM 2/82/83 98 WASTEWATER
TREATMENT - PRIVATE/ON-SITE
98-083

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Subchapter II
ADMINISTRATION AND ENFORCEMENT

Comm 83.20 PURPOSE. (1) This subchapter establishes the following:

(a) Regulatory processes and procedures which are to be followed when designing, installing or maintaining a POWTS; and

(b) Responsibilities and actions of the various governmental agencies and entities involved with the administration and enforcement of this chapter.

Note: Section 145.20 (1) (a), Stats., states that the governing body of the governmental unit responsible for the regulation of private sewage systems may assign the duties of administering the private sewage system program to any office, department, committee, board, commission, position or employee of that governmental unit.

(2) Nothing in this chapter shall limit a governmental unit's authority and power in exercising administration and enforcement responsibilities regarding a POWTS, including requiring and issuing other types of permits for activities not covered under this subchapter relating to sanitary permits.

Comm 83.21 SANITARY PERMITS. (1) GENERAL. (a) Pursuant to ss. 145.135 and 145.19, Stats., the installation or construction of a POWTS may not commence or continue unless:

1. The owner of the property on which the POWTS is to be installed possesses a valid sanitary permit; and

2. Plan approval for the POWTS has been obtained in accordance with s. Comm 83.22.

(b) The modification of an existing POWTS may not commence or continue unless the owner of the property on which the POWTS is located possesses a valid sanitary permit and has obtained plan approval for the modification under s. Comm 83.22, if the modification involves the addition or replacement of any of the following:

1. A POWTS holding component.

2. A POWTS treatment component.

3. A POWTS dispersal component.

(2) APPLICATION. (a) The application for a sanitary permit shall be made in a format prescribed by the department.

Note: An application for a sanitary permit may be obtained from the governmental unit administering and enforcing this chapter or the department. See appendix for further information relative to the application format and addresses of governmental units and the department.

(b) 1. Except as provided in subd. 2., the application for a sanitary permit shall be submitted to the appropriate governmental unit where the POWTS is located or will be located.

2. The application for a sanitary permit shall be submitted to the department for a POWTS that is located or will be located on property owned by the state.

Note: Section 145.20 (2) (b), Stats., states that the governmental unit responsible for regulation of private sewage systems shall approve or disapprove applications for sanitary permits and assist applicants in preparing an approvable application.

(c) The application for a sanitary permit to the governmental unit shall be accompanied by all of the following:

1. At least one set of clear and legible plans and specifications delineating the information under s. Comm 83.22 (2) (a) 3. and (c).

2. A set of plans bearing the department's conditional approval and the approval letter issued by the department, if required to be reviewed by the department under s. Comm 83.22 (1).

3. Sufficient supporting information to determine whether the proposed design, installation and management of the POWTS or the proposed modification to an existing POWTS conforms with this chapter.

4. Any other information as specified by local ordinance relating to POWTS installations.

5. A fee as specified by the governmental unit.

Note: Section 145.19 (2) to (6) reads: (2) Fee. No fee for a sanitary permit may be less than $61, or the amount determined under department rule. The governing body for the governmental unit responsible for the regulation of private sewage systems may establish a fee for a sanitary permit which is more than $61, or the amount determined under department rule. [Pursuant to s. Comm 2.67 (1), the minimum sanitary permit fee is $116.]

(3) Copy of permit forwarded to the department. The governmental unit responsible for the regulation of private sewage systems shall forward a copy of each valid sanitary permit and $20, or the amount determined under department rule, of the fee to the department within 90 days after the permit is issued. [Pursuant to s. Comm 2.67 (2), the $50 of the sanitary permit fee is to be forwarded to the department.]

(4) Use of fee. The portion of this fee retained by the governmental unit responsible for the regulation of private sewage systems shall be used for the administration of private sewage system programs.

(5) Fee adjustment. The department, by rule promulgated under ch. 227, may adjust the minimum permit fee under sub. (2) and the fee portion forwarded under sub. (3).

(6) Groundwater fee. In addition to the fee under sub. (2), the governmental unit responsible for the regulation of private sewage systems shall collect a groundwater fee of $25 for each sanitary permit. The governmental unit shall forward this fee to the department together with the copy of the sanitary permit and the fee under sub. (3). The moneys collected under this subsection shall be credited to the environmental fund for environmental management.

(3) PROCESSING. (a) A governmental unit shall review and make a determination on the submission of an application for a sanitary permit within 30 days after receiving all the required information and fees under sub. (2) (e).

(b) A sanitary permit may not be issued until the plans and specifications have been approved by the department or governmental unit having jurisdiction.

(c) 1. If upon review of the application and the supporting information, the governmental unit or the department determines that the proposed design, installation and management of the POWTS or the proposed modification of an existing POWTS conforms with this chapter, a sanitary permit shall be issued.

2. If upon review of the application and the supporting information, the governmental unit or the department determines that the proposed design, installation and management of the POWTS or the proposed modification of an existing POWTS does not conform with this chapter, a sanitary permit may not be issued.

a. When the issuance of a sanitary permit is denied, the governmental unit or department reviewing the application shall provide in writing to the applicant the reasons for denial, a notice for the right to appeal and the procedures for appeal.

b. An applicant denied a sanitary permit by a governmental unit may appeal the decision in accordance with ch. 68, Stats.

c. The appeal of the denial by the department for a sanitary permit shall be made in writing within 30 days from the date of the decision.

(d) A sanitary permit shall be issued by the appropriate governmental unit or the department in a format prescribed by the department.

Note: See appendix for further information relative to the permit format.

(4) TRANSFERS. A sanitary permit may be transferred from an owner to a subsequent owner, pursuant to s. 145.135 (1), Stats.

Note: Section 145.135 (1), Stats., reads in part: "A sanitary permit may be transferred from the holder to a subsequent owner of the land, except that the subsequent owner must obtain a new copy of the sanitary permit from the issuing agent."

(5) EXPIRATION. Pursuant to s. 145.135 (1), Stats., a sanitary permit shall expire 2 years from the date of issuance unless renewed in accordance with sub. (6).

(6) RENEWALS. (a) 1. The application for renewal of a sanitary permit shall be made in a format prescribed by the department.

Note: See appendix for further information relative to the application for renewal format.

2. The application for renewal of a sanitary permit shall be submitted to the department or the appropriate governmental unit in accordance with sub. (2) (b).

(b) The renewal of a sanitary permit shall be contingent upon the proposed POWTS or the proposed modification of an existing POWTS conforming with the rules of this chapter in effect at the time the sanitary permit is renewed.

(7) REVOCATION. (a) The department may revoke a sanitary permit issued under this section for any false statements or misrepresentation of facts on which the sanitary permit was issued.

(b) A governmental unit may revoke a sanitary permit that the governmental unit has issued under this section for any false statements or misrepresentation of facts on which the sanitary permit was issued.

(c) The revocation of a sanitary permit and the reasons for revocation shall be conveyed in writing to the individual to whom the sanitary permit was issued or transferred.

(d) If a sanitary permit is revoked, the installation or modification of a POWTS may not commence or continue until another sanitary permit is obtained.

(8) POSTING. When a sanitary permit is obtained under sub. (2), the sanitary permit shall:

(a) Be posted in such a location and manner on the proposed site where the POWTS is to be installed or modified so that the information on the permit is visible for inspection; and

(b) Remain posted until:

1. The POWTS installation or modification is completed; and

2. An opportunity for a final inspection occurs in accordance with s. Comm 83.26.

Comm 83.22 PLAN REVIEW AND APPROVAL. (1) SUBMISSION OF PLANS. (a) Plans shall be submitted to the department, a designated agent or the governmental unit in accordance with this section for all of the following types of installations or modifications:

1. The installation or construction of a POWTS.

2. The replacement or addition of a POWTS treatment component.

3. The replacement or addition of a POWTS holding component.

4. The replacement or addition of a POWTS dispersal component.

(b) Plans for the types of POWTS delineated in Table 83.22-1 shall be submitted to the department for review.

(c) Plans for the types of POWTS delineated in Table 83.22-2 shall be submitted for review to the department or a designated agent.

Note: See s. Comm 83.23 for more information relative to designated agents.

(d) Plans for the types of POWTS delineated in Table 83.22-3 shall be submitted for review to the appropriate governmental unit where the POWTS is located or will be located.

Table 83.22-1
PLAN SUBMISSIONS
TO DEPARTMENT

Type of Installation
1. POWTS owned by the state.
2. Facilities owned by the state and served by POWTS.
3. POWTS that will not completely utilize treatment and dispersal technologies or methods previously approved under s. Comm 84.10 (2) or (3).
4. POWTS treating domestic wastewater combined with industrial wastes[a].
5. Experimental POWTS under s. Comm 83.27.

Note a: See s. Comm 83.32 (3) (a).

Table 83.22-2
PLAN SUBMISSIONS
TO DEPARTMENT OR DESIGNATED AGENT

Type of Installation
1. POWTS that will completely utilize treatment and dispersal technologies or methods previously approved under s. Comm 84.10 (2) or (3).
2. POWTS that collect and hold all wastewater of the facilities served and utilize holding components previously recognized under s. Comm 84.10 (2) or (3).

Note: Pursuant to s. 145.19 (2), Stats., governmental units may require separate plan examination fees or include these fees in the cost of the sanitary permit.

Table 83.22-3
PLAN SUBMISSIONS
TO GOVERNMENTAL UNIT

Type of Installation
1. POWTS that will serve a single one- or 2-family dwelling utilizing technologies or methods previously recognized under s. Comm 84.10 (2) or (3), and using gravity distribution of the effluent to an in-ground distribution cell.

Note: Pursuant to s. 145.19 (2), Stats., governmental units may require separate plan examination fees or include these fees in the cost of the sanitary permit.

(2) PLANS AND SPECIFICATIONS. (a) 1. When plans are submitted to the department or designated agent for review, at least 3 sets of plans and one set of specifications shall be provided.

Note: Specifications for a project do not have to be a separate document but may be delineated on the plans.

2. Plans and specifications submitted for review shall be clear, legible and permanent copies.

3. Plans submitted for review shall include all of the following:

a. Details and configuration layouts depicting how the design is to be constructed and how the design is to accomplish the treatment in accordance with ss. Comm 83.43 and 83.44 and dispersal that is claimed or the holding of wastewater.

b. Specifications, including a description of the materials for the project and the installation or construction practices and methods to be employed.

c. A site plan with a bench mark either scaled or dimensioned, delineating all treatment and dispersal components and their relationship to any items listed in Table 83.43-1.

(b) 1. All plans submitted for review shall be accompanied by sufficient data and information to determine if the proposed POWTS or modification of an existing POWTS and their performance will conform with chs. Comm 82 to 84 including, but not limited to all of the following:

a. A plan review application form specified by the department.

Note: See appendix for an example of the plan review application form.

b. The minimum and maximum wastewater flow and load of the proposed project and the method or rationale for determining the flow and load.

c. Documentation to support treatment and dispersal claims.

d. A management plan for the proposed design reflecting conformance to subch. V.

e. A soil and site evaluation report for those POWTS components that consist in part of in situ soil.

f. A description of a contingency plan in the event the proposed POWTS fails and cannot be repaired.

2. In addition to the information required under subd. 1., plans for one or more holding tanks serving a large commercial, industrial, recreational or residential development with an estimated daily wastewater flow of 3,000 gallons or more shall include information pursuant to s. NR 113.07 (1) (e).

Note: Section NR 113.07 (1) (e) reads as follows: Large commercial, industrial, recreational or residential development holding tank systems that singly or when added to together or increased by successive additions generate 3000 gallons of septage per day or greater shall contract with a wastewater treatment facility for treatment of the septage. The contract terms shall provide assurance that the septage from the system will continually be conveyed to, and accepted, at the wastewater treatment facility. If a service area designation exists, the wastewater treatment facility shall amend the service area to include the commercial, industrial, recreational or residential development. The department may not indicate sufficient disposal capacity to the department of industry, labor and human relations, or department of commerce, until the service area adjustments have been completed and approved.

3. In addition to the information required under subd. 1., plans for an experimental POWTS shall be accompanied by information that does all of the following:

a. Describes the resources of the owner or agent to operate and maintain the POWTS.

b. Describes the objectives of the experiment relative to the POWTS treatment or dispersal capabilities.

c. Proposes a schedule for installing, monitoring, reporting and concluding the experiment.

d. Identifies the person or entity responsible for conducting the experiment.

4. In addition to the information required under subd. 1., plans for a POWTS which is to serve more than one structure or building shall be accompanied by information that does all of the following:

a. Describes the resources of the owner or owners to operate and maintain the POWTS.

b. Describes the legal entity, public or private, that has responsibility for the operation and maintenance of the POWTS.

c. Includes a copy of a recorded legal document that identifies all the parties that have ownership rights and are responsible for the operation and maintenance of the POWTS.

(c) Plans and specifications which are required to be submitted for review under sub. (1) shall be one of the following:

1. Signed and sealed in accordance with s. A-E 2.02 by an individual who is registered by the department of regulation and licensing as an architect, engineer, designer of plumbing systems or designer of private sewage systems.

2. Signed, including license number, and dated by an individual who is responsible for the installation of the POWTS and who is credentialed by the department as a licensed master plumber or master plumber-restricted service.

(d) Plans submitted to the department for review shall be accompanied by a fee in accordance with ss. Comm 2.61 and 2.65.

(3) PLAN REVIEW PROCESS. (a) Time limits. The department shall review and make a determination on the submission of a plan within 15 business days after receiving all the required information and fees.

Note: See appendix for further information regarding the locations of the department's offices where plans may be submitted for review.

(b) Conditional approval. 1. If, upon review, the applicable reviewing agency determines that the plans conform to this chapter and chs. Comm 82 and 84, a conditional approval shall be granted in writing.

2. All conditions indicating nonconformance to this chapter and chs. Comm 82 and 84 shall be corrected before or during installation.

(c) Denial of approval. If, upon review, the applicable reviewing agency determines that the plans do not conform to this chapter or chs. Comm 82 and 84, the request for conditional approval shall be denied in writing.

(4) REVISIONS. (a) A modification to the design of a POWTS for which a plan has been previously granted approval under sub. (3) (b) shall be submitted to the applicable reviewing agency for review in accordance with this section, if the proposed modification involves any one of the following:

1. The replacement or addition of a POWTS treatment component.

2. The replacement or addition of a POWTS holding component.

3. The replacement or addition of a POWTS dispersal component.

4. A change to one or more dispersal components or areas involving any of the following:

a. Location outside suitable evaluated areas or proposed depths.

b. Size.

c. Orientation.

d. Type.

(b) The installer of a POWTS may not implement or undertake the proposed revisions under par. (a) until written approval is obtained from the applicable reviewing agency.

(c) Revisions to previously approved plans shall be reviewed in accordance with sub. (3).

(d) If revisions under par. (a) are submitted to and approved by the department, the owner of the site for the POWTS shall file the revisions with the county which issued the sanitary permit.

(5) LIMITATION OF RESPONSIBILITY. A conditional approval of a plan by the department may not be construed as an assumption by the department of any responsibility for the design of the POWTS or any component of the system. The department does not hold itself liable for any defects in construction, nor for any damages that may result from a specific installation.

(6) REVOCATION OF APPROVAL. (a) The department may revoke any plan approval issued under this section for any false statements or misrepresentation of facts on which the approval was based.

(b) The designated agent or governmental unit may revoke any plan approval issued by the designated agent or governmental units for any false statements or misrepresentation of facts on which the approval was based.

(c) The revocation of a plan approval and the reasons for revocation shall be conveyed in writing to the submitter of the plans as noted on the application.

(d) If a plan approval is revoked, the installation or alteration of a POWTS may not continue until another plan approval is obtained.

(7) EVIDENCE OF APPROVAL. (a) When plans are required to be approved by the department or designated agent under sub. (1), the plumber responsible for the installation of a POWTS or the modification of an existing POWTS shall keep at the construction site at least one set of plans bearing evidence of approval by the department or designated agent and at least one copy of specifications.

(b) The plans and specifications shall be maintained at the construction site until the POWTS installation or modification is completed and an opportunity for a final inspection occurs in accordance with s. Comm 83.26.

(c) The plans and specifications shall be made available to the department or the governmental unit upon request.

Comm 83.23 REVIEW AGENT STATUS. (1) Upon request from a governmental unit, the department may delegate to the governmental unit the responsibility to review plans for one or more of the types of POWTS delineated in Table 83.22-2 which are to be or are located within the jurisdiction of that governmental unit.

(2) A request by a governmental unit to review plans for the types of POWTS delineated in Table 83.22-2 shall be made in writing. The request shall include all of the following:

(a) The types of POWTS for which delegation is desired.

(b) Information delineating how the plans are to be processed and reviewed.

(c) Information on how plan review decisions are to be recorded and maintained.

(3) The delegation of plan review by the department shall be contingent upon a governmental unit's request demonstrating sufficient capabilities to complete the reviews, including all of the following:

(a) The employment of one or more individuals who are certified by the department as a POWTS inspector to perform the plan review.

(b) The involvement of one or more individuals who are certified soil testers, to provide assistance in the plan review process.

Note: The requirements of this subsection do not require the employment of 2 individuals to perform plan review. The individual who is to perform the plan review may also be the certified soil tester.

(4) (a) The department shall provide the governmental unit with a written decision of delegation or denial of delegation relative to a request under this section concerning plan review.

(b) The delegation for plan review shall be contingent upon the governmental unit acknowledging that the submission and review of plans under s. Comm 83.22 (1) may, at the discretion of the submitter, be made to the department or the designated agent.

(5) The department shall include as part of governmental unit audits conducted under s. 145.20 (3) (b), Stats., an evaluation of the plan review functions which are delegated to a governmental unit under this section.

(6) A governmental unit that wishes to discontinue the delegated plan review function under this section shall notify the department in writing at least 30 days prior to the discontinuance.

(7) The recognition as a review agent may be revoked by the department in accordance with s. 145.20 (3) (a) 2., Stats.

Comm 83.24 PETITIONS FOR VARIANCE. (1) The department shall consider and may grant a variance to a provision of this chapter in accordance with ch. ILHR 3.

Note: The petition for variance process is to allow the owner of a proposed or existing POWTS to ask the department's recognition of an alternative method or means for complying with the intent of a specific rule.

(2) (a) Pursuant to s. 145.24, Stats., the department may not approve a petition for variance for an existing POWTS which is determined to be a failing private onsite wastewater treatment system.

(b) For the purposes of this subsection, the department shall consider a petition for variance if the existing POWTS is not considered failing as described in s. 145.245 (4), Stats.

Comm 83.25 GOVERNMENTAL PROGRAMS. (1) DELEGATION OF RESPONSIBILITIES. (a) Pursuant to s. 145.20 (1) (am), Stats., the delegation by a governmental unit of the administration and enforcement of this chapter to a town sanitary district or public inland lake protection and rehabilitation district shall be by ordinance.

(b) A copy of an ordinance delegating administration and enforcement of this chapter to a town sanitary district or public inland lake protection and rehabilitation district shall be forwarded to the department at least 30 days prior to the effective date of the ordinance.

(2) ISSUANCE OF BUILDING PERMITS. (a) General. Pursuant to s. 66.036, Stats., the issuance of building permits by a municipality for unsewered properties shall be in accordance with this subsection.

Note: See appendix for a reprint of s. 66.036, Stats.

(b) New construction. A municipality may not issue a building permit to commence construction or installation of a structure that necessitates the use of a POWTS to serve the structure, unless:

1. The owner of the property possesses a sanitary permit for the installation of a POWTS in accordance with s. Comm 83.21; or

Note: Section Comm 83.21 outlines the procedures for the issuance of sanitary permits. Sections 145.135 and 145.19, Stats., mandate that no private sewage system may be installed unless the owner of the property holds a valid sanitary permit.

2. A POWTS of adequate capability and capacity to accommodate the wastewater flow and contaminant load already exists to serve the structure.

Note: See ss. Comm 83.02 and 83.03 concerning the application of current code requirements to existing POWTS.

(c) Construction affecting wastewater flow or contaminant load. 1. A municipality may not issue a building permit to commence construction of any addition or alteration to an existing structure when the proposed construction will modify the design wastewater flow or contaminant load, or both, to an existing POWTS, unless the owner of the property:

a. Possesses a sanitary permit to either modify the existing POWTS or construct a POWTS to accommodate the modification in wastewater flow or contaminant load, or both; or

b. Provides documentation to verify that the existing POWTS is sufficient to accommodate the modification in wastewater flow or contaminant load, or both.

2. For the purpose of this paragraph, a modification in wastewater flow or contaminant load shall be considered to occur:

a. For public buildings, facilities and places of employment, when there is a proposed change in occupancy of the structure; or the proposed modification affects either the type or number of plumbing appliances, fixtures or devices discharging to the system; and

b. For dwellings, when there is an increase or decrease in the number of bedrooms; or the proposed modification affects either the type or number of plumbing appliances, fixtures or devices discharging to the system.

(d) Documentation of existing capabilities. Documentation to verify whether an existing POWTS can accommodate a modification in wastewater flow or contaminant load, or both, shall include at least one of the following:

1. A copy of the plan for the existing POWTS that delineates minimum and maximum performance capabilities and which has been previously approved by the department or the governmental unit.

2. Information on the performance capabilities for the existing POWTS that has been recognized through a product approval under ch. Comm 84.

3. A written investigative report prepared by an architect, engineer, designer of plumbing systems, designer of private sewage systems, master plumber, master plumber-restricted service or certified POWTS inspector analyzing the proposed modification and the performance capabilities of the existing POWTS.

(e) Setbacks. 1. A municipality may not issue a building permit for construction of any structure or addition to a structure on a site where there exists a POWTS, unless the proposed construction conforms to the applicable setback limitations.

Note: The applicable setback limitations are determined based upon the rules in effect at the time when the sanitary permit was issued for the existing POWTS, or when the POWTS was installed if no sanitary permit was required or obtained. See appendix for further information.

2. The applicant for a building permit shall provide documentation to the municipality issuing the building permit showing the location and setback distances for the proposed construction relative to all of the following:

a. Existing POWTS treatment components.

b. Existing POWTS holding components.

c. Existing POWTS dispersal components.

Note: A municipality which issues building permits may delegate to the governmental unit responsible for issuing sanitary permits the determination of whether the proposed construction will affect or interfere with an existing POWTS relating to capability or location of the existing POWTS.

Comm 83.26 INSPECTIONS AND TESTING. (1) (a) Pursuant to s. 145.02 (3) (c), Stats., the department or governmental unit may inspect the construction, installation, operation or maintenance of a POWTS to ascertain whether the POWTS conforms to plans approved by the department or governmental unit, the conditions of approval and this chapter.

(b) The department may issue an order directing an immediate cessation of the installation of a POWTS or the modification to an existing POWTS for failure to comply with a corrective order.

(c) Pursuant to ss. 145.02 (3) (f) and 145.20 (1) (a) and (2) (f), Stats., an individual authorized by the department or a governmental unit to administer and enforce this chapter may issue orders to abate human health hazards relating to this chapter.

Note: Section Comm 5.66 delineates qualifications and responsibilities for POWTS inspectors.

(d) Pursuant to s. 145.20 (2) (e) and (g), Stats., nothing in this chapter shall limit a governmental unit's authority and power to inspect or require an evaluation of a POWTS, including an existing POWTS at times or for activities not covered under this section.

(2) (a) When a sanitary permit is required under s. Comm 83.21 (1), no part of a POWTS component may be covered nor any POWTS component put into service until the governmental unit or the department has had an opportunity to inspect the system in accordance with this subsection.

Note: Pursuant to s. 145.20 (2), Stats., an individual authorized by a governmental unit to administer and enforce the provisions of chs. Comm 82 to 87 relative to POWTS is required to be a certified POWTS inspector under s. Comm 5.66.

(b) The master plumber or the master plumber-restricted service responsible for the installation of a POWTS or the modification to an existing POWTS shall notify the governmental unit when the work will be or is ready for inspection. The notification shall be in person, in writing or by telephone or other electronic communication in a format acceptable to the governmental unit performing the inspection.

(c) The master plumber or the master plumber-restricted service responsible for the installation of a POWTS or the modification shall maintain records of the inspection notifications. The records shall include the date and time of notification and the name of the person contacted.

(d) The master plumber or master plumber-restricted service responsible for the POWTS installation or modification shall provide the necessary equipment and properly credentialed personnel required for the inspection as requested by the governmental unit or department.

(e) If an inspection is not made by the end of the next workday, excluding Saturdays, Sundays, and holidays, after the requested inspection day, the master plumber or the master plumber-restricted service may proceed with the installation of the POWTS, including backfilling and covering.

(3) Pursuant to s. 145.20 (2) (g), Stats., a governmental unit by ordinance may require other inspections in addition to that specified under this section.

(4) A governmental unit shall maintain a written record of each inspection conducted for a POWTS. The record shall include information relative to all of the following:

(a) The location of the POWTS.

(b) The date of the inspection.

(c) The nature and findings of the inspection.

(5) Before being put into service, components of a POWTS shall be tested in accordance with the manufacturer's specifications or as specified as a condition of approval under ss. Comm 83.22 and 84.10.

Comm 83.27 EXPERIMENTAL POWTS. (1) The provisions of this chapter or ch. Comm 84 are not intended to prevent the design and use of an innovative method or concept for the treatment or dispersal of domestic wastewater by means of an experimental method which is not specifically addressed by this chapter, provided the design has been first approved by the department in accordance with s. Comm 84.50 (1) and (3).

(2) The department shall review a submittal of an experimental POWTS under this section with input from the technical advisory committee created under s. Comm 84.10 (3) (d).

Comm 83.28 PENALTIES. Penalties for violations of this chapter shall be assessed in accordance with s. 145.12, Stats.

Note: Section 145.12 (4), Stats., indicates that any person who violates any order under s. 145.02 (3) (f) or 145.20 (2) (f) or any rule or standard adopted under s. 145.13 shall forfeit not less than $10 nor more than $1,000 for each violation. Each violation of an order under s. 145.02 (3) (f) or 145.20 (2) (f) or any rule or standard adopted under s. 145.13 constitutes a separate offense and each day of continued violation is a separate offense.

Comm 83.29 RANGE OF RESPONSES. (1) (a) Pursuant to s. 160.21, Stats., the department may respond with any one or more of the actions delineated under Table 83.29 if the preventive action limits or enforcement standards enumerated in ch. NR 140 Tables 1 and 2 are exceeded at a point of standards application as a result of the performance of a POWTS, except as provided in par. (b).

(b) Pursuant to s. 160.255, Stats., the design, installation, use or maintenance of a POWTS is not required to comply with the nitrate standard specified in ch. NR 140 Table 1, except as provided under s. Comm 83.03 (5).

Table 83.29
DEPARTMENT RANGE OF RESPONSES

- Gather more data relative to the cause and significance of the exceedence.
- Determine whether the situation is a human health hazard.
- Issue orders to change or comply with the management or maintenance plan of a specific POWTS or type of onsite wastewater system.
- Issue orders to conform with this chapter.
- Determine whether the exceedence is an isolated problem, or is likely to recur.
- Revise or revoke a product approval issued under ch. Comm 84 for a treatment or dispersal component.
- Revise the rules of this chapter or chs. Comm 81, 82, 84 or 85.

(2) Pursuant to s. 160.21 (2), Stats., the point of standards application relative to the performance of POWTS shall be:

(a) Any point of present groundwater use for potable water supply; and

(b) Any point beyond the boundary of the property on which the facility, practice or activity is located.

Subchapter III
GENERAL REQUIREMENTS

Comm 83.30 PURPOSE. This subchapter establishes parameters for the types of POWTS that may be used and how a POWTS may be used.

Comm 83.31 PRINCIPLES. A POWTS shall be used in such a manner so as not to render the POWTS inoperative or beyond its capabilities, and thereby, create a human health hazard.

Comm 83.32 PROHIBITIONS AND LIMITATIONS. (1) PROHIBITIONS. (a) 1. Except as provided in subds. 2. and 3., the introduction of wastewater or substances in such quantities or concentrations to a POWTS, including a POWTS existing prior to [the effective date of this chapter . . . revisor to insert effective date], that results in exceeding the enforcement standards and preventive action limits specified in ch. NR 140 Tables 1 and 2 at a point of standards application shall be prohibited.

2. Pursuant to s. 160.255, Stats., the design, installation, use or maintenance of a POWTS is not required to comply with the nitrate standard specified in ch. NR 140 Table 1, except as provided under s. Comm 83.03 (5).

3. The department has determined that it is not technically or economically feasible for the final effluent from a POWTS to comply with the preventive action limit for chloride specified in ch. NR 140, Table 2, as existed on June 1, 1998.

(b) Substances deleterious to a POWTS shall be intercepted, diluted or treated in accordance with s. Comm 82.34 prior to the substance discharging into a POWTS.

(c) The use of a cesspool as a POWTS is prohibited, including any cesspool existing prior to [the effective date of this chapter . . . revisor to insert effective date].

(d) The discharge of domestic wastewater to the surface waters of the state is prohibited, including by means of plumbing outfall pipes existing prior to [the effective date of this chapter . . . revisor to insert effective date].

(e) The discharge of domestic wastewater to the ground surface is prohibited, including by means of plumbing outfall pipes existing prior to [the effective date of this chapter . . . revisor to insert effective date].

(f) The infiltrative surface of a treatment or dispersal component of a POWTS existing prior to December 1, 1969, which consists in part of in situ soil may not be located in bedrock or groundwater.

(g) The use of camping unit transfer containers as a POWTS holding component shall be restricted to campgrounds permitted by the department of health and family services under ch. HFS 178.

(2) LOCAL PROHIBITIONS. (a) A municipality may by ordinance prohibit or limit the installation and use of the following technologies, designs or methods as POWTS components:

1. A holding tank.

2. A constructed wetland as a POWTS treatment component.

3. Evapotranspiration bed as a POWTS treatment component.

(b) A municipality may enact ordinances that are more restrictive than the applicable state minimum standards for those POWTS existing prior to December 1, 1972, except as provided in s. Comm 83.03 (2) (b) 2.

Note: The date, December 1, 1972, reflects the point in time at which the state plumbing code became a state-wide uniformly applied code rather than just a minimum standard. Since December 1, 1969, the state plumbing code required 36 inches of soil between the infiltrative surface of a POWTS and high groundwater or bedrock.

(c) A municipality may by ordinance restrict the ownership of a POWTS to a governmental entity or agency when the POWTS is to serve 2 or more structures or buildings that are located on more than one property.

(3) LIMITATIONS. (a) Industrial wastes and wastewater may not, unless approved by the department of natural resources, be introduced into a plumbing drain system that is served by a POWTS.

Note: The department of natural resources regulates industrial wastes under ch. NR 214. Section NR 214.02 reads in part: "This chapter applies to those discharges of industrial wastes to land treatment systems not regulated under ch. NR 518. This includes but is not limited to liquid wastes, by-product solids and sludges generated by: fruit and vegetable processing, dairy products processing, meat, fish and poultry products processing, mink raising operations, aquaculture, commercial laundromat and motor vehicle cleaning operations and any other industrial, commercial or agricultural operation which results in a point source discharge that has no detrimental effects on the soils, vegetation or groundwater of a land treatment system".

(b) Storm and clear water wastes may be introduced into a plumbing drain system that is served by a POWTS, if the POWTS is designed to accept those wastes. A POWTS may accept wastes permitted under s. Comm 82.36 (3) (b).

Note: Section Comm 82.36 (3) (b) 4. permits the discharge of a maximum of 20 gallons per day of clear water wastes to a sanitary drain system connected to a publicly owned treatment works.

(c) Except as provided in ch. NR 116, a POWTS may not be installed in a floodway.

Note: See s. Comm 83.45 (6) for installations in a floodfringe.

Comm 83.33 ABANDONMENT. A subsurface tank or pit that is no longer used as a POWTS component shall be abandoned by complying with all of the following:

(1) Disconnecting all piping to the tanks and pits.

(2) Sealing all disconnected piping to the tanks and pits in accordance with s. Comm 82.21 (2) (d).

(3) Pumping and disposing of the contents from all tanks and pits.

Note: The disposal of the contents from treatment tanks, distribution tanks, seepage pits and holding components is addressed in ch. NR 113 which is administered by the department of natural resources.

(4) Removing all tanks or removing the covers of the tanks or pits and filling the tanks and pits with soil, gravel or an inert solid material.

Note: Pursuant to s. 281.45, Stats., municipalities and sanitary districts may determine the availability of, and require connection to, public sewers. Section 281.45, Stats., reads in part: "HOUSE CONNECTIONS. To assure preservation of public health, comfort and safety, any city village or town or town sanitary district having a system of waterworks or sewerage, or both, may by ordinance require buildings used for human habitation and located adjacent to a sewer or water main, or in a block through which one or both of these systems extend, to be connected with either or both in the manner prescribed. If any person fails to comply for more than 10 days after notice in writing the municipality may impose a penalty or may cause connection to be made, and the expense thereof shall be assessed as a special tax against the property."

Subchapter IV
DESIGN AND INSTALLATION

Comm 83.40 PURPOSE. This subchapter establishes minimum parameters for the design and installation of a POWTS for the purpose of:

(1) Safeguarding public health;

(2) Minimizing the level of substances which have a reasonable probability of entering waters of the state; and

(3) Delineating performance standards by which to evaluate designs.

Comm 83.41 PRINCIPLES. (1) A POWTS shall be designed to hold wastewater or reduce the contaminant load and disperse the flow of wastewater as specified in this subchapter.

(2) A POWTS shall be designed to have sufficient capacity to accommodate the anticipated quantities of wastewater that will be discharged into the system.

(3) A POWTS shall be designed to have sufficient ability to treat or separate out the anticipated types, quantities and concentrations of wastewater contaminants to be discharged into the system so that the dispersed wastewater will not create a human health hazard.

(4) A POWTS shall be designed to disperse wastewater below the surface of the ground.

Comm 83.42 APPLICATION. (1) DESIGN BASIS. The design of a POWTS shall be based on the methods and limitations outlined in this subchapter or on other documented data acceptable to the department.

(2) DESIGN RELATION TO ACTUAL FLOWS AND CONTAMINANT LOADS. For any situation where it is known that the wastewater flow or contaminant load exceeds the parameters of this subchapter, the POWTS shall be designed in relation to the known flow or load.

(3) DESIGN CONSIDERATIONS. The determination of contaminant reduction and hydraulic dispersal shall take into account the flow and contaminant load of the influent wastewater, the ability of all components to reduce contaminant load and disperse hydraulic flow into the environment, and all accepted engineering principles in regards to flow velocities and friction losses in the design.

Comm 83.43 GENERAL REQUIREMENTS. (1) MATERIALS. The components of a POWTS shall be constructed of materials which are of a type recognized under this chapter or ch. Comm 84.

(2) DESIGN FLOW. In order to accommodate peak wastewater flow, the design wastewater flow of a POWTS shall equal at least 150% of the estimated daily flow generated from a dwelling, building or facility.

(3) ESTIMATED DAILY COMBINED FLOW FOR A POWTS SERVING A DWELLING. The estimated daily wastewater flow of combined graywater and blackwater from a dwelling shall be based on one or more of the following:

(a) The following equation:

100 gallons X B = F

Where: B = number of bedrooms, based on 2 persons per bedroom, unless otherwise approved by the department; see par. (b) for flows based upon number of residents.

F = Estimated daily wastewater flow per dwelling per day (in gallons), excluding storm water discharges.

(b) The following equation:

50 gallons X R = F

Where: R = number of residents included in design; see par. (a) for flows based upon number of bedrooms

F = Estimated daily wastewater flow per dwelling per day (in gallons), excluding storm water discharges.

Note: See appendix for further information.

(c) Measured daily wastewater flow of the influent source over a period of time representative of dwelling's use or occupancy.

Note: See appendix for further information on flows.

(d) A detailed estimate of wastewater flow based upon per capita or per function.

(4) ESTIMATED DAILY SEGREGATED GRAYWATER FLOW FOR A POWTS SERVING A DWELLING. The estimated daily wastewater flow of graywater from a dwelling shall be based on one or more of the following:

(a) The following equation:

60 gallons X B = F

Where: B = number of bedrooms, based on 2 persons per bedroom, unless otherwise approved by the department; see par. (b) for flows based upon number of residents.

F = Estimated daily graywater flow per dwelling per day (in gallons), excluding storm water discharges.

(b) The following equation:

30 gal. X R = F

Where: R = number of residents included in design; see par. (a) for flows based upon number of bedrooms

F = Estimated daily graywater flow per dwelling per day, excluding storm water discharges.

Note: See appendix for further information.

(c) Measured daily graywater flow of the influent source over a period of time representative of dwelling's use or occupancy.

(d) A detailed estimate of graywater flow based upon per capita or per function.

(5) ESTIMATING SEGREGATED BLACKWATER FLOW FOR A POWTS SERVING A DWELLING. The estimated daily wastewater flow of blackwater from a dwelling shall be based on one or more of the following:

(a) The following equation:

40 gallons X B = F

Where: B = number of bedrooms, based on 2 persons per bedroom, unless otherwise approved by the department; see par. (b) for flows based upon number of residents.

F = Estimated daily blackwater flow per dwelling per day (in gallons).

(b) The following equation:

20 gal. X R = F

Where: R = number of residents in design; see par. (a) for flows based upon number of bedrooms

F = estimated daily blackwater flow per dwelling per day.

(c) Measured daily blackwater flow of the influent source over a period of time representative of dwelling's use or occupancy.

(d) A detailed estimate of blackwater flow based upon per capita or per function.

(6) ESTIMATING WASTEWATER FLOW FOR COMMERCIAL FACILITIES. The estimated daily wastewater flow of graywater, blackwater, or combined graywater-blackwater flow from commercial facilities shall be based on one or more of the following:

(a) Measured daily wastewater flow over a period of time representative of the facility's use or occupancy.

(b) A detailed estimate of wastewater flow based upon per capita or per function.

Note: See appendix for further information.

(7) ESTIMATING CONTAMINANT LOADS. Estimates of contaminant loads from dwellings and public facilities shall be based on a detailed analysis including all contaminants listed in sub. (8) and s. Comm 83.44 (2) (a).

Note 1: See appendix for further information.

Note 2: See Note under s. Comm 83.32 (2) for information relative to industrial wastes.

(8) FINAL EFFLUENT QUALITY. The wastewater quality dispersed from the last POWTS treatment component shall contain fecal coliform of less than 200 CFU, colony forming units, per 100 ml.

(9) GENERAL DESIGN REQUIREMENTS. (a) Flow velocity. 1. Piping installed in a POWTS shall be designed and installed to supply wastewater to POWTS treatment and dispersal components while maintaining the velocity required to ensure operation of the POWTS.

2. Gravity flow piping between POWTS components shall be installed at a pitch that produces a computed flow velocity of at least one foot per second when flowing half full.

3. Pressurization equipment or devices and piping upstream of a POWTS treatment or dispersal component consisting in part of in situ soil shall be installed to produce a computed velocity of at least 2 feet per second.

4. Gravity piping within a POWTS treatment or dispersal component consisting in part of in situ soil shall be installed level or pitched downstream a maximum 4 inches per 100 feet.

(b) Distribution and drain pipe sizing. The piping within a POWTS shall be of a diameter to permit the operation of the POWTS.

(c) Frost protection. All POWTS components shall be designed to be protected from freezing temperatures that could detrimentally affect component operation.

(d) Component placement. The orientation of a POWTS treatment or dispersal component consisting in part of in situ soil shall take into account variations in elevation, slope orientation, and other conditions that could affect component performance.

(e) Alarms or warning systems. 1. a. A POWTS component utilizing a mechanical device shall be provided with an automatic visual or audible means of notifying the user of the POWTS of a mechanical device failure in accordance with this subdivision.

Note: In accordance with s. Comm 16.28, an alarm that is electrically powered is to be on a separate circuit from the circuit supplying power to the mechanical device.

b. An alarm indicating the failure of a pump shall remain audible or visible until manually turned off.

c. Where duplex pumping equipment is employed to provide continuous component operation in the event that one pump fails, the pumps shall be installed in such a manner so as to provide the continuous operation automatically.

2. A POWTS holding tank shall be provided with an automatic visual or audible means of notifying the user of the POWTS of the necessity for pumping.

3. A POWTS treatment or dispersal component consisting in part of in situ soil that is located in an area subject to seasonal soil saturation shall include provisions for automatic shut down of the component during saturated periods.

(f) Accessibility. The design of a POWTS shall include provisions to provide access to all components that require maintenance or observation.

(g) Anchoring system components. An exterior subsurface POWTS treatment tank or POWTS holding component to be installed in an area subject to saturated conditions shall be installed so as to prevent flotation.

Note: See appendix for further information.

(h) Treatment byproducts. 1. All treatment byproducts discharged from or as a result of operating a POWTS shall be disposed of so as not to create a human health hazard.

Note: The disposal of the contents of holding tanks and the sludge, scum, and contaminated liquids from treatment tanks and components is regulated by the department of natural resources in accordance with chs. NR 113 and NR 204.

2. Deleterious or hazardous materials segregated out from effluent flows shall be disposed of in a manner conforming with the rules of the state agency having jurisdiction.

3. Effluent from a POWTS shall be dispersed so as not to create a human health hazard.

4. All POWTS components within a building or structure shall be gas tight unless provisions are made assuring the safety of individuals entering the building or structure.

(i) Site parameters and limitations. 1. POWTS treatment, holding and dispersal components shall be located so as to provide the minimum horizontal setback distances as outlined in Table 83.43-1 or as otherwise approved by the department.

Note: Chapter NR 812 establishes upslope location criteria for wells relative to contamination sources.

Table 83.43-1
HORIZONTAL SETBACK PARAMETERS

Physical Feature	POWTS Treatment Component Consisting in Part of In Situ Soil or Dispersal Component	Exterior Subsurface Treatment Tank or Holding Tank Component
Building	10 feet	5 feet[a]
Property Line	5 feet	2 feet
Swimming Pool	15 feet	none[b]
OHWM of navigable waters	50 feet	10 feet
Water Service and Private Water Main	10 feet	10 feet
Well	chs. NR 811 & 812[c]	chs. NR 811 & 812[c]

OHWM = Ordinary High-Water Mark
Note a: Except camping unit transfer containers
Note b: See s. Comm 84.43 (8) (g) 1 relative to accessibility.
Note c: Portions of chs. NR 811 & 812 are reprinted in the appendix.

Comm 83.44 DESIGN PARAMETERS FOR POWTS COMPONENTS CONSISTING OF IN SITU SOIL. (1) EVALUATION. POWTS treatment and dispersal components consisting in part of in situ soil shall be evaluated in accordance with ch. Comm 85.

(2) INFLUENT QUALITY. (a) Influent quality to a POWTS treatment or dispersal component consisting in part of in situ soil may not exceed all of the following:

1. A monthly average of 30 mg/L grease and oil.

2. A monthly average of 220 mg/L BOD_5.

3. A monthly average of 150 mg/L TSS.

(b) The monthly average under par. (a) shall be calculated as the sum of all measurements taken over 30 consecutive days, with at least 6 measurements occurring on 6 separate days, and divided by the number of measurements taken during that period.

(c) Influent to a POWTS treatment or dispersal component that consists in part of in situ soil may not contain any solid or suspended solid exceeding 1/8 inch in diameter.

(3) INFILTRATIVE SURFACE. (a) The infiltrative surface of a POWTS treatment component consisting in part of in situ soil or dispersal component shall be located at least 12 inches above the estimated highest groundwater elevation and bedrock.

(b) 1. At least 6 inches of the 12-inch soil separation required under subpar. a. shall be an in situ soil type for which soil treatment capability has been credited under Table 83.44-3.

2. The purpose of the 6 inches of in situ soil under subd. 1. is to assure that the wastewater will be assimilated into subsurface soils without ponding on the ground surface.

(c) The infiltrative surface of a POWTS treatment component consisting in part of in situ soil or dispersal component shall be located at least one inch below the finished grade.

(4) CAPABILITIES. (a) 1. a. Except as provided under subd. 2, the dispersal capability of a POWTS treatment or dispersal component consisting in part of in situ soil shall be limited to that specified in Table 83.44-1 or Table 83.44-2 based upon effluent quality concentrations.

b. Under subpar. a. the effluent quality parameter with the highest concentration shall determine the maximum application rate.

c. Except as provided in par. (c), the soil conditions at the infiltrative surface of the POWTS treatment or dispersal component consisting in part of in situ soil shall be used to establish the maximum application rate for a POWTS dispersal design.

d. The application rates specified under Table 83.44-1 shall only be recognized where the percolation results have been filed with the governmental unit before July 2, 1994.

2. Maximum soil application rates other than those specified in Tables 83.44-1 or 83.44-2 may be employed for the design of a POWTS treatment or dispersal component consisting in part of in situ soil if documentation is submitted and approved under s. Comm 83.22 and is based on soil permeability and evapotranspiration estimates correlated to specific soil characteristics described in a detailed morphological soil evaluation.

(b) The treatment capability of a POWTS treatment component consisting in part of in situ soil shall be limited to that specified in Table 83.44-3, unless otherwise approved by the department.

(c) The design of a treatment or dispersal component consisting in part of situ soil shall reflect restrictive soil horizons that affect treatment or dispersal.

(5) EFFLUENT DISTRIBUTION. (a) Effluent distribution to in situ soil shall be such that no dose exceeds 20% of the total design wastewater flow.

(b) Effluent distribution to silt loam or finer soil material with weak platy or massive structure shall be accomplished by means of pressurized distribution.

Table 83.44-1
MAXIMUM SOIL APPLICATION RATES
BASED UPON PERCOLATION RATES

Percolation Rate (minutes per inch)	Maximum Monthly Average $BOD_5 > 30$ mg/L ≤ 220 mg/L TSS > 30 mg/L ≤ 150 mg/L (gals/sq ft/day)	Maximum Monthly Average $BOD_5 \leq 30$ mg/L TSS ≤ 30 mg/L (gals/sq ft/day)
0 to less than 10	0.8	1.2
10 to less than 30	0.6	1.2
30 to less than 45	0.5	1.0
45 to 60	0.3	0.6
greater than 60 to 120	0.2	0.4

Note: > means greater than
$\leq$ means less than or equal to

Table 83.44-2
MAXIMUM SOIL APPLICATION RATES
BASED UPON MORPHOLOGICAL SOIL EVALUATIONS

Soil Texture	Soil Structure	Maximum Monthly Average $BOD_5 > 30 \leq 220$mg/L TSS > 30 $\leq$150mg/L (gals/sq ft/day)	Maximum Monthly Average $BOD_5 \leq 30$ mg/L TSS ≤ 30 mg/L (gals/sq ft/day)
Coarse sand or coarser	N/A	0.8	1.6
Loamy coarse sand	N/A	0.8	1.2
Sand	N/A	0.8	1.2
Loamy sand	N/A	0.8	1.2
Fine sand	Weak to strong	0.6	0.6
Fine sand	Massive	0.5	0.5
Loamy fine sand	Weak to strong	0.6	0.6
Loamy fine sand	Massive	0.5	0.5
Very fine sand	N/A	0.5	0.5
Loamy very fine sand	N/A	0.5	0.5
Sandy loam	Moderate to strong	0.6	0.9
Sandy loam	Weak, weak platy	0.5	0.5

Table 83.44-2 continued

Soil Texture	Soil Structure	Maximum Monthly Average	
		$BOD_5 > 30 \leq 220$mg/L TSS $> 30 \leq 150$mg/L	$BOD_5 \leq 30$ mg/L TSS ≤ 30 mg/L
Sandy loam	Massive	0.4	0.4
Loam	Moderate to strong	0.6	0.7
Loam	Weak, weak platy	0.5	0.5
Loam	Massive	0.4	0.4
Silt loam	Moderate to strong	0.6	0.6
Silt loam	Weak	0.3	0.3
Silt loam	Weak platy	0.3	0.3
Silt loam	Massive	0.2	0.2
Sandy clay loam	Moderate to strong	0.5	0.5
Sandy clay loam	Weak	0.3	0.3
Sandy clay loam	Weak platy	0.3	0.3
Sandy clay loam	Massive	0.2	0.2
Clay loam	Moderate to strong	0.5	0.5
Clay loam	Weak	0.3	0.3
Clay loam	Weak platy	0.3	0.3
Clay loam	Massive	0.2	0.2
Silty clay loam	Moderate to strong	0.4	0.5
Silty clay loam	Weak	0.3	0.3
Silty clay loam	Weak platy	0.3	0.3
Silty clay loam	Massive	0.2	0.2
Sandy clay	Moderate to strong	0.3	0.3
Sandy clay	Massive to weak	0.05	0.05
Clay	Moderate to strong	0.3	0.3
Clay	Massive to weak	0.05	0.05
Silty clay	Moderate to strong	0.3	0.3
Silty clay	Massive to weak	0.05	0.05

Note: > means greater than
< means less than or equal to
N/A means Not Applicable

Table 83.44-3
SOIL TREATMENT CAPABILITY FOR FECAL COLIFORM
Minimum Depth of Unsaturated Soil Required to
Attain Level in s. Comm 83.43 (8)[a]
(in inches)

Soil Texture	Soil Structure	Fecal Coliform
Very coarse sand or coarser	N/A[b]	NC
Coarse sand	N/A[b]	60
Loamy coarse sand (w/ ≤35% coarse fragments)	N/A[b]	60
Loamy coarse sand (w/ >35% coarse fragments)	N/A[b]	NC
Sand (w/ ≤35% coarse fragments)	N/A[b]	36
Sand (w/ >35% coarse fragments)	N/A[b]	NC
Loamy sand	N/A[b]	36
Fine sand	Weak to strong	36
Fine sand	Massive	36
Loamy fine sand	Weak to strong	36
Loamy fine sand	Massive	36
Very fine sand	N/A[b]	36
Loamy very fine sand	N/A[b]	36
Sandy loam	Moderate to strong	36
Sandy loam	Weak, weak platy	36
Sandy loam	Massive	36
Loam	Moderate to strong	36
Loam	Weak, weak platy	36
Loam	Massive	36
Silt loam	Moderate to strong	36
Silt loam	Weak	36
Silt loam	Weak platy	36
Silt loam	Massive	36
Sandy clay loam	Moderate to strong	36
Sandy clay loam	Weak	36
Sandy clay loam	Weak platy	36
Sandy clay loam	Massive	36
Clay loam	Moderate to strong	36
Clay loam	Weak	36
Clay loam	Weak platy	36
Clay loam	Massive	36
Silty clay loam	Moderate to strong	36
Silty clay loam	Weak	36

Table 83.44-3 continued

Soil Texture	Soil Structure	Fecal Coliform
Silty clay loam	Weak platy	36
Silty clay loam	Massive	36
Sandy clay	Moderate to strong	36
Sandy clay	Massive to weak	36
Clay	Moderate to strong	36
Clay	Massive to weak	36
Silty clay	Moderate to strong	36
Silty clay	Massive to weak	36

Note a: Influent quality as per s. Comm 83.44 (2)
Note b: Structure will not affect performance
N/A means Not Applicable
NC means No Credit
≤ means less than or equal to
> means great than

(6) ORIENTATION. (a) The infilitrative surface of a distribution cell within a POWTS treatment or dispersal component consisting in part of in situ soil and located above original grade shall be oriented so that the slope of the original grade below the cell does not vary in elevation more than one percent of the cell length for the entire length of the cell.

Note: See appendix for an illustration depicting a distribution cell.

(b) The infilitrative surface of a distribution cell within a POWTS treatment or dispersal component consisting in part of situ soil and located below the surface of the original grade shall be level.

(7) GEOMETRY. The geometry of a subsurface treatment or dispersal component consisting in part of the in situ soil shall take into account the gas exchange necessary for treatment or dispersal of the influent.

Comm 83.45 INSTALLATION. (1) GENERAL. A POWTS shall be constructed and installed in such a manner to hold wastewater or reduce the contaminant load and disperse the flow of wastewater in accordance with this subchapter and the plan approval under s. Comm 83.22.

(2) FROZEN SOIL. POWTS treatment and dispersal components consisting in part of in situ soil may not be installed if the soil is frozen at the infiltrative surface of the component.

(3) SNOW COVER. Snow cover shall be removed before excavating or installing POWTS treatment and dispersal components consisting in part of in situ soil.

(4) MOISTURE. The soil moisture content for a POWTS treatment or dispersal component consisting in part of in situ soil shall be evaluated immediately prior to installation of the component. If the soil at the infiltrative surface can be rolled into a 1/4-inch wire, the installation may not proceed.

(5) BEDDING. All vessels and pipes of a POWTS shall be bedded in accordance with a product approval under s. Comm 84.10 or a plan approval under Comm 83.22.

(6) FLOOD FRINGE. (a) All POWTS treatment tanks, holding and dispersal tanks that are located in flood fringe areas shall be made and maintained watertight to prevent infiltration.

(b) Vent pipes and observation pipes serving POWTS components that are located in flood fringe areas shall terminate at least 2 feet above regional flood levels.

Note: See s. Comm 83.43 (9) (f) relative to anchoring provisions.

Subchapter V
MANAGEMENT

Comm 83.50 PURPOSE. The purpose of this subchapter is to:

(1) Establish monitoring and maintenance requirements for POWTS in order to ensure that POWTS will operate as designed and thereby protect the public health and the waters of the state; and

(2) Provide the department with data by which to make regulatory decisions.

Comm 83.51 PRINCIPLES. (1) A POWTS, including a POWTS existing prior to [the effective date of this chapter . . . revisor to insert effective date], shall be maintained at all times so as not to create a human health hazard.

(2) When upon inspection of a POWTS, including a POWTS existing prior to [the effective date of this chapter . . . revisor to insert effective date], any part of the system that is found to be defective in conformance with the applicable provisions of this chapter, the installation or modification plan, or the approvals, the part shall be repaired, renovated, replaced or removed.

Note: Section Comm 87.60 (5) (b) 4 also establishes management and maintenance requirements for a POWTS that is located in a governmental unit which participates in the replacement and rehabilitation program under s. 145.245, Stats.

Comm 83.52 RESPONSIBILITIES. (1) (a) The owner of a POWTS shall be responsible for operating and maintaining the POWTS in accordance with this chapter and the approved management plan under s. Comm 83.54 (1).

(b) The owner of a POWTS existing prior to [the effective date of this chapter . . . revisor to insert effective date], shall be responsible for maintaining the POWTS in accordance with s. Comm 83.54 (4).

(2) A POWTS, including a POWTS existing prior to [the effective date of this chapter . . . revisor to insert effective date], that is not maintained in accordance with the approved management plan or as required under s. Comm 83.54 (4) shall be considered a human health hazard.

(3) The activities relating to evaluating and monitoring mechanical POWTS components after the initial installation of the POWTS in accordance with an approved management plan shall be conducted by person who holds a credential issued by the department as a registered mechanical POWTS provider.

Note: See s. Comm 5.36 concerning the application and qualification requirements to become a registered mechanical POWTS provider.

Comm 83.53 GENERAL. (1) No product for chemical or physical restoration or chemical or physical procedures for POWTS, including a POWTS existing prior to [the effective date of this chapter . . . revisor to insert effective date], may be used unless approved by the department in accordance with ss. Comm 84.10 and 84.13.

(2) Nothing in this subchapter shall limit a governmental unit's authority and power in establishing a mandatory POWTS maintenance program, including management or maintenance undertaken by the governmental unit.

Comm 83.54 MANAGEMENT REQUIREMENTS. (1) MANAGEMENT PLAN. (a) The management plan for each POWTS shall include information and procedures for maintaining the POWTS to operate and function as designed and approved.

(b) The management plan for a POWTS shall be a part of the plan submittal under s. Comm 83.22 or 84.10.

(c) The management plan for POWTS shall specify all necessary management and servicing information which may include, but is not limited to all of the following:

1. Accumulated solids or byproduct removal requirements.

2. Influent quantities and qualities and effluent quantities and qualities.

3. Metering, sampling and monitoring schedules and requirements.

4. Load and rest schedules.

5. Pumping frequency requirements.

6. Installation and inspection checklists.

7. Evaluation, monitoring and maintenance schedules for mechanical POWTS components.

8. Start up and shutdown procedures.

9. Procedure for abandonment.

(d) If the owner of the POWTS wishes to operate or maintain a POWTS differently than that specified in the approved management plan, a written request for approval to amend the management plan shall be submitted to the agency that initially reviewed the installation plan under s. Comm 83.22.

(2) METERING AND MONITORING. (a) General. The management plan specified in sub. (1) shall include the metering or monitoring of POWTS influent or effluent as specified in this subsection.

(b) Department option. The department may require the metering or monitoring of any POWTS to evaluate the operation of the POWTS.

(c) Required influent metering. Influent meters shall be installed in accordance with par. (d), if a POWTS:

1. Includes one or more holding tanks, except camping unit transfer containers;

2. Receives wastewater of a type exceeding the quality limits in s. Comm 83.44 (2), except from one- and 2-family dwellings; or

3. Is required by a POWTS component manufacturer.

(d) Metering influent flows. 1. Influent flows to POWTS shall be metered by one of the following methods:

a. Installing event counters and elapsed time meters.

b. Installing water meters to meter the water distribution system flow to the POWTS.

c. Metering wastewater flow from all parts of the plumbing system discharging to the POWTS.

d. Metering the water distribution system and metering exterior hydrant use, except as provided in subd. 2.

2. Where meters are installed on water distribution systems existing prior to [the effective date of this chapter . . . revisor to insert effective date], the entire water distribution system may be metered and the exterior hydrant usage estimated and subtracted from the total flow to meet the requirements of this paragraph.

(e) Monitoring influent and effluent loads. 1. When influent or effluent contaminants are to be monitored, samples shall be collected in accordance with the requirements of the approved management plan or, where no procedures are specified, in accordance with published sampling procedures accepted by the department.

Note: Acceptable sampling procedures include those contained in the following sources:

"Procedures Manual for Ground Water Monitoring at Solid Waste Disposal Sites" EPA SW-611, Office of Water and Waste Management, U. S. Environmental Protection Agency, Dec. 1980, Washington, D. C.

"Techniques of Water Resources Investigations of the United States Geological Survey, Guidelines for Collection and Field Analysis of Ground Water Samples for Selected Unstable Constituents," Book I, Chapter D2, U. S. Geological Survey, Washington, D. C.

"Procedures for the Collection of Representative Water Quality Data from Monitoring Wells," Cooperative Groundwater Report 7, Illinois State Water Survey, 1981, Champaign, Illinois.

"Manual of Ground Water Sampling Procedures," NWWA/EPA Series, Robert S. Kerr Environmental Research Laboratory, 1981, Ada, Oklahoma.

"Groundwater Sampling Procedures Guidelines", Wisconsin DNR, PUBL-WR-153, February 1987.

"Groundwater Sampling Procedures Field Manual", Wisconsin DNR, PUBL-WR-168, September 1987.

2. All samples collected to evaluate influent or effluent quality, except samples collected for total coliform bacteria analysis and the field analyses for pH, specific conductance and temperature, shall be analyzed by a laboratory certified under s. 144.95, Stats., and rules adopted under that section.

3. The results of the analysis required under subd. 2. shall be maintained and reported as required in the approved management plan and in accordance with s. Comm 83.55 (1) (a).

(3) SERVICING REQUIREMENTS. (a) The management plan specified in sub. (1) shall reflect the servicing schedules of POWTS components as specified in this subsection.

(b) The pumping frequency of an anaerobic treatment tank for a POWTS shall occur at least when the combined sludge and scum volume equals 1/3 of the tank volume.

(c) The pumping frequency of a holding tank for a POWTS, except for camping unit transfer containers, shall occur at least when the wastewater of the tank reaches a level of one foot below the inlet invert of the tank.

Note: The pumping of POWTS holding and treatment components, including septic tanks and holding tanks, is required to be performed by licensed pumpers under ch. NR 113.

(4) EXISTING POWTS. (a) The pumping frequency of an anaerobic treatment tank for a POWTS existing prior to [the effective date of this chapter . . . revisor to insert effective date] shall occur at least when the combined sludge and scum volume equals 1/3 of the tank volume.

(b) The pumping frequency of a holding tank for a POWTS existing prior to [the effective date of this chapter . . . revisor to insert effective date], except for camping unit transfer containers, shall occur at least when the wastewater of the tank reaches a level of one foot below the inlet invert of the tank.

(c) The servicing of POWTS treatment components other than those under pars. (a) and (b) existing prior to [the effective date of this chapter . . . revisor to insert effective date] shall be provided in accordance with the requirements specified by the manufacturer or designer of the component.

Comm 83.55 REPORTING REQUIREMENTS. (1) (a) The owner of a POWTS or their agent shall report to the department or department authorized agent at the completion of each inspection or pumping event specified in the approved management plan, except for camping transfer containers.

(b) The owner of a POWTS existing prior to [the effect date of this chapter . . . revisor to insert effective date] or their agent shall report to the department or designated agent shall report to the department or designated agent the completion of each servicing event required under s. Comm 83.54 (4), except for camping transfer containers.

(2) The management and servicing reports required under sub. (1) shall be submitted to the department or designated agent:

(a) In a manner specified by the department or designated agent;

(b) Within 10 business days from the date of inspection or pumping; and

(c) By the owner or the owner's agent.

(3) The management and servicing reports required under sub. (1) shall include the following information:

(a) A POWTS identifying number.

(b) The location of the POWTS.

(c) The date of inspection or pumping.

(d) The credential number of the individual performing the inspection or pumping.

(e) Other information required by the approved management plan.

(4) The department or designated agent may require verification of any information contained in a management and servicing report.

Note: This subsection does not require the maintaining of test data which is collected voluntarily and which is not being collected to determine compliance with this chapter.

(5) DEPARTMENT RESPONSIBILITY. (a) The department shall maintain records relating to the operation, maintenance and repair of POWTS as specified in this section for a period of not less than 6 years.

(b) Upon request by a governmental unit, the department may delegate to the governmental unit the responsibility to maintain records relating to the operation, maintenance and repair of POWTS as specified in this section.

Subchapter VI
RECOGNIZED METHODS AND TECHNOLOGIES

Comm 83.60 PURPOSE. (1) This subchapter identifies methods and technologies that have been recognized by the department under s. Comm 84.10 (3) that conform with subchs. IV and V and that may be utilized in the design of POWTS for a specific project.

(2) This subchapter does not limit the use of other designs of POWTS or POWTS components the performance of which has been recognized under s. Comm 83.22 or Comm 84.10 (3) or both.

Comm 83.61 ACCEPTABLE METHODS AND TECHNOLOGIES. Pursuant to s. Comm 84.10 (3), the department recognizes at least the following methods and technologies to be utilized in the design of POWTS:

(1) Pressure Distribution Component Manual for Private Onsite Wastewater Treatment System, October, 1, 1998.

(2) At-Grade Component Manual Using a Pressure Distribution System for Private Onsite Wastewater System, October, 1, 1998.

(3) Mound Component Manual for Septic Tank Effluent for Private Onsite Wastewater System, October, 1, 1998.

(4) Conventional Soil Absorption Component Manual for Private Onsite Wastewater System, October, 1, 1998.

(5) Holding Tank Component Manual for Private Onsite Wastewater System, October, 1, 1998.

(6) Single Pass Sand Filter Component Manual, October, 1, 1998.

Note: See appendix for information on obtaining copies of the above from the department.

Comm 83.62 PARAMETERS FOR USING ACCEPTABLE METHODS AND TECHNOLOGIES. When a design of a POWTS for a specific project utilizes a method or technology recognized under s. Comm 84.10 (3), a deviation from the specifications and limitations relative to the installation and maintenance of that method or technology shall constitute a violation of this chapter.

Chapter Comm 83
Appendix

The material and information contained in this appendix is for clarification purposes only. Appendix material and information are numbered to correspond to the rule number as it appears in the text of the code. Material and information included in this appendix is subject to change without notice, including names, addresses, phone numbers and forms, and reflects information known at the time of publication.

A-83.21 (2) APPLICATION. The specific format of a sanitary permit application is specified by the department and may change depending on the data tracking needs of the department. The uniform application form issued by the department is to be used by all permit issuing agents. It may consist of a paper or electronic format, or both. The sanitary permit application form will require the applicant to report information pertinent to the ownership, use, location, system type, maintenance schedule, and responsible installer. Additionally, plans and specifications for the project must also be submitted with, and are part of, the permit application. Fees for the sanitary permit are based on a statutory minimum as cited in s. 145.19(2), Wis. Stats. and any additional costs levied by the issuing agent.

Table A-83.21-1 contains the names, addresses and telephone numbers of the local governmental units from which sanitary permit application forms may be obtained, and to which completed applications are submitted.

Sanitary Permit Issuing Agents
Table A-83.21-1

Governmental Unit	Address and Telephone	Governmental Unit	Address and Telephone
ADAMS	ADAMS COUNTY COURTHOUSE P O BOX 187 FRIENDSHIP WI 53934-0187 (608) 339-4222	BROWN	BROWN COUNTY 305 E WALNUT ST. P.O. BOX 23600 GREEN BAY WI 54305-3600 (920) 448-4490
ASHLAND	ASHLAND COUNTY COURTHOUSE ROOM 109 201 WEST SECOND ST. ASHLAND WI 54806 (715) 682-7014	BUFFALO	BUFFALO COUNTY ZONING BUFFALO COUNTY COURTHOUSE P O BOX 492 ALMA WI 54610-0492 (608) 685-6217 (608) 685-6290
BARRON	BARRON COUNTY ZONING OFFICE COURTHOUSE AG CENTER 330 EAST LA SALLE AVE. BARRON WI 54812 (715) 537-6375	BURNETT	BURNETT COUNTY GOVERNMENT CENTER 7410 COUNTY ROAD K #102 SIREN WI 54872 (715) 349-2138

Governmental Unit	Address and Telephone	Governmental Unit	Address and Telephone
BAYFIELD	BAYFIELD COUNTY COURTHOUSE P O BOX 58 WASHBURN WI 54891 (715) 373-6138 (715) 373-6139	CALUMET	CALUMET COUNTY PLANNING ZONING AND SANITATION COURTHOUSE 206 COURT ST. CHILTON WI 53014 (920) 849-1442
CHIPPEWA	CHIPPEWA COUNTY ZONING AND PLANNING DEPARTMENT 711 NORTH BRIDGE ST CHIPPEWA FALLS WI 54729 (715) 726-7943 (715) 726-7944	FLORENCE	FLORENCE COUNTY COURTHOUSE 501 LAKE AVE. P O BOX 627 FLORENCE WI 54121 (715) 528-3206
CLARK	CLARK COUNTY COURTHOUSE PLANNING, ZONING AND SOLID WASTE 517 COURT ST. ROOM 204A NEILLSVILLE WI 54456 (715) 743-5130	FOND DU LAC	FOND DU LAC COUNTY CODE ENFORCEMENT OFFICE CITY/COUNTY GOVERNMENT CENTER 160 SOUTH MACY ST. FOND DU LAC WI 54935 (920) 929-3139
COLUMBIA	COLUMBIA COUNTY ADMINISTRATION BUILDING P O BOX 177 PORTAGE WI 53901	FOREST	FOREST COUNTY COURTHOUSE 200 EAST MAIN ST. CRANDON WI 54520-1414 (715) 478-3893
CRAWFORD	CRAWFORD COUNTY 111 WEST DUNN ST. PRAIRIE DU CHIEN WI 53821 (608) 326-0294	GRANT	GRANT COUNTY SANITATION DEPARTMENT 125 S MONROE ST LANCASTER WI 53813-1635 (608) 723-4394
DANE	DANE COUNTY ENVIRONMENTAL HEALTH DIVISION 1202 NORTHPORT DRIVE RM 154 MADISON WI 53704 (608) 242-6515	GREEN	GREEN COUNTY P O BOX 358 MONROE WI 53566 (608) 328-9423 (608) 328-9446
DODGE	DODGE COUNTY DEPARTMENT OF PLANNING & DEVELOPMENT COURTHOUSE 127 EAST OAK ST. JUNEAU WI 53039 (920) 386-3700	GREEN LAKE SANITATION DISTRICT	GREEN LAKE SANITATION DISTRICT P O BOX 417 GREEN LAKE WI 54941 (920) 294-3261

Governmental Unit	Address and Telephone	Governmental Unit	Address and Telephone
DOOR	DOOR CO BOARD OF HEALTH COURTHOUSE 421 NEBRASKA STURGEON BAY WI 54235-0670 (920) 746-2308 Ext. 2218	GREEN LAKE	GREEN LAKE COUNTY COURTHOUSE 492 HILL ST. GREEN LAKE WI 54941-3188 (920) 294-4027
DOUGLAS	DOUGLAS COUNTY COURTHOUSE 1313 BELKNAP ST. ROOM 206 SUPERIOR WI 54880 (715) 395-1380	IOWA	IOWA COUNTY COURTHOUSE 222 NORTH IOWA ST. DODGEVILLE WI 53533 (608) 935-0398 (608) 935-0333 (608) 935-0330
DUNN	DUNN COUNTY ZONING 800 WILSON AVE. MENOMONIE WI 54751 (715) 232-1401	IRON	IRON COUNTY COURTHOUSE HURLEY WI 54534 (715) 561-5414
EAU CLAIRE	EAU CLAIRE CITY/COUNTY HEALTH DEPARTMENT 720 SECOND AVE. EAU CLAIRE WI 54703 (715) 839-4718	JACKSON	JACKSON COUNTY PUBLIC HEALTH DEPT. COURTHOUSE 307 MAIN ST. BLACK RIVER FALLS WI 54615 (715) 284-0220
JEFFERSON	JEFFERSON COUNTY COURTHOUSE 320 SOUTH MAIN ST. ROOM 214 JEFFERSON WI 53549 (920) 674-7130	MANITOWOC	MANITOWOC COUNTY 1701 MICHIGAN AVE. MANITOWOC WI 54220 (920) 683-4185 (920) 683-4186
JUNEAU	JUNEAU COUNTY ZONING OFFICE 250 OAK ST. MAUSTON WI 53948-1345 (608) 847-9391	MARATHON	MARATHON COUNTY 210 RIVER DR. WAUSAU WI 54403-5449 (715) 261-6021
KENOSHA	KENOSHA COUNTY PLANNING AND DEVELOPMENT KENOSHA COUNTY CENTER 19600 75TH ST. P O BOX 520 BRISTOL WI 53104-0520 (414) 857-1895	MARINETTE	MARINETTE COUNTY COURTHOUSE 1926 HALL AVE. P O BOX 320 MARINETTE WI 54143-0320 (715) 732-7535

Governmental Unit	Address and Telephone	Governmental Unit	Address and Telephone
KEWAUNEE	KEWAUNEE COUNTY COURTHOUSE 613 DODGE ST. KEWAUNEE WI 54216 (920) 388-4410 Ext.132	MARQUETTE	MARQUETTE COUNTY COURTHOUSE 77 WEST PARK ST. P O BOX 21 MONTELLO WI 53949 (608) 297-9159
LA CROSSE	LA CROSSE COUNTY DIVISION OF ENVIRONMENTAL HEALTH 300 NORTH FOURTH ST. LA CROSSE WI 54601-3299 (608) 785-9771 (608) 785-9731 (608) 785-9726 (608) 785-9730 (608) 789-7816	MENOMINEE	MENOMINEE ZONING/ASSESSORS OFFICE MENOMINEE COUNTY COURTHOUSE P O BOX 279 KESHENA WI 54135-0279 (715) 799-3301 (715) 799-3096
LAFAYETTE	LAFAYETTE COUNTY AG CENTER - COURTHOUSE 627 WASHINGTON ST DARLINGTON WI 53530 (608) 776-4830	MILWAUKEE COUNTY BROWN DEER, VILLAGE OF	VILLAGE OF BROWN DEER 4800 WEST GREEN BROOK DRIVE BROWN DEER WI 53223 (414) 357-0144
LANGLADE	LANGLADE CO LAND RECORDS & REGULATIONS RESOURCE CENTER 837 CLERMONT ST. P O BOX 505 ANTIGO WI 54409 (715) 627-6206	MILWAUKEE COUNTY CUDAHY, VILLAGE OF	CITY OF CUDAHY MUNICIPAL BUILDING 5050 SOUTH LAKE DRIVE CUDAHY WI 53110 (414) 769-2210
LINCOLN	LINCOLN COUNTY COURTHOUSE 1110 EAST MAIN ST. MERRILL WI 54452 (715) 536-0333	MILWAUKEE COUNTY FRANKLIN, CITY OF	CITY OF FRANKLIN CITY HALL 9229 WEST LOOMIS ROAD FRANKLIN WI 53132 (414) 425-0084
MILWAUKEE COUNTY GLENDALE, CITY OF	CITY OF GLENDALE 5909 NORTH MILWAUKEE RIVER PKWY. GLENDALE WI 53209 (414) 228-1708	MILWAUKEE COUNTY WAUWATOSA, CITY OF	CITY OF WAUWATOSA CITY HALL 7725 WEST NORTH AVE. WAUWATOSA WI 53212 (414) 471-8400
MILWAUKEE COUNTY GREENDALE, VILLAGE OF	VILLAGE OF GREENDALE VILLAGE HALL 6500 NORTHWAY GREENDALE WI 53129 (414) 423-2100	MILWAUKEE COUNTY WEST ALLIS, CITY OF	CITY OF WEST ALLIS CITY HALL 7525 WEST GREENFIELD AVE. WEST ALLIS WI 53214 (414) 302-8413

Governmental Unit	Address and Telephone	Governmental Unit	Address and Telephone
MILWAUKEE COUNTY GREENFIELD, CITY OF	CITY OF GREENFIELD CITY HALL 7325 WEST FOREST HOME AVE. GREENFIELD WI 53220 (414) 543-5465 ext. 328	OZAUKEE	OZAUKEE COUNTY ENVIRONMENTAL HEALTH DEPT. COURTHOUSE 121 WEST MAIN ST. P O BOX 994 PORT WASHINGTON WI 53074-0994 (414) 284-8313 (414) 284-8315 (414) 284-8316 (414) 284-8318
MILWAUKEE COUNTY HALES CORNERS, VILLAGE OF	VILLAGE OF HALES CORNERS 5635 SOUTH NEW BERLIN ROAD HALES CORNERS, WI 53130 (414) 529-6160	PEPIN	PEPIN COUNTY COURTHOUSE 550 SEVENTH AVE. WEST P O BOX 39 DURAND WI 54736 (715) 672-8897
MILWAUKEE COUNTY MILWAUKEE, CITY OF	CITY OF MILWAUKEE MUNICIPAL BUILDING ROOM 1017 841 NORTH BROADWAY MILWAUKEE WI 53202 (414) 286-3364	PIERCE	PIERCE COUNTY COURTHOUSE P O BOX 647 ELLSWORTH WI 54011 (715) 273-6747
MILWAUKEE COUNTY OAK CREEK, CITY OF	CITY OF OAK CREEK CITY HALL 8640 SOUTH HOWELL AVE. OAK CREEK WI 53154 (414) 768-6545	POLK	POLK COUNTY ZONING ADMINISTRATION COUNTY COURTHOUSE 100 POLK COUNTY PLAZA BALSAM LAKE WI 54810 (715) 485-9279
MILWAUKEE COUNTY RIVER HILLS, VILLAGE OF	VILLAGE OF RIVER HILLS VILLAGE HALL 7650 NORTH PHEASANT LANE RIVER HILLS WI 53217 (414) 352-8213	PORTAGE	PORTAGE COUNTY COURTHOUSE 1516 CHURCH ST. STEVENS POINT WI 54481 (715) 346-1334
MILWAUKEE COUNTY ST. FRANCIS, CITY OF	CITY OF ST. FRANCIS 4235 SOUTH NICHOLSON AVE. ST FRANCIS WI 53235 (414) 481-2300	PRICE	PRICE COUNTY NORMAL BLDG ROOM 205 PHILLIPS WI 54555 (715) 339-3272
MILWAUKEE COUNTY SOUTH MILWAUKEE, CITY OF	CITY OF SOUTH MILWAUKEE 2424 15TH AVE. SOUTH MILWAUKEE WI 53172 (414) 762-2222	RACINE	RACINE COUNTY CODE ADMINISTRATION DEPARTMENT IVES GROVE BUILDING 14200 WASHINGTON AVE. STURTEVANT WI 53177 (414) 886-8475

Governmental Unit	Address and Telephone	Governmental Unit	Address and Telephone
RICHLAND	RICHLAND COUNTY COURTHOUSE 181 WEST SEMINARY ST. RICHLAND CENTER WI 53581 (608) 647-2447	TAYLOR	TAYLOR COUNTY ZONING OFFICE 224 SOUTH SECOND ST. ROOM 110 MEDFORD WI 54451 (715) 748-1485
ROCK	ROCK COUNTY ENVIRONMENTAL HEALTH DEPARTMENT P O BOX 1143 JANESVILLE WI 53547-1143 (608) 757-5441	TREMPEALEAU	TREMPEALEAU COUNTY ZONING DEPT. COURTHOUSE 36245 MAIN ST. P O BOX 67 WHITEHALL WI 54773-9430 (715) 538-2311 Ext. 222 or 223
RUSK	RUSK COUNTY ZONING OFFICE 311 MINER AVE. EAST LADYSMITH WI 54848 (715) 532-2181	VERNON	VERNON COUNTY COURTHOUSE P O BOX 306. VIROQUA WI 54665 (608) 637-7018
ST. CROIX	ST. CROIX COUNTY ZONING OFFICE 1101 CARMICHAEL ROAD HUDSON WI 54016 715) 386-4680 (715) 386-4684 (715) 386-4682 (715) 386-4683	VILAS	VILAS COUNTY COURTHOUSE P O BOX 369 EAGLE RIVER WI 54521 (715) 479-3620
SAUK	SAUK COUNTY PLANNING AND ZONING SAUK COUNTY WEST SQUARE BUILDING 505 BROADWAY BARABOO WI 53913 (608) 355-3285	WASHBURN	WASHBURN COUNTY COURT HOUSE P O BOX 506 SHELL LAKE WI 54871-0506 (715) 468-2666
SAWYER	SAWYER COUNTY ZONING ADMINISTRATION COURTHOUSE P O BOX 668 HAYWARD WI 54843-0668 (715) 634-8288	WASHINGTON	WASHINGTON COUNTY LAND USE AND PARK DEPARTMENT PUBLIC AGENCY CENTER SUITE 2300 333 EAST WASHINGTON ST. WEST BEND WI 53095-2584 (414) 335-4445
SHAWANO	SHAWANO COUNTY COURTHOUSE 311 NORTH MAIN ST. SHAWANO WI 54166 (715) 526-6766 (715) 524-2321	WAUKESHA	WAUKESHA CO DEPART OF PARKS AND LAND USE DIVISION OF ENVIRONMENTAL HEALTH 1320 PEWAUKEE RD RM 260 WAUKESHA WI 53188 (414) 896-8300

Governmental Unit	Address and Telephone	Governmental Unit	Address and Telephone
SHEBOYGAN	SHEBOYGAN COUNTY COURTHOUSE PLANNING DEPARTMENT 615 NORTH SIXTH ST. SHEBOYGAN WI 53081 (920) 459-3060	WAUPACA	WAUPACA COUNTY COURTHOUSE 811 HARDING ST. WAUPACA WI 54981-2072 (715) 258-6255 (715) 258-6257
WAUSHARA	WAUSHARA COUNTY ZONING P O BOX 149 WAUTOMA WI 54982-0149 (920) 787-0453	WALWORTH	WALWORTH COUNTY COURTHOUSE ANNEX LAKELAND COMPLEX W3929 COUNTY NN ELKHORN WI 53121 (414) 741-3394
WISCONSIN, STATE OF	DEPARTMENT OF COMMERCE SAFETY & BUILDINGS DIV. 201 W WASHINGTON AVE PO BOX 2658 MADISON WI 53701-2658	WOOD	WOOD COUNTY ZONING OFFICE COURTHOUSE 400 MARKET ST. WISCONSIN RAPIDS WI 54494-8095 (715) 421-8466
WINNEBAGO	WINNEBAGO COUNTY PLANNING AND ZONING COURTHOUSE P O BOX 2808 OSHKOSH WI 54903-2808 (920) 236-4844		

A-83.21 (3) PROCESSING. The state sanitary permit is issued when evidence and documentation is presented by the owner of the property that minimum code standards have been or will be met.

[Insert sample form of sanitary permit]

Chapter 145 Wisconsin Statutes provides some direction as to the issuance of sanitary permits as follows:

145.135 Sanitary permits.

(1) Validity. In this section, "sanitary permit" means a permit issued by the department or any governmental unit responsible for the regulation of private sewage systems for the installation of a private sewage system. No person may install a private sewage system unless the owner of the property on which the private sewage system is to be installed holds a valid sanitary permit. A sanitary permit is valid for 2 years from the date of issue and renewable for similar periods thereafter. A governmental unit responsible for the regulation of private sewage systems may not charge more than one fee for a sanitary permit or the renewal of a sanitary permit in any 12-month period. A sanitary permit shall remain valid to the end of the established period, notwithstanding any change in the state plumbing code or in any private sewage system ordinance during that period. A sanitary permit may be transferred from the holder to a subsequent owner of the land, except that the subsequent owner must obtain a new copy of the sanitary permit from the issuing

agent. The results of any percolation test or other test relating to the disposal of liquid domestic wastes into the soil shall be retained by the governmental unit responsible for the regulation of private sewage systems where the property is located. The governmental unit responsible for the regulation of private sewage systems shall make the test results available to an applicant for a sanitary permit and shall accept the test results as the basis for a sanitary permit application unless the soil at the test site is altered to the extent that a new soil test is necessary.

(2) Notice. A sanitary permit shall include a notice displayed conspicuously and separately on the permit form, to inform the permit holder that:

(a) The purpose of the sanitary permit is to allow installation of the private sewage system described in the permit.

(b) The approval of the sanitary permit is based on regulations in force on the date of approval.

(c) The sanitary permit is valid and may be renewed for a specified period.

(d) Changed regulations will not impair the validity of a sanitary permit.

(e) Renewal of the sanitary permit will be based on regulations in force at the time renewal is sought, and that changed regulations may impede renewal.

(f) The sanitary permit is transferable.

145.19 Sanitary permit.

(1) Requirement; information; forms. No septic tank may be purchased and no private sewage system may be installed unless the owner of the property on which the private sewage system is to be installed holds a valid sanitary permit from the governmental unit responsible for the regulation of private sewage systems in which the property is located. The department shall prescribe the information to be included in the sanitary permit and furnish sanitary permit forms to the governmental unit. The applicant shall submit the completed sanitary permit to the governmental unit. The governmental unit shall approve or disapprove the sanitary permit according to the rules promulgated by the department under this chapter. No person may sell at retail, as defined under s. 100.201 (1) (d) , a septic tank for installation in this state unless the purchaser holds a valid sanitary permit issued under this section.

(2) Fee. No fee for a sanitary permit may be less than $61, or the amount determined under department rule. The governing body for the governmental unit responsible for the regulation of private sewage systems may establish a fee for a sanitary permit which is more than $61, or the amount determined under department rule.

(3) Copy of permit forwarded to the department. The governmental unit responsible for the regulation of private sewage systems shall forward a copy of each valid sanitary permit and $20, or the amount determined under department rule, of the fee to the department within 90 days after the permit is issued.

(4) Use of fee. The portion of this fee retained by the governmental unit responsible for the regulation of private sewage systems shall be used for the administration of private sewage system programs.

(5) Fee adjustment. The department, by rule promulgated under ch. 227 , may adjust the minimum permit fee under sub. (2) and the fee portion forwarded under sub. (3).

(6) Groundwater fee. In addition to the fee under sub. (2) , the governmental unit responsible for the regulation of private sewage systems shall collect a groundwater fee of $25 for each sanitary permit. The governmental unit shall forward this fee to the department together with the copy of the sanitary permit and the fee under sub. (3) . The moneys collected under this subsection shall be credited to the environmental fund for environmental management.

A-83.21 (6) RENEWALS. Sanitary permit renewals are completed in compliance with s.145.135 (1) and 145.135 (2) (e), Wis. Stats. A completed sanitary permit renewal application form must be submitted to the local permit issuing agent.

[Insert sample renewal form]

A-83.22 (2) PLANS AND SPECIFICATIONS. A POWTS plan review application form must be completed and submitted with a plan submittal. The application form is uniform state-wide and includes a worksheet to calculate the appropriate fees for the project.

[Insert sample plan review application form]

A-83.22 (3) PLAN REVIEW PROCESS. All proposed POWTS installations require plan review prior to sanitary permit issuance. Projects subject to department review include all projects under Table 83.22-1, and many of the projects under Table 83.22–2. Designated agents may review projects included in Table 83.22-2.

[Insert current county agent plan review listing]

Commerce Plan Review Offices

Hayward Office
15837 USH 63
Hayward WI 54843
(715) 634-4870

LaCrosse Office
2226 Rose Street
LaCrosse WI 54603
(608) 785-9334

Madison Office
201 W. Washington Ave
PO Box 7162
Madison WI 53707-7162
(608) 266-3151

Shawano Office
1340 Green Bay Street
Suite 300
Shawano WI 54166
(715) 524-3626

Green Bay Office
2331 San Luis Place
Green Bay WI 54304
(920) 492-5601

Waukesha Office
401 Pilot Court Ste C
Waukesha WI 53188
(414) 548-8606

A-83.25 (2) ISSUANCE OF BUILDING PERMITS. A building permit is defined in s. Comm 81.01 (44), Wis. Adm. Code, as any written permission from a municipality that allows construction to commence on a structure. In effect, this means that land use and zoning permits, as well as other similar permits that constitute permission to construct are considered building permits.

Prior to building permit issuance, the issuing agent has a statutory responsibility, under s. 66.036, Wis. Stats., to consider whether or not the proposed structure requires connection to a private onsite wastewater treatment system (POWTS), or if the construction will interfere with the operation of an existing POWTS.

> Section 66.036, Stats. Building on unsewered property. (1) No county, city, town or village may issue a building permit for construction of any structure requiring connection to a private domestic sewage treatment and disposal system unless a system satisfying all applicable regulations already exists to serve the proposed structure or all permits necessary to install such a system have been obtained.
>
> (2) Before issuing a building permit for construction on any structure on property not served by a municipal sewage treatment plant, the county, city, town or village shall determine that the proposed construction does not interfere with a functioning private domestic sewage treatment and disposal system. The county, city, town or village may require building permit applicants to submit a detailed plan of the owner's existing private domestic sewage treatment and disposal system.

A-83.25 (2) (e) Setbacks. Horizontal setbacks from encumbrance for new POWTS installations are in conformance with Table Comm 83.43 –1 or the rule in effect at the time the system was installed, which ever is less. For setback distances associated with previous administrative codes refer to the previous code issue or the following table.

[Insert Table on previous code setbacks]

A-83.43 (3) (a) Normal wastewater flow from a dwelling is estimated at 2 persons per bedroom. However, when occupancy is less than or greater than 2 persons per bedroom POWTS designers may estimate the combined graywater and blackwater flows using the equation pursuant to Comm 83.43 (3) (b).

A-83.43 (3) (c) Actual meter readings may be used to calculate the combined estimated design wastewater flow from a dwelling. To calculate the estimated design wastewater flow, use the following formula and compare the answer to the peak metered flow. Choose the larger of the two estimated design wastewater flows.

(total meter flow/number of readings)(1.5) = estimated design wastewater flow

The frequency of meter readings should be weekly for dwellings.

A-83.43 (4) ESTIMATING DAILY SEGREGATED GRAYWATER FLOW FOR A POWTS SERVING A DWELLING.

Follow equations in Comm 83.43 (4) (a) and 83.43 (4) (b).

A-83.43 (5) ESTIMATING DAILY SEGREGATED BLACKWATER FLOW FOR A POWTS SERVING A DWELLING.

Follow equations in Comm 83.43 (5) (a) and 83.43 (5) (b).

A-83.43 (6) COMMERCIAL FACILITIES. Table A-83.43-1 may be used to estimate wastewater flows from a commercial building.

Table A-83.43-1
Public Facility Wastewater Flows

Source	Unit	Estimated Wastewater Flow (gpd)
Apartment or Condominium	Bedroom	100
Assembly hall (no kitchen)	Person (10 sq. ft./person)	1.3

Table A-83.43-1
Public Facility Wastewater Flows
(continued)

Source	Unit	Estimated Wastewater Flow (gpd)
Bar or cocktail lounge (no meals served)	Patron (10 sq. ft./patron)	4
Bar or cocktail lounge* (w/meals – all paper service)	Patron (10 sq. ft./patron)	8
Beauty salon	Station	90
Bowling alley	Bowling lane	80
Bowling alley (with bar)	Bowling lane	150
Camp, day and night	Person	25
Camp, day use only (no meals served)	Person	10
Campground or Camping Resort	Space, with sewer connection and/or service building	30
Campground sanitary dump station	Camping unit or RV served	25
Catch basin	Basin	65
Church (no kitchen)	Person	2
Church* (with kitchen)	Person	5
Dance hall	Person (10 sq. ft./person)	2
Day care facility (no meals prepared)	Child	12
Day care facility* (with meal preparation)	Child	16
Dining hall* (kitchen waste only without dishwasher and/or food waste grinder)	Meal served	2
Dining hall* (toilet and kitchen waste without dishwasher and/or food waste grinder)	Meal served	5
Dining hall* (toilet and kitchen waste with dishwasher and/or food waste grinder)	Meal served	7
Drive-in restaurant* (all paper service with inside seating)	Patron seating space	10
Drive-in restaurant* (all paper service without inside seating)	Vehicle space	10
Drive-in theater	Vehicle space	3
Employees (total all shifts)	Employee	13
Floor drain (not discharging to catch basin)	Drain	25
Gas station / convenience store	Patron	3
Gas station (with service bay) Patron Service bay	 Patron Service bay	 3 50
Hospital*	Bed space	135
Hotel, motel or tourist rooming house	Room	65
Medical office building Doctors, nurses, medical staff Office personnel Patients	 Person Person Person	 50 13 6.5
Migrant labor camp (central bathhouse)	Employee	20

Table A-83.43-1
Public Facility Wastewater Flows
(continued)

Source	Unit	Estimated Wastewater Flow (gpd)
Mobile Home (Manufactured home) (served by its own POWTS)	Bedroom	100
Mobile home park	Mobile home site	200
Nursing, Rest Home, Community Based Residential Facility	Bed space	65
Outdoor sport facilities (toilet waste only)	Patron	3.5
Parks (toilets waste only)	Patron (75 patrons/acre)	3.5
Parks (toilets and showers)	Patron (75 patrons/acre)	6.5
Public shower facility	Shower taken	10
Restaurant*, 24-hr. (dishwasher and/or food waste grinder only)	Patron seating space	4
Restaurant*, 24-hr. (kitchen waste only without dishwasher and/or food waste grinder)	Patron seating space	12
Restaurant, 24-hr. (toilet waste)	Patron seating space	28
Restaurant*, 24-hr. (toilet and kitchen waste without dishwasher and/or food waste grinder)	Patron seating space	40
Restaurant*, 24-hr. (toilet and kitchen waste with dishwasher and/or food waste grinder)	Patron seating space	44
Restaurant* (dishwasher and/or food waste grinder only)	Patron seating space	2
Restaurant* (kitchen waste only without dishwasher and/or food waste grinder)	Patron seating space	6
Restaurant (toilet waste)	Patron seating space	14
Restaurant* (toilet and kitchen waste without dishwasher and/or food waste grinder)	Patron seating space	20
Restaurant* (toilet and kitchen waste with dishwasher and/or food waste grinder)	Patron seating space	22
Retail store	Patron (70% of total retail area ÷ 30 sq. ft. per patron)	1
School* (with meals and showers)	Classroom (25 students/classroom)	500
School* (with meals or showers)	Classroom (25 students/classroom)	400
School (without meals or showers)	Classroom (25 students/classroom)	300
Self-service laundry (toilet waste only)	Clothes washer	33
Self-service laundry (with only residential clothes washers)	Clothes washer	200
Swimming pool bathhouse	Patron	6.5

* = May be high strength waste

A-83.43 (6) (a). Actual meter readings may be used to calculate the combined estimated design wastewater flow from a dwelling. To calculate the estimated design wastewater flow use

the following formula and compare the answer to the peak metered flow. Choose the larger of the two estimated design flows.

(total meter flow/number of readings)(1.5) = estimated design wastewater flow

The frequency of meter readings should be daily for commercial.

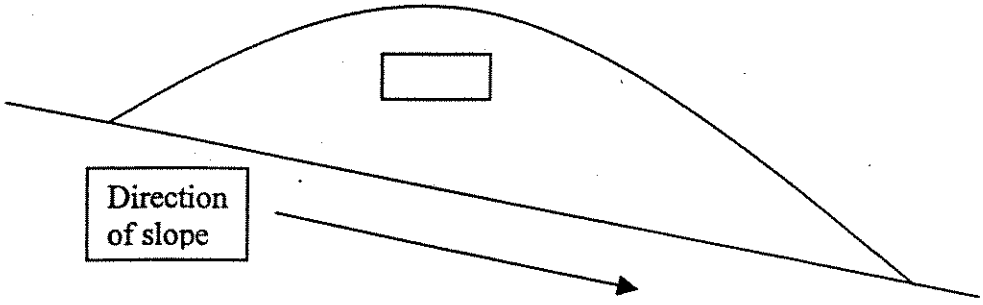
A-83.43 (6) (b) A detailed per capita and per function flow may be established for commercial facilities. The per function flow ratings shall be substantiated by manufactures data of the per function flow and detailed use data from the facility in question or a similar facility under similar conditions of use. Estimated design wastewater flow shall be at least 1.5 times the total estimated daily flow calculated from the per capita and per function flow information

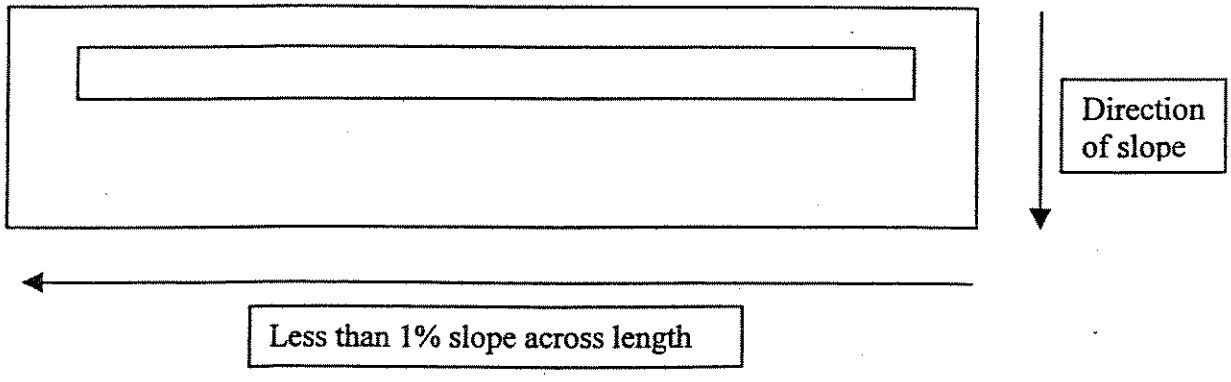
A-83.43 (7) ESTIMATING CONTAMINANT LOADS

Pathogenic contaminant load may be estimated based on data collected by a reputable testing or research facility.

A-83.44 ORIENTATION (6)

Orientation of above grade dispersal structures is on the contour except that a 1% cross slope is acceptable along the length as shown below.





SECTION 55. Comm 84.10 Table 84.10 line 5 is amended to read:

Table 84.10
SUBMITTALS TO DEPARTMENT
(Partial Table)

	Product Categories
5.	Prefabricated ~~septic/holding tanks~~ holding or treatment components for POWTS

SECTION 56. Comm 84.10 (3) is repealed and recreated to read:

Comm 84.10 (3) VOLUNTARY POWTS PRODUCT APPROVAL. (a) The department may issue a product approval, upon request and review, for POWTS design packages and site constructed POWTS components which conform to the standards or specifications referenced in chs. Comm 81, 82, 83 and this chapter, but do not require approval under sub. (2) or s. Comm 84.50.

(b) Each request for approval shall be made on a form provided by the department.

Note: See appendix for a reprint of the form and addresses of the department where the form may be obtained.

(c) The submittal shall be accompanied by sufficient data and information to determine if the product complies with the provisions of chs. Comm 81, 82, 83 and this chapter and ch. 145, Stats. The submittal shall include, but not be limited to, all of the following:

1. Plans and specifications.

2. Theory of operation.

3. Testing protocol.

4. Testing data.

5. Limits of reliable operation.

6. Installation requirements and procedures.

7. Inspection checklist and worksheet.

8. Inspection requirements and procedures.

9. Operation and maintenance requirements.

10. Operation and maintenance schedule.

11. Operation and maintenance checklist and worksheet.

(d) 1. The department shall review a submittal under this subsection with input from a technical advisory committee.

2. The members on the technical advisory committee under subd. 1. shall be appointed by the department for staggered 3-year terms and shall include representatives of at least the following groups or organizations:

a. The department of natural resource.

b. Local governmental unit.

c. POWTS designer.

d. Academic or scientific community.

e. Plumber.

f. Environmental group.

g. POWTS component manufacturer.

(e) 1. If, upon review, the department determines that a product conforms to the provisions of chs. Comm 81, 82, 83 and this chapter and ch. 145, Stats., the department shall issue an approval in writing.

2. The department may impose specific conditions in granting an approval, including a provision to provide training to POWTS installers and POWTS inspectors.

3. Violations of the conditions under which an approval is granted shall constitute a violation of this chapter.

(f) If, upon review, the department determines that a product does not conform to the provisions of chs. Comm 81, 82, 83 and this chapter and ch. 145, Stats., the request for approval shall be denied in writing.

(g) The department shall review and make a determination on an application for a product approval within 3 months of receipt of all fees, plans, drawings, specifications and other information required to complete the review.

(h) If an approved plumbing product is modified or additional assertions of function or performance are made, the approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.

SECTION 57. Comm 84.11 is amended to read:

Comm 84.11 IDENTIFICATION. Each length of pipe and each pipe fitting, trap, fixture, material, device and product to be used in plumbing shall be marked as required by the applicable standard specified by reference in this chapter or as specified ~~in s. Comm 83.15 for septic tanks and holding tanks, and s. Comm 84.20 (5) (o) for water treatment devices~~ by rule in this chapter.

SECTION 58. Comm 84.20 (5) (j) to (q) is renumbered 84.20 (5) (k) to (r).

SECTION 59. Comm 84.20 (5) (j) is created to read:

Comm 84.20 (5) (j) POWTS design packages and POWTS components. POWTS design packages and POWTS components shall function and perform in accordance with assertions submitted to and approved by the department under s. Comm 84.10.

SECTION 60. Comm 84.20 (5) (q) 1., as renumbered, Note is created to read:

Comm 84.20 (5) (q) 1. Note: See s. Comm 82.40 for limitations as to the types of water treatment devices which may discharge to a POWTS.

SECTION 61. Comm 84.25 is created to read:

Comm 84.25 POWTS HOLDING COMPONENTS OR TREATMENT COMPONENTS. (1) GENERAL. All POWTS holding components or treatment components shall conform to the requirements of this section.

(2) WATER TIGHTNESS. (a) General. Tank assemblies, including fittings and access openings, shall be manufactured to be water tight as required under this subsection.

(b) Concrete tanks. 1. Where concrete tanks are required to have covers, the tanks shall meet one of the following requirements:

a. Withstand a vacuum of at least 2 inches of mercury for 60 minutes, without loss of pressure.

b. Hold water for one hour, without leakage after the tank has been filled with water and let stand for 24 hours, then refilled to the highest liquid level required to be held in the tank.

2. Concrete tanks that are not required to have a cover shall hold water for one hour, without leakage after the tank has been filled with water and let stand for 24 hours, then refilled to the highest liquid level required to be held in the tank.

(c) Steel tanks. 1. Steel tanks that are required to have a cover shall be capable of withstanding one of the following requirements:

a. An internal air pressure of at least 5 psig for 15 minutes, without loss of pressure.

b. An internal water pressure of at least 5 psig for 60 minutes, without loss of pressure.

2. Steel tanks that are not required to have a cover shall be capable of holding water after being filled to their inlet or outlet, whichever is higher, for 24 hours without loss of water.

(d) Tanks constructed of materials other than concrete or steel. 1. Tanks constructed of materials other than concrete or steel that are required to have a cover shall be capable of withstanding one of the following requirements:

a. A vacuum of at least 2 inches of mercury for 60 minutes, without loss of pressure.

b. An internal air pressure of at least 5 psig for 15 minutes, without loss of pressure.

c. An internal water pressure of at least 5 psig for 60 minutes, without loss of pressure.

2. Tanks constructed of materials other than concrete or steel that are not required to have a cover shall be capable of holding water after being filled to their inlet or outlet, whichever is higher, for one hour without loss of water.

(3) STRENGTH. Tank assemblies, including fittings and access openings, shall be capable of withstanding loads and pressures that the tanks are intended to encounter and remain watertight.

(4) PROTECTION FROM ELEMENTS. (a) Concrete tanks. 1. The interior of a concrete tank assembly, including fittings and access openings, shall have a protective coating or be constructed of material, above the lowest liquid level expected in the tank, that will inhibit the deterioration of the concrete due to internal environmental effects.

2. Under subd. 1., concrete with a water cement ratio not exceeding 0.45 shall be considered resistant to deterioration due to internal environmental effects.

(b) Steel tanks. 1. Steel tank assemblies, including fittings and access openings, shall have a protective coating that will inhibit the deterioration of the steel due to internal and external environmental effects.

2. Steel tank assemblies, including fittings and access openings, installed underground shall be provided with cathodic protection in accordance with UL Standard 1746 or STI-P_3.

(c) Tanks constructed of materials other than concrete or steel. Tank assemblies, including fittings and access openings, constructed of materials other than concrete or steel shall be protected against deterioration due to internal and external environmental effects.

(5) VENTING. (a) Each tank, except camping unit transfer containers, shall be provided with a means of venting gases formed inside of the tank to the atmosphere.

(b) The tank vent shall terminate in accordance with s. Comm 82.31 (16).

(6) PIPE CONNECTION. All pipe connection openings to a tank shall be designed to allow connections in accordance with s. Comm 84.40.

(7) ACCESS. (a) Each covered tank shall be provided with one or more openings of sufficient size and located in such a manner to provide a means for inspection or required cleaning or maintenance of the tank.

(b) Inspection openings for tanks located below ground shall extend at least to the finished grade.

(c) Cleaning and maintenance openings for treatment tanks located below ground shall extend to at least within 6 inches below finished grade.

(d) Cleaning and maintenance openings for holding components shall comply with all of the following:

1. Extend to at least 4 inches above finished grade when the holding component is below ground.

2. Be located to allow servicing of pumps or siphons located in the holding component.

(e) Inspection, maintenance and cleaning openings shall terminate with a means that prevents entrance of deleterious materials.

(f) Covers located at or above ground for openings larger than 8 inches in diameter shall be provided with locking devices and shall remain locked except for cleaning or maintenance purposes.

(8) WARNING LABEL. (a) Covers for all tank openings larger than 8 inches in diameter shall be provided with a permanent warning label indicating the dangers of entering the tank, in accordance with this subsection.

(b) The warning label shall be securely attached and made of a noncorrosive metal or plastic bearing the legend "DO NOT ENTER WITHOUT PROPER EQUIPMENT" or "DANGEROUS GASES EXIST IN TANK" or similar language.

(c) The label shall be rectangular in shape with minimum dimensions of 4 by 5 inches.

(d) The wording on the label shall be a minimum of 1/2 inch in height and be either indented or raised.

(9) DOSING APPARATUS. (a) Pumps for POWTS used to disperse air, treated wastewater or final effluent shall be rated by the pump manufacturer for such use.

(b) Siphons for POWTS shall be rated by the siphon manufacturer for wastewater use.

(c) All other dosing apparatus for POWTS shall be constructed of corrosive resistant materials and designed to perform as intended.

(10) ALARM SYSTEM. (a) All pump and alarm controls for POWTS shall be specifically designed by the manufacturer for such use.

(b) The use of pressure diaphragm switches in POWTS tanks shall be prohibited.

(11) TANK LABEL. (a) Anaerobic tanks. Each anaerobic treatment tank or holding component shall be labeled near an inlet or outlet opening. The label shall be embossed, impressed, or securely attached to the tank. The label shall include all of the following information:

1. Name or trademark of the manufacturer.

2. Capacity of each compartment.

3. Manufacturer's model number.

(b) Aerobic tanks. 1. Each aerobic treatment tank shall be provided with 2 label plates. Label plates shall be inscribed to be easily read and understood, and be securely attached.

2. One label plate shall be attached to the front of the electrical control box. The second label plate shall be attached to the aeration equipment assembly, tank, or riser at a location normally subject to access during inspection of the unit.

3. Each label plate shall include all of the following information:

a. Name or trademark of the manufacturer.

b. Model number.

c. Rated daily flow capacity of the unit.

(12) OTHER TREATMENT COMPONENTS. A treatment component not specifically covered in this section may not be sold for use in a POWTS or may not be installed in a POWTS, unless it has received department approval and conforms to the applicable performance standards of this chapter and chs. Comm 82 and 83, and ch. 145, Stats.

SECTION 62. Comm 84.30 (2) (d) is repealed and recreated to read:

Comm 84.30 (2) (d) Treated wastewater piping. 1. Nonpressurized, nonperforated drain piping conveying treated wastewater from a POWTS treatment or holding component to a

POWTS treatment or holding component, distribution cell or dispersal zone shall conform to one of the standards listed in Table 84.30-3.

2. Nonpressurized perforated drain piping conveying treated wastewater in a POWTS soil treatment or dispersal component shall conform to one of the standards listed in Table 84.30-4.

3. Pressurized perforated drain piping conveying treated wastewater in a POWTS treatment or dispersal component shall conform to one of the standards listed in Table 84.30-5 and shall be perforated in accordance with the POWTS design.

SECTION 63. Comm 84.30 Table 84.30-5 is amended to read:

Table 84.30-5
PRESSURIZED DRAIN PIPE AND TUBING AND SERVICE SUCTION LINES

Material	Standard
Acrylonitrile butadiene styrene (ABS)[a]	ASTM D1527; ASTM D2282; ASTM D2661; ASTM F628
~~Acrylonitrile butadiene styrene (ABS) composite[a]~~	~~ASTM D2680~~
Brass	ASTM B43
Cast iron	ASTM A74; ASTM A377; AWWA C115/A21; CISPI 301
Chlorinated polyvinyl chloride (CPVC)[a]	ASTM 2846; ASTM F441; ASTM F442
Concrete	ASTM C14; ASTM C76
Copper[b]	ASTM B42; ASTM B88; ASTM B306
Ductile iron	ASTM A377; AWWA C115/Z21.15; AWWA C151/A21.51
Galvanized steel	ASTM A53
Polyvinyl chloride (PVC)a	ASTM D1785; ASTM D2241; ASTM D2665; ASTM 2672; AWWA C900
Stainless steel	ANSI B36.19M; ASTM A270; ASTM A450

Note a: Thermoplastic sewer pipe shall be installed in accordance with ASTM D2321.
Note b: Copper tubing , type M, may not be installed underground.

SECTION 64. Comm 84.30 (6) (g) to (j) and Table 84.30-12 are created to read:

Comm 84.30 (6) (g) Geotextile fabrics. Geotextile fabric used in a POWTS to prevent backfill material from entering the distribution cell shall meet the requirements listed in Table 84.30-12.

Table 84.30-12
GEOTEXTILE FABRICS

Property	Test Method	Minimum Average Roll Value
Grab Tensile, lbs	ASTM D4632	35 lbs, minimum
Grab Elongation, %	ASTM D4632	50%, minimum
Mullen Burst, psi	ASTM D3786	45 psi, minimum
Puncture, lbs	ASTM D4833	10 lbs, minimum
Trapezoidal tear, lbs	ASTM D4533	11 lbs, minimum
AOS, US Sieve #	ASTM D4751	20 US sieve #, minimum
AOS, US Sieve #	ASTM D4751	70 US sieve #, maximum

(h) Leaching chambers. Leaching chambers for distribution cell components of POWTS shall meet all of the following requirements:

1. Constructed of corrosion resistant materials.

2. Designed to prevent soil surrounding the chamber from entering the chamber.

3. Capable of withstanding pressures that the leaching chamber is intended to encounter.

(i) Stone aggregate. Stone aggregate which is used as a filtering medium or to create a distribution cell in a treatment or dispersal component of a POWTS shall meet all of the following requirements:

1. Be washed to remove fine material.

2. Be 1/2 to 2-1/2 inch in size.

3. Conform to ASTM Standard C33 for coarse aggregate.

4. Have a hardness value of at least 3 on Moh's Scale of Hardness.

Note: Stone that can scratch a copper penny without leaving any residual stone material on the penny has a hardness value of at least 3 on Moh's Scale of Hardness.

(j) Sand. Sand which is used as a filtering medium in a treatment or distribution cell of a POWTS shall conform to ASTM Standard C33 for fine aggregate.

SECTION 65. Comm 84.50 (3) (g) 1. and 7. are amended to read:

Comm 84.50 (3) (g) 1. Plans detailing the installation of the plumbing material or product shall be submitted to the department in accordance with s. Comm 82.20 (4) or ~~83.07 (2)~~ 83.22.

Comm 84.50 (3) (g) 7. Five years after the date of the completed installation the department shall within 6 months order the removal of the plumbing material or product ~~or~~, issue an ~~alternate~~ approval, or renew the experimental approval for another 5-year period to obtain additional information to determine the result of the experiment.

SECTION 66. Comm 84.60 is repealed.

SECTION 67. A-84.10 (3) (b) is created to read:

A-84.10 (3) (b) Request forms for voluntary POWTS products approval may be obtained at the following locations:

Department of Commerce Offices

Madison Office
201 W. Washington Ave
PO Box 7162
Madison, WI 53707-7162
608) 266-3151

(Insert sample form approval request)

SECTION 68. Chapter Comm 85 is repealed and recreated to read:

Chapter Comm 85

SOIL AND SITE EVALUATIONS

Comm 85.01 PURPOSE. The purpose of this chapter is to establish the minimum requirements for evaluating and reporting soil and site characteristics that may affect treatment or dispersal of wastewater, treated wastewater, final effluent or nonwater-carried human wastes.

Comm 85.02 SCOPE. Pursuant to s. 145.02, Stats., this chapter applies to all soil and site evaluations conducted relative to the treatment or dispersal of wastewater, treated wastewater, final effluent or nonwater-carried human wastes into soil.

Comm 85.10 QUALIFICATIONS. (1) SOIL EVALUATION. A soil evaluation for treatment or dispersal of wastewater, treated wastewater, final effluent or nonwater-carried human wastes regulated by chs. Comm 83 and 91 shall be performed by an individual who is a certified soil tester.

Note: Section Comm 5.33 delineates the qualifications and certification procedures for certified soil testers.

(2) SITE EVALUATION. A site evaluation, relative to the installation of a POWTS treatment, holding or dispersal component location, or to determine land slope or setback distances to topographic or other site features shall be performed by a Wisconsin registered architect, professional engineer, designer of plumbing systems, designer of private sewage systems or land surveyor; a certified soil tester or POWTS inspector; or a licensed master plumber or master plumber-restricted service.

(3) SOIL SATURATION MONITORING. Soil saturation monitoring may only be conducted and reported by an individual who is a certified soil tester.

Comm 85.20 SOIL EVALUATIONS. (1) GENERAL. (a) Soil boring methods and procedures shall comply with this section.

(b) Maximum soil application rates shall be determined relative to the soil texture, structure and consistence for each soil horizon or layer.

Note: Section Comm 83.44 establishes maximum soil application rates and soil treatment capability for the design of POWTS treatment or dispersal components consisting in part of in situ soil.

(2) NUMBER, TYPE AND DEPTH OF EVALUATIONS. (a) General. The number, type, depth and location of soil profile evaluations shall be sufficient to delineate the area under investigation and to assure consistency of the data within that area.

(b) Number and area. 1. a. Except as provided in subpar. d. and subd. 2., a minimum of 3 soil profile evaluation excavations shall be used to delineate a site within which POWTS treatment or dispersal components consisting in part of in situ soil are to be located.

b. For estimated daily flows of 1,000 gallons per day or less, at least one soil profile evaluation excavation per treatment or dispersal site shall be constructed as a soil pit, and described in accordance with Comm 85.30 (1) (c).

c. For estimated daily flows greater than 1,000 gallons per day, at least three soil profile evaluations per treatment or dispersal site shall be constructed as soil pits, and described in accordance with Comm 85.30 (1) (c).

d. The department or governmental unit may require additional soil profile evaluation excavations to be constructed where soil variability considerations may not be adequately addressed. The department or governmental unit may specify that soil profile descriptions in accordance with Comm 85.30 (1) (c) be conducted for any additional soil profile evaluation excavations.

2. At least one soil pit or soil boring shall be used to establish soil suitability for a pit privy.

Note: Sections Comm 83.44 (3) and 91.12 (1) (b) 1. contain further information regarding privy siting and soil requirements.

(c) Type. 1. Soil profile evaluations used to determine soil application rates shall be conducted using soil pits.

2. Soil profile evaluations used to determine or identify soil horizon depths, soil color, soil texture, redoximorphic feature colors or depth to groundwater or bedrock shall be conducted using either soil pits or soil borings.

(d) Depth. Soil profile evaluations shall extend an adequate depth below the land surface to identify soil properties critical to soil treatment or dispersal of wastewater, treated wastewater, final effluent or nonwater-carried human waste.

(3) EXCAVATION METHODS. (a) Soil profile excavations. A soil profile excavation shall be of such size and construction to allow accurate determination of soil characteristics.

(b) Soil borings. 1. Soil borings shall be created by means of a soil bucket auger, soil probe, split-spoon sampler or Shelby tube having at least a 2 inch diameter.

2. A soil boring may not be created by means of a power auger.

(c) Soil pits. A soil pit shall be of adequate size, depth and construction to enable a person to safely enter and exit the pit and to complete a morphological soil profile description.

Note: Occupational Safety and Health Administration rules and regulations (29 CFR 1926, Subpart P) apply to certain types of excavations, and the persons entering such excavations need to be familiar with those regulations.

(4) WINTER SOIL EVALUATIONS. (a) Soil color evaluations conducted from October 1st through April 1st shall be performed between 9:00 a.m. and 3:00 p.m. on days when natural light conditions permit accurate color determinations.

(b) Frozen soil material shall be thawed prior to conducting evaluations for soil color, texture, structure and consistence.

Comm 85.30 SOIL PROFILE DESCRIPTION AND INTERPRETATIONS. (1) GENERAL. (a) A soil profile description shall be prepared for each soil profile excavation constructed.

(b) Soil profile descriptions shall be written in accordance with the descriptive procedures, terminology and interpretations found in Chapter 3 of the Soil Survey Manual, USDA, October, 1993, except where modified by, or in conflict with, this chapter.

(c) A soil profile description to substantiate soil application rates shall include at least all of the following morphological information for each soil horizon or layer:

1. Thickness in inches or decimal feet.

2. Munsell soil color notation.

3. Soil mottle or redoximorphic feature color, abundance, size and contrast.

4. United States Department of Agriculture, USDA, soil textural class with rock fragment modifiers.

5. Soil structure grade, size and shape.

6. Soil consistence.

7. Root abundance and size.

8. Soil boundary.

9. Occurrence of saturated soil, groundwater, bedrock or disturbed soil.

(d) A soil profile description to substantiate soil characteristics other than for application rates shall include the information specified in par. (c) 1. to 4. and 9.

(2) SOIL INTERPRETATIONS. (a) Redoximorphic features or mottles shall be interpreted as zones of seasonal or periodic soil saturation or groundwater, except as provided under sub. (3).

(b) Unless determined otherwise under s. Comm 85.60, the highest elevation of seasonal soil saturation shall be the ground surface where redomimorphic features are present within 4 inches of the bottom of the A horizon.

(3) SOIL COLOR PATTERN EXEMPTIONS. (a) Without filing a report under s. Comm 85.60 (2), a certified soil tester may discount the following conditions, not limited by enumeration, as indicators of seasonally saturated soil:

1. Fossilized soil color patterns formed by historic periodic soil saturation.

2. A soil profile that has an abrupt textural change, consisting of silt loam or finer textures overlying at least 4 feet of unsaturated loamy sand or coarser textured soil and 24 inches or less of periodically saturated soil immediately above the coarser material.

3. Redoximorphic features orientated along old or decayed root channels.

4. Residual sandstone colors.

5. Unevenly weathered glacially deposited material, glacially deposited material naturally gray in color, or concretionary material in various stages of decomposition.

6. Deposits of lime.

7. Light colored silt or fine sand coatings on soil ped surfaces.

(b) Without filing a report under s. Comm 85.60 (2) for a specific site, the department may accept the results of soil saturation monitoring or of the hydrograph procedure under s. Comm 85.60 previously conducted for areas adjacent to the site, provided that the soil profile descriptions and interpretations confirms that the soil and site conditions are similar for the specific site and the adjacent areas.

(4) SOIL COLOR PATTERN REPORTS. The certified soil tester shall report and describe any soil color pattern exemptions encountered.

(5) DETERMINATION REQUESTS. A certified soil tester may request a determination by the governmental unit or department staff on the significance of unusual soil color patterns as indicators of soil saturation that may not indicate saturated soil conditions that will interfere with wastewater treatment, as specified by s. Comm 83.43 (7). The governmental unit or department may decline to make such determinations, and defer to the use of soil saturation monitoring pursuant to s. Comm 85.60 or some other method to make a determination.

Comm 85.40 EVALUATION REPORTS. (1) GENERAL. A soil evaluation report shall be prepared and submitted to the governmental unit having jurisdiction upon the completion of the evaluation and associated report form.

(2) SOIL REPORT CERTIFICATION AND FORMAT. (a) Soil evaluation reports. Soil evaluation reports shall be prepared in a format specified by the department and this chapter.

Note: See appendix for further information relative to the report format.

(b) Certification. 1. Except as provided in subd. 2., each page of a soil evaluation report shall bear:

a. The original signature of the certified soil tester who collected the data;

b. The certified soil tester's identification number; and

c. The date the report is signed.

2. When more than one sheet of a soil evaluation report is bound together into one volume, only the title sheet shall:

a. Be required to be signed, dated and bear the identification number of the certified soil tester who collected the data; and

b. Clearly identify all other sheets comprising the bound volume.

(3) REPORT CONTENTS. (a) Site report. A site evaluation report shall include at least all of the following:

1. The site's legal description to within 40 acres.

2. The date the data was collected.

3. A legible and permanent site plan that:

a. Is presented on paper no smaller than 8 1/2 inches by 11 inches in size;

b. Is drawn to scale or fully dimensioned;

c. Shows the extent of the site evaluated for soil dispersal or treatment;

5. Location information for all points under investigation including structures, property lines and other encumbrances to the treatment or dispersal component placement on the site.

6. Pertinent elevation data, such as:

a. A reference to, and description of, a permanent vertical and horizontal reference point or bench mark from which all distances and elevations are delineated on the site plan;

b. The natural, undisturbed surface grade elevation for all soil profile excavations;

c. The percent and direction of land slope for the site under evaluation;

d. Ground surface contour lines at an interval appropriate for the conditions present;

e. The floodplain elevation, if established, and current surface elevation of any adjacent navigable waters or reservoir; and

f. The soil saturation monitoring well grade, top of well casing, and bottom well elevation.

(b) Soil report. A soil evaluation report shall include at least all of the following:

1. A site evaluation report pursuant to par. (a).

2. The date soil evaluations were conducted.

3. The site's legal description to within 40 acres.

4. Soil profile descriptions pursuant to s. Comm 85.30 for all soil profile evaluation excavations.

Comm 85.50 GOVERNMENTAL UNIT REVIEW. (1) GENERAL. (a) A governmental unit shall review all soil evaluation reports and site evaluation reports within 30 days of receipt.

(b) Upon completing the review of a soil evaluation report a governmental unit shall accept the report, reject the report, request additional information or clarification, or require verification under sub. (2).

(c) When a report is deemed acceptable, a governmental unit shall so indicate on the report and file the report for future reference.

(d) If the report is not acceptable, a governmental unit shall notify the submitter in writing and shall state the deficiencies or actions, or both, necessary to bring the report into compliance with this chapter or ch. Comm 83.

(2) VERIFICATION. (a) Soil. 1. The governmental unit or the department may require the property owner or the certified soil tester to provide soil pits in accordance with s. Comm 85.20 (3) for verification of soil profile evaluation data.

2. The certified soil tester who is responsible for the soil report shall be present at the site during the verification of soil profile evaluation data if so requested by the governmental unit or the department.

3. Soil verifications may not be conducted under adverse weather or light conditions that may lead to inaccurate results.

(b) Site. 1. The governmental unit or the department may require the property owner or credentialed individual who certified the site report to provide assistance and equipment to verify site conditions.

2. The credentialed individual who is responsible for the site report shall be present at the site during the verification of site conditions if so requested by the governmental unit or department.

(c) Report. The governmental unit or the department shall complete a written report for each soil or site verification completed, and the results or findings of the report shall be filed with the soil and site evaluation report for future reference.

Comm 85.60 SOIL SATURATION MONITORING. (1) GENERAL. (a) Optional documentation. 1. A property owner, or their agent, may submit documentation to the department to prove that redoximorphic features, or other soil color patterns, at a particular site are not indicative of periodically saturated soil conditions or high groundwater.

2. Documentation shall be in the form of an interpretative determination, soil saturation monitoring, or hydrograph procedure pursuant to this section.

(b) Artificially controlled navigable waters. Where sites are located adjacent to artificially controlled navigable waters, the following conditions shall be addressed.

1. If loamy sand or coarser soil textures prevail at a site adjacent to a navigable water that is served by a controlling structure and maintained by a recognized management entity, the groundwater elevation at the site shall be compared to the current and highest controlled navigable water elevation.

2. The highest normal groundwater elevation at such sites shall be the higher of either the observed elevation or an adjusted elevation based on the controlled water elevation maintained by the management entity.

(2) INTERPRETIVE DETERMINATIONS. (a) A written report by a certified soil tester evaluating and interpreting redoximorphic soil features, or other soil color patterns, may be submitted to the department in lieu of monitoring data. The written report shall conclusively demonstrate that the existing soil morphological features or color patterns are not indicative of current conditions of periodic soil saturation.

(b) The department shall make a determination on the validity of the data, results and conclusions set forth in the report.

(c) The written report shall include, but not limited, to all of the following information:

1. A soil evaluation report pursuant to s. Comm 85.40.

2. An interpretive review of the site including, but not limited, to al of the following:

a. Local hydrology.

b. An historical interpretation of the local geomorphology.

c. Soil disturbance and hydraulic modification.

d. The landscape position and local topography in the area under investigation.

3. Soil series and mapping units, if available, for the immediate area, as listed in the USDA soil survey.

4. Data, if any, from previous soil saturation monitoring in similar soil conditions and landscape position.

5. Any written reports, comments or recommendations by the governmental unit or department staff.

(3) SOIL SATURATION MONITORING. Actual levels of soil saturation may be determined at specific sites in accordance with the procedures in pars. (a) through (i).

(a) Intent to monitor. 1. The property owner, or his or her agent, shall notify the governmental unit and the department of the intent to conduct soil saturation monitoring at least 15 business days prior to monitoring well installation.

2. The notification to conduct soil saturation monitoring shall include:

a. Soil profile descriptions pursuant to s. Comm 85.30 in the area under investigation and the proposed number, depth, and location of the monitoring wells; and

b. Written permission signed by the property owner for governmental unit and department personnel to enter upon the property under investigation during reasonable hours of the day to verify monitoring well installation or monitoring results.

(b) Precipitation. 1. Precipitation data reported for monitoring purposes shall include monthly totals for September through May, and daily totals for February through May.

2. Precipitation data totals under subd. 1. shall be from either the closest local station to the monitored site, or the average from the 3 closest local stations to the site. If averaging is used, the totals under subd. 1. shall be submitted for all 3 stations.

(c) Regional water tables. 1. Where sites are subject to a broad, relatively uniform, regional water table, the fluctuation observed over a several year cycle shall be considered.

2. At such sites, and where free water levels are more than 5 feet below grade, determinations shall be made using the hydrograph procedures contained in sub. (4).

3. Areas affected by a regional water table shall be delineated by the department in consultation with the affected counties and the Wisconsin Geological and Natural History Survey.

(d) Fine textured soil. 1. The department may prohibit soil saturation monitoring in fine textured soil with high matric potentials where monitoring results may be inconclusive.

2. In such cases, the department may approve alternative methods to address the direct determination of saturated or near saturated soil conditions not enumerated in this section.

(e) Monitoring well installation, construction and testing. 1. 'Number of wells'. a. At least 3 monitoring wells shall be located to delineate the area under investigation.

b. The governmental unit or department may require more than 3 wells to adequately evaluate potential soil saturation conditions.

2. 'Monitoring well depth'. a. At the request of the department or governmental unit, at least one monitoring well shall be constructed to a depth of 15 feet below the ground surface to determine if groundwater conditions are due to a perched water table and the possible extent of the saturated zone.

b. Other monitoring wells shall terminate at specific depths below grade that will serve to evaluate where shallow perched zones of soil saturation occurring within the soil profile.

c. The governmental unit or department may designate specific monitoring well depths and well locations based on soil and site conditions, or experience in a particular geographic area or topographic position.

d. A monitoring well may not be less than 24 inches deep.

3. 'Monitoring well construction'. The direct observation of soil saturation conditions shall be accomplished by means of monitoring wells conforming to this subdivision and Figure 85.60-1.

a. The monitoring well casing shall be constructed of materials meeting the standards in s. Comm 84.30 Table 84.30-1, except that lead pipe may not be used.

b. The inside diameter of a monitoring well may not be less than 2 inches or more than 4 inches nominal size.

c. The borehole diameter shall be 2 to 4 inches larger than the outside diameter of the monitoring well casing.

d. The top of the monitoring well casing shall terminate at least 18 inches above grade and be provided with a vented cap.

e. The bottom of the monitoring well casing shall terminate in a slotted, or screened casing. The slots or screen shall extend 6 to 18 inches above the bottom of the pipe and be at least 4 inches below the filter pack seal. The slots or screen shall not be hand cut and shall be designed to retain soil particles with a diameter of greater than 0.02 inch.

f. Except for the vented end cap, joints between lengths of pipe and fittings shall conform to s. Comm 84.40.

g. Finished grade around the well shall be sloped away from the well pipe using soil material.

h. At a minimum, the upper 12 inches of annular space surrounding the well pipe shall be sealed by puddled clay, bentonite, or an equal-parts mixture of soil, bentonite and cement. A surface seal may not be necessary if the entire soil profile is sand.

i. The annular space seal below 12 inches and to the top of the filter pack seal may be of unspecified soil material.

j. A filter pack seal shall be installed above the filter pack to prevent soil migration downward into the filter pack.

k. The well pipe shall be set on at least 2 inches of pea gravel that extends 4 to 6 inches above the top of the well screen or highest slot. The gravel filter pack is not necessary if the natural soil is coarse sand or coarser.

4. 'Monitoring well development'. a. Wells shall be tested for adequate hydraulic performance prior to the start of monitoring.

b. Wells installed in unsaturated soil shall be carefully filled once with clean water to a depth of 24 inches above the bottom of the borehole and allowed to drain freely for at least one week prior to the start of monitoring.

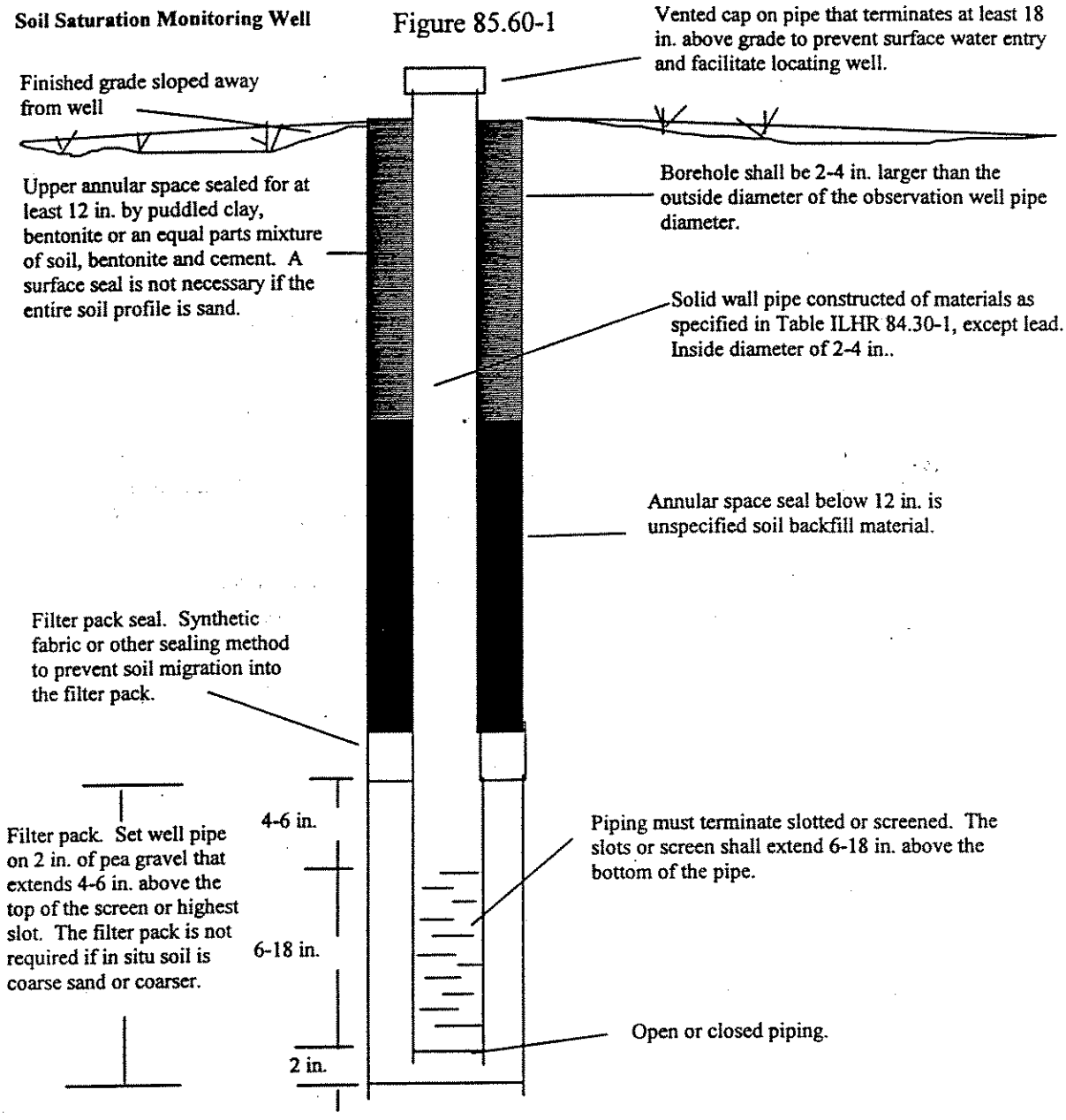
Note: Water remaining in the well after one week may indicate poor contact between the well and surrounding soil material.

c. Wells terminating in saturated soil shall be developed by removing at least one volume of water equal to the volume of the borehole below the filter pack, if possible.

Note: Water levels not returning nearly to or exceeding the initial water level within one week of purging may indicate poor contact between the well and surrounding soil material.

d. Any well deemed in poor contact with the surrounding soil may be reinstalled and tested pursuant to this section. A second unsuccessful attempt to show good contact in a properly installed well shall be reason to reject all or part of the monitoring project.

Soil Saturation Monitoring Well Figure 85.60-1



(f) Observations. 1. 'Observation period.' The observation period for soil saturation monitoring shall begin on or before the appropriate date specified in Figure 85.60-2, and end June 1st.

2. 'Alternate observation period.' The department may approve an alternate observation period if the data presented conclusively demonstrates equivalency to conditions encountered during a normal spring observation period.

3. 'Minimum frequency.' Observations shall be made on the first day of the observation period and at least every 7 days thereafter until the observation period is complete.

(g) Conclusions. 1. The highest level of soil saturation shall be considered to occur at the highest elevation of free water present in an observation well for a period of 7-day observation period.

2. The results of monitoring under this section shall be considered inconclusive if the precipitation totals under par. (b) do not equal or exceed:

a. 8.5 inches from September 1st through the last day of February; and

b. 7.6 inches from March 1st through May 31st.

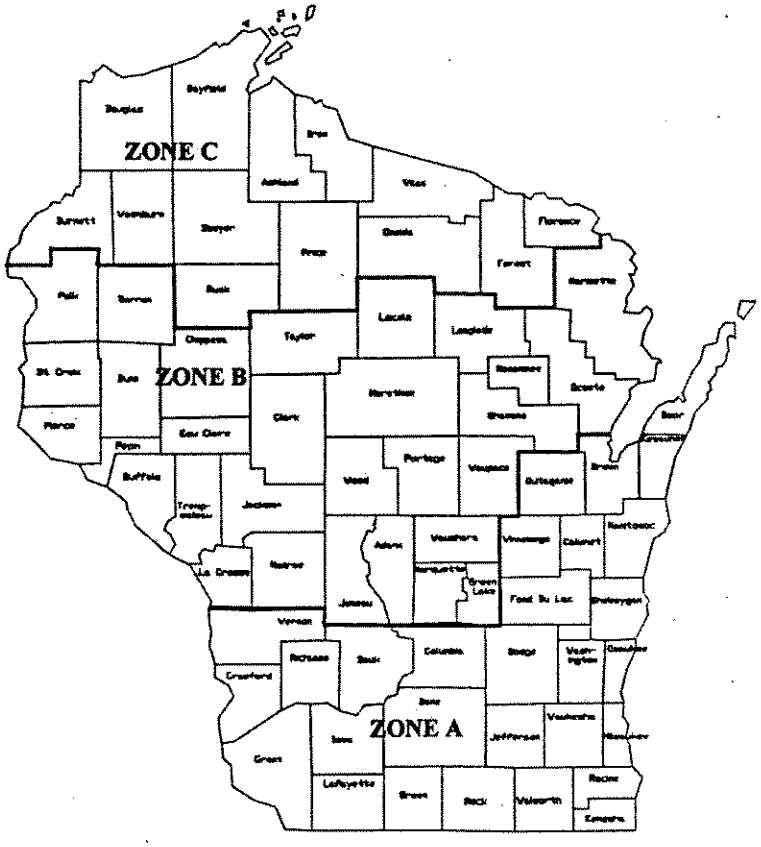


Figure 85.60-2
Latest Date to Begin Spring Soil Saturation Monitoring

Zone A	February 15
Zone B	March 1
Zone C	March 15

(g) Reporting data. 1. Within 60 days of the completion of the observations, 3 copies of the following data shall be submitted to the department for review:

a. A soil and site evaluation report pursuant to s. Comm 85.40.

b. Well installation, depth, location, elevation and development information.

c. Precipitation data and name of any local station used.

d. Observation dates.

e. Current and any prior observation results.

f. Any governmental unit observations or reports pertaining to the monitoring observations, well construction or soil/site conditions.

2. Within 60 days of the completion of the observations, one copy of the data specified in subd. 1. shall be filed with the governmental unit having jurisdiction.

(h) Report forms. Soil saturation monitoring results shall be reported on forms specified by the department.

(i) Failure to report. Failure to file monitoring results with the governmental unit and department within 60 days may disqualify the site from future monitoring or interpretive determinations.

(4) HYDROGRAPH PROCEDURE. (a) 1. Where regional water table fluctuations are considered in deep sandy soil, the predicted high level of groundwater shall be established using hydrograph documentation.

2. The highest level of groundwater shall be determined by direct observation during the soil profile evaluation or by one of the hydrograph methods outlined in pars. (b) to (d), whichever is highest.

(b) 1. If there is less than 5 feet to free water below original grade, the procedures detailed in sub. (2) or (3) shall be used to determine the highest predicted groundwater level at the site.

2. If there is 5 feet or more to free water below original grade, the hydrograph procedure may be used to determine the highest predicted groundwater level at the site.

(c) Where the water table at the site is 5 to 10 feet below grade, the procedures of subds. 1. to 5. shall be followed:

1. A completed soil and site evaluation report pursuant to s. Comm 85.40 that confirms the elevation of free water, if observed, shall be prepared.

2. a. A slotted or screened soil saturation monitoring well shall be installed at the proposed system location to a depth of at least 12 inches below the free water elevation.

b. The well shall be installed and tested pursuant to sub. (3) (e) 5.

3. a. The water level in the well shall be recorded after completion of the well installation and 7 days later.

b. The highest of the 2 water levels shall be used to complete the hydrograph procedure.

4. The permanent USGS groundwater well or wells as assigned by the governmental unit or department shall be read within 24 hours of establishing the actual free water elevation at the site.

Note: See appendix for further information relative to the report format.

5. The hydrograph procedure shall be completed and the results shall be reported to the department in a format specified by the department.

(d) Where the water table at the site is 10 feet or greater below grade, the procedures of subds. 1. to 3. shall be followed.

1. A completed soil and site evaluation report pursuant to s. Comm 85.40 that confirms the elevation of free water, if observed, shall be prepared.

2. The permanent USGS groundwater well or wells assigned to the project by the governmental unit or department shall be read within 24 hours of the actual free water determination at the site.

3. The standard hydrograph procedure shall be completed and the results shall be reported to the department in a format specified by the department.

Note: See appendix for further information relative to the report format and addresses of the department.

(5) SOIL SATURATION MONITORING WELL ABANDONMENT. The following requirements shall apply to all soil saturation monitoring wells installed pursuant to this section.

(a) Abandonment timeline. Unless specifically approved by the governmental unit or department, all soil saturation monitoring wells shall be abandoned within 60 days after the completion of monitoring.

(b) Contamination conduit. Any soil saturation monitoring well found by the department or governmental unit to be acting as a conduit for groundwater contamination shall be ordered abandoned immediately.

(6) VERIFICATION. (a) Verification. The governmental unit or department may request verification of monitoring pursuant to s. Comm 85.50 (2), and proper well installation pursuant to this section.

(b) On-site visits. 1. The governmental unit or department may visit sites during monitoring observation periods or at other reasonable times to determine the accuracy of data.

2. A written record of on-site visits in subd. 1. shall be maintained by the agency conducting the visits.

SECTION 69. Chapter Comm 91 is created to read:

Chapter Comm 91

SANITATION

Comm 91.01 PURPOSE. The purpose of this chapter is to establish minimum standards and criteria for the design, installation and maintenance of sanitation systems and devices which are alternatives to water-carried waste plumbing fixtures and drain systems so that these sanitation systems and devices are safe and will safeguard public health and the waters of the state.

Note: Local governmental units may restrict or place more stringent limitations or requirements relative to the design, installation, maintenance or use of the sanitation systems within the scope of this chapter.

Comm 91.02 SCOPE. (1) This chapter applies to all composting toilet systems, incinerating toilets, pit privies and vault privies installed or constructed on or after the effective date of this chapter.

(2) The provisions of this chapter are not retroactively applied to existing installations unless specifically stated in the administrative rule.

Comm 91.03 DEFINITIONS. In this chapter:

(1) "Composting toilet system" means a method that collects, stores and converts by bacterial digestion nonliquid-carried human wastes or organic kitchen wastes, or both, into humus.

(2) "Department" means the department of commerce.

(3) "Incinerating toilet" means a self-contained device for the treatment of nonliquid carried wastes that deposits the wastes directly into a combustion chamber, reduces the solid portion to ash and evaporates the liquid portion.

(4) "MPN" means most probable number.

(5) "Pit privy" means an enclosed nonportable toilet into which nonwater-carried human wastes are deposited to a subsurface storage chamber that is not watertight.

(6) "Vault privy" means an enclosed nonportable toilet into which nonwater-carried human wastes are deposited to a subsurface storage chamber that is watertight.

Comm 91.10 COMPOSTING TOILET SYSTEMS. (1) The materials, design, construction and performance of a composting toilet system shall conform to NSF Standard 41.

(2) All composting toilet systems shall be listed by a testing agency acceptable to the department.

Note: Listing agencies acceptable to the department include the American Gas Association; Canadian Standards Association; NSF International; Underwriter's Laboratories; and Warnock Hersey.

(3) (a) Components for the storage or treatment of wastes shall be continuously ventilated.

(b) Ventilation ducts or vents for the composting toilet system shall conform to s. Comm 82.31 (16).

Note: See appendix for a reprint of portions of s. Comm 82.31 (16).

(4) (a) The disposal of the compost shall be in accordance with EPA part 503.

(b) The disposal of any liquid from a composting toilet system shall be either to a public sanitary sewer system or a POWTS conforming to ch. Comm 83.

Comm 91.11 INCINERATING TOILETS. (1) The design, construction and installation of a gas-fired incinerating toilet shall conform to ANSI Z21.61.

(2) The materials, design, construction and performance of an electric-fired incinerating toilet shall conform to NSF Standard 41.

(3) All electric and gas-fired incinerating toilets shall be listed by a testing agency acceptable to the department.

Note: Listing agencies acceptable to the department include the American Gas Association, Canadian Standards Association, NSF International, Underwriter's Laboratories, and Warnock. Hersey

(4) (a) The disposal of the end product shall be of in accordance with EPA part 503.

(b) The disposal of any liquid from an incinerating toilet shall be either to a public sanitary sewer system or a POWTS conforming to ch. Comm 83.

Comm 91.12 PRIVIES. (1) (a) The storage chamber of a vault privy shall conform with the requirements of s. Comm 84.25 relating to holding tanks, and shall have a minimum storage capacity of 200 gallons or one cubic yard.

(b) 1. The storage chamber of a pit privy shall be sited and located in soil recognized to provide treatment and dispersal in accordance with s. Comm 83.44 (4) (b).

Note: Chapter Comm 85 establishes procedures for conducting soil evaluations and preparing soil evaluation reports. Section Comm 5.33 delineates the qualifications and certification procedures for individuals who conduct soil evaluations.

2. Governmental units may set standards for the structure above the vault or pit for one- and two-family dwellings.

3. Privies for public use shall meet the requirements of this section and s. ILHR 52.63.

Note: Chapters NR 811 and 812 establish minimum separation distances between a pit or vault privy and a potable well. Chapters NR 811 and 812 are administered by the department of natural resources.

(c) The storage chamber of a vault privy shall be anchored to prevent flotation caused by saturated soil conditions.

(2) (a) The storage chamber of a pit or vault privy shall be provided with a vent for the purpose of relieving explosive gases.

(b) The vent serving the storage chamber of a privy shall be:

1. At least 3 inches in diameter;

2. Installed in accordance with s. Comm 82.31 (16) (a) to (f); and

3. Fabricated or provided with screening to prevent insects from entering the storage chamber.

(3) The servicing of a vault privy relative to the pumping, transporting and disposal of the contents shall be in accordance with ch. NR 113.

(4) The abandonment of a vault privy shall be accomplished by:

(a) Having the contents of the storage chamber pumped and disposed of in accordance with ch. NR 113;

(b) Removing the entire top of the chamber; and

(c) Filling the remaining portion of the emptied storage chamber with soil or other inert material to an elevation equal to or above the surrounding grade.

(5) The abandonment of a pit privy shall be accomplished by filling the storage chamber with soil or other inert material to an elevation equal to the surrounding grade.

Note: The requirements of the commercial building code, chs. ILHR 50-64, apply to the structures built over those privies serving public buildings and places of employment.

(6) (a) A privy may not be installed in a floodway.

(b) A privy may be installed in the floodfringe provided that the area is filled to remove it from the floodfringe designation or the vault is flood-proofed.

Note: The department of natural resources determines if filling or flood-proofing is in accordance with current rules in effect for development in a floodfringe area.

Comm 91.20 INCORPORATION OF STANDARDS BY REFERENCE. (1) CONSENT. Pursuant to s. 227.21, Stats., the attorney general and the revisor of statutes have consented to the incorporation by reference of the standards listed in sub. (4).

(2) COPIES. Copies of the adopted standards are on file in the offices of the department, the secretary of state and the revisor of statutes. Copies of the standards may be purchased through the respective organizations listed in sub. (4).

(3) INTERIM AMENDMENTS. Interim amendments of the adopted standards shall have no effect in the state until such time as this section is correspondingly revised to reflect the changes.

(4) ADOPTION OF STANDARDS. The standards referenced in pars. (a) and (b) are hereby incorporated by reference into this chapter.

(a) American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018, GAS-FIRED TOILETS, Z21.61-1983.

(b) NSF International, 3475 Plymouth Road, P.O. Box 130140, Ann Arbor, Michigan 48113-0140, WASTEWATER RECYCLE/REUSE AND WATER CONSERVATION DEVICES, NSF 41-1983.

Chapter Comm 91
Appendix

The material and information contained in this appendix is for clarification purposes only. Appendix material and information are numbered to correspond to the rule number as it appears in the text of the code. Material and information included in this appendix is subject to change without notice, including names, addresses, phone numbers and forms, and reflects information known at the time of publication.

A-91.10 (3) (b) Section Comm 82.31 (16) reads as follows:

82.31 (16) VENT TERMINALS. All vents and vent systems shall termi-nate in the open air in accordance with this subsection.

(a) Extension above roofs. Extensions of vents through a roof shall terminate at least 8 inches above the roof. Where the roof is to be used for any purpose other than weather protection, the vents shall extend at least 7 feet above the roof.

(b) Waterproof flashings. The penetration of a roof system by a vent shall be made watertight with an approved flashing.

(c) Prohibited uses. Vent terminals shall not be used as flag poles, support for antennas or other similar purposes.

(d) Location of vent terminals. 1. A vent shall not terminate under the overhang of a building.

2. All vent terminals shall be located:

a. At least 10 feet from an air intake;

b. At least 5 feet from a power exhaust vent;

c. At least 10 feet horizontally from or 2 feet above roof scuttles, doors and openable windows; and

d. At least 5 feet from or 2 inches above parapet walls.

3. Where a structure has an earth covered roof extending from surrounding grade, the vent extension shall run at least 7 feet above grade and terminate with an approved vent cap. The portion of vent pipe outside the structure shall be without joints, except one fitting may be installed where the pipe leaves the top or side of the structure.

(e) Extension through wall. Where approved by the depart-ment, a vent may terminate through an exterior wall. Such a vent shall terminate at least 10 feet horizontally from any lot line and shall terminate downward. The vent shall be screened and shall comply with par. (d).

(f) Extensions outside buildings. Drain or vent pipe extensions shall not be located or placed on the outside of an exterior wall of any new building, but shall be located inside the building.

(g) Frost closure. For protection against frost closure, each vent terminal shall be at least 2 inches in diameter. Where it is necessary to increase the diameter of the vent, the change in diameter shall be made at least 6 inches inside the building.

Note: See Appendix for further explanatory material.

(END)

* *

EFFECTIVE DATE

Pursuant to s. 227.22 (2) (intro.), Stats., these rules shall take effect on the first day of the month following publication in the Wisconsin Administrative Register.

* *

WAUKESHA COUNTY

515 West Moreland Boulevard
Waukesha, Wisconsin 53188-2428

County Board Office

Phone: (414) 548-7002
Fax: (414) 548-7005

AUG 24 1998

August 19, 1998

Sen. Alberta Darling
State Capitol
P.O. Box 7882
Madison, WI 53707-7882

Dear Senator Darling:

We are writing to you because of your role as a member of the Joint Committee for Review of Administrative Rules. Our Land Use, Parks & Environment Committee members continue to have concerns with COMM 83 as well as the corresponding Draft Environmental Impact Statement (DEIS).

The Wisconsin County Code Administrators expressed reservations that the proposed code will decrease statewide uniformity and delete regulatory authority that counties repeatedly asked to have retained. We concur with those reservations and we have attached a copy of their July 13, 1998 comments for your convenience.

Our staff emphasizes that going from a prescriptive based code to a performance based code is a massive undertaking that must be approached cautiously to insure that local municipalities, regulators, designers, and installers recognize their responsibilities and have an understanding as to how to comply with the detailed provisions of COMM 83. Their letter, which provides specific details is also attached.

Thank you for your consideration. Please feel free to contact us if any questions or concerns arise.

Sincerely,

James T. Dwyer, Chair
Waukesha County Board of Supervisors

Robert F. Hamilton, Chair
Land Use, Parks & Environment Committee

MGM/mo

Attachments

cc: Waukesha County Legislative Delegation (with attachments)

Daniel M. Finley
County Executive

John C. Toshner
Director

Waukesha COUNTY

DEPARTMENT OF
PARKS AND LAND USE

July 30, 1998

James Quast
Department of Commerce
Program Development Bureau
P.O. Box 2689
Madison, WI 53701

Re: Proposed Modifications to COMM 81, 83, 85

Waukesha County is supportive of and encourages the development of new technology in privately owned wastewater treatment systems. The continued evaluation of the performance of POWTS and attempts to improve ground water quality throughout Wisconsin are indeed important goals. The ongoing effort to revise COMM 83 aims to achieve these ends, but major concerns persist regarding some of the issues addressed in the proposed modifications.

Although improvements have been made between the previous COMM 83 draft and this one, the following items remain a concern and should be addressed in the final version of COMM 83 rules.

Page 21- 81.01(89): Engineered system -- Comm 83.43(8) establishes a maximum fecal coliform discharge level of less than 200 CFU per 100 ml.. An engineered system may provide treatment to reduce or remove components of wastewater that are harmful to human health or groundwater quality, however, an engineered system must be held to the same minimum discharge parameters as require for other POWTS.

Page 23 - 81.01(111): Governmental Unit -- Within the foreseeable future, some counties may exceed a population in excess of 500,000. Although 145.01(5), Stats. states the city, village or town where the private sewage system is located would be considered the governmental unit, the county designation should not be omitted since some counties may continue to be directly involved with POWTS and enforce the applicable codes.

Page 56 - 83.03(b) & (c): Modifications to existing POWTS -- A modification to an existing POWTS may be minor (ie. pump replacement, manhole, riser baffle replacement etc.) or may be a major modification involving the replacement of a POWTS component (ie. Septic tank, Dose tank, Absorption field etc.) Unless specific guidelines are established, uniformity among counties will vary.

Page 56 & 57 - 83.03 (2)(b) 2a & b Retroactivity: The definition used in 81.01(118) for high groundwater should be used rather than the groundwater definition as defined in 81.01(114).

Division of Environmental Health
1320 Pewaukee Road • Room 260
Waukesha, Wisconsin 53188-3868
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Page 57 - 83.04 Implementation: Counties should be allowed to determine whether they have the resources, staff and adequate training of POWTS inspectors to inspect POWTS as identified in Table 83.04. Establishing a timetable of 18 months does not insure counties will be trained to properly inspect POWTS of various designs and technologies. To properly monitor the operation and maintenance of some POWTS, a considerable time commitment will be necessary and inspectors will need proper training and adequate resources to test POWTS experiencing questionable operation, or to monitor existing POWTS to insure proper operation. Rather than mandating that counties accept the new technologies, the local policy makers must have the opportunity to decide if they are willing to make the commitment necessary to allow the technology within the county.

Page 59 -- 83.21(1)(a): The reference to state statutes does not include s66.036 This section should be included in the enumerated codes to emphasize that a sanitary permit is required prior to the issuance of a building permit.

Page 59 -- 83.21(1)(b): This section requires a sanitary permit for modification of an existing POWTS where the modification involves an addition or replacement of a POWTS component nor does it address a POWTS modification that involves a repair or system remediation (ie. Terralift),

Page 61 -- 83.21(4) Transfers: A sanitary permit not only occurs between owners but also between plumbers. This section should be modified to include transfers between plumbers.

Page 62 -- 83.21(7) Revocation: A provision should be provided to include the authority to suspend a sanitary permit for cases when revocation would not fit the circumstances.. Permit revocation requires obtaining a new sanitary permit, including fees while a permit suspension allows a permit to be held in abeyance until the deficiencies or problems are corrected without penalizing the owner by incurring additional cost for a new sanitary permit.

Page 62 -- 83.22(1) Plan Review & Approval: Plan review does not address modifications that involves an addition or replacement of a POWTS component nor does it address a POWTS modification that involves a repair or system remediation (ie. Terralift),

Page 68 -- 83.24(1): A petition for variance should not be considered if the POWTS does not comply with the performance standard as identified in 83.43(8). The purpose the COMM 83 is to establish a performance based code. The ability to obtain a variance to the performance standards defeats the intent of the code.

Page 69 -- 83.25(c) Construction affecting wastewater flow or contaminate load: This section ties the review of a POWTS to the issuance of a building permit without providing a realistic mechanism for triggering the review. The provisions of the current Comm 83.055 have been in effect for a number of years and have been developed by many counties into an effective method of providing an evaluation of an existing POWTS when specifically identified improvements are made to a

property. The proposed language is a step backward which will lead to confusion and non-uniform application throughout the state.

Page 70 -- 83.25(2)(d) Documentation of existing capabilities: This section requires documentation to include only one of the itemized criteria, when two or all three criteria may be necessary to make an adequate determination of the POWTS suitability. This section need to included the requirement the existing POWTS is not failing as defined in Wis Stats. And s83.03(2).

Page 71 -- Note after 83.25(2)(c)2c: The agency responsible for the issuance of sanitary permit should be the recognized authority for determining whether the proposed construction will affect or interfere with an existing POWTS. Leaving this to the discretion of the municipality will lead to confusion, non-uniform application within the state and increases the risk of making a compliant POWTS into a non-compliant one.

Page 72 -- 83.26(5): Clarification is needed to identify when the testing must occur and who must do the testing. Failure to identify the responsible party will lead to confusion and non-uniform application.

Page 74 -- 83.31 Principles: The POWTS should be maintained and operated in a manner so as not to cause the POWTS to fail to operate according to the design and/or performance standards, and thereby, create a human health hazard. A performance based code should reference performance based standards as a method of determining proper operation.

Page 74 -- 83.32(1)(f): To be consistent with s83.03(2)(a)2b, the POWTS shall not be located less than 2' above groundwater or bedrock.

Page 74 -- 83.32(g): A definition for "camping unit transfer containers" should be provided in COMM 81 since the term is used in various sections of COMM 83.

Page 81 -- 83.43(9)(e)3: A POWTS system should not be approved or installed in an area that is subject to seasonal soil saturation. Providing automatic shut down of a POWTS system creates a situation for misapplication and helps create conditions that may result in a potential health hazard.

Page 83 -- 83.44(3) Infiltrative surface: This portion of the code appears to be inconsistent with other code sections which establish a minimum 2' separation between the bottom the POWTS and bedrock or groundwater conditions for existing POWTS or S83.43(9)(e)3 which allows POWTS to be installed in areas subject to seasonal soil saturation.

Page 82 -- 83.44 Design parameters for POWTS components consisting of in sito soil: This section establishes the criteria for concentration of influent quality parameters. This section does not provide guidance concerning when , in what situations or who is responsible for influent testing.

Unless these items are specifically addressed, the responsibility for influent testing will be confusing to owners, installers and local municipalities.

Page 83 -- 83.44(3)(c): The infiltrative surface must be at least one inch below the original grade, not the finished grade as indicated.

Page 87 -- 83.44(6)(b): This section requires a below grade infiltrative surface to be level, but nowhere does the code require an infiltrative surface located above the original grade to be level. A POWTS installed below or above the ground surface or above the ground surface must be installed so the infiltrative surface is level.

Page 89 -- Subchapter V - Management: Due to complexity of some POWTS systems, an effective maintenance and monitoring procedure is necessary. Because POWTS maintenance & monitoring is an integral part to insure its proper operation, an effective, workable and tested method must be in place to insure that POWTS are maintained and evaluated as designed. Failure to provide an effective maintenance and monitoring procedure may result in premature POWTS failure and increase the risk of creating a public health hazard.

Page 118 -- Chapter Comm 85 - Soil And Site Evaluations: There is concern about subdivision development occurring involving the creation of "buildable" lots that do not have sufficient soils evaluations done to identify an area for a POWTS system. Inadequate lot size, insufficient area for a POWTS system, conflicts with utility and drainage easements and unsuitable soils on lots that are identified as "buildable" by the developer may result in additional costs and legal litigation to the developer or the buyer. The present COMM 85, establishes minimum criteria for development of subdivisions not served by public sewers and should continue being used in addition to the plat review that is presently performed by Department of Commerce staff.

Although improvements have been made to COMM 83, the above reflects some of the concerns Waukesha County has that should be clarified and/or rewritten to provide direction and statewide uniformity in its enforcement and application. Going from a prescriptive based code to a performance based code is a massive undertaking that must be approached cautiously to insure that local municipalities, regulators, designers and installers recognize their responsibilities and have an understanding as to how to install, inspect, maintain and enforce the provisions of COMM 83 and/or the various POWTS package designs. Consideration of the above items is a step towards achieving that goal.

Thank you for your consideration.

George A. Morris, Environmental Health Manager

Dick Mace, Planning & Zoning Manager

WISCONSIN COUNTY CODE ADMINISTRATORS
Comments on the Draft Environmental Impact Statement of the Wisconsin Dept. of Commerce
Submitted July 13, 1998

Overview

Our review of the current draft of the Environmental Impact Statement as it relates to the revision of Wisconsin Administrative Code ch Comm 83 finds there is remarkably little improvement over the previous draft. The DEIS as summarized in Table 5.1, makes the case that the proposed changes will increase local options and enhance local decision making authority, reduce confusion to the consumer and provide numeric standards to guide enforcement actions. The reality is that the proposed code will decrease statewide uniformity, deletes regulatory authority that counties have repeatedly asked to have retained and forces many technologies down on the counties regardless of their capabilities to properly permit, inspect and monitor those systems. We firmly believe the counties should be given the authority to determine which technologies they are able to adequately regulate, and limit their permitting activities to those technologies only. The department could and should play a role in encouraging counties to obtain the resources necessary to be able to accommodate all the available private sewage technology, but should not dictate this.

Upon reviewing the DEIS the four most glaring deficiencies we find in the document are as follows.

1. The DEIS fails to evaluate the impact of eliminating all administrative guidance from the code. This will have the result of forcing local units of government to adopt their own regulations to fill in the gaps in the code. It is extremely unlikely that any two counties will adopt the same regulations. Therefore the regulated community and consumers will be faced with a myriad of different regulations whenever they cross jurisdictional boundaries. This conscious effort on the part of the department serves in large part to destroy the uniformity of the code which was the goal of the uniform code adopted in 1972. There are many places in the document where eliminating confusion for the consumer is listed as a motive for making certain changes, so it is especially ironic that such concern is not extended to this crucial aspect of the code.

2. The current DEIS still only compares the two alternative codes provided in the previous document. Although the review of several "sub-alternatives" is included, a meaningful review of viable alternatives such as the code introduced by the WCCA at the public hearings in 1995 and 1997 is conspicuous by its absence. In this regard the document is notably deficient, and serves to amplify the department's bias toward only one alternative.

3. The DEIS does not address the significance of the risks related to systems that rely on mechanical or chemical processes to treat sewage and then discharge the effluent into shallow soils over bedrock or groundwater. The document repeatedly asserts there is "no difference" between the risks from engineered systems and those allowed under the current code. This ignores the reality of the potential problems due to mechanical failure, improper maintenance or improper operation of the high tech systems; especially those discharging into shallow soil over bedrock or groundwater. This also does not evaluate the fact that counties with small staffs will not have the resources to adequately monitor and follow-up on problems with these systems, yet will be forced to accept that technology.

4. The DEIS does not evaluate the problems which will be encountered if the code is implemented before the system management and maintenance protocol is established and implemented. The statewide monitoring system RFP had not been sent out as recently as May of 1998, so is a long

way from being available for use. This is perhaps the most critical aspect of the whole package, and the impact of this basic aspect not being in place prior to implementation must be assessed.

Our comments on specific portions of the DEIS are as follows:

Page 2 Paragraph 2. While it is true that there are technologies that can be designed to overcome difficult site conditions, it is unlikely that any of the new technologies will provide effective treatment of domestic wastewater at a low cost. Most of the technologies utilize mechanical devices and/or disinfectants to provide the desired effluent quality. By this very nature it is disingenuous to imply that the systems will be "low cost."

Page 2 Paragraph 4. The statement is that the new code will eliminate over 150 regulatory interpretations of the existing code, and this change should improve regulatory consistency while reducing complexity.

The new code eliminates the regulatory framework that exists in the current code for guidance to all counties. This framework will have to be re-created by the counties, but it is extremely unlikely that any two counties will do things the same way. Therefore the department has GUARANTEED there will be less regulatory consistency which will result in greater complexity for the regulated community, and greater confusion for consumers.

Page 2 Paragraph 6. The benefit acclaimed in this paragraph could also be achieved within the framework of the code recommended by the WCCA.

Page 3 "Sub Alternatives considered" The proposed code submitted by the Wisconsin County Code Administrators is more than a "sub alternative", yet has not received any mention in this or the previous EIS document. The DEIS is still deficient in terms of meeting WEPA, ILHR 1 and Comm 107 due to the failure to evaluate this reasonable alternative, or other potential comprehensive alternatives.

Chapter 3

3.1 The introductory paragraph asserts that "the impacts of a single system are practically identical". This is not true. Systems that rely on mechanical devices and/or inputs of chemicals to achieve pre-treatment and then discharge into shallow suitable soil depths pose a much greater risk to the environment and public health. This risk is not adequately evaluated in the DEIS.

3.2.1 Page 68 The third paragraph includes the assertion that "Viruses can be problematic, but their occurrence in domestic wastewater is rare." There is no footnote citation for this assertion. To the contrary, information available through the Wisconsin Division of Health indicates that people regularly shed viruses that are significant agents of waterborne communicable diseases, including small round virus (Norwalk), hepatitis A, hepatitis E and even polio virus. These are serious threats to groundwater and public health, and the risks from these pathogens posed by improper maintenance of high tech onsite wastewater treatment systems must be evaluated by the DEIS. Contact should be made with Dave Botticelli, Environmental virologist at the Wisconsin State Lab of Hygiene, for expert information on this topic.

3.2.1 Page 70 The last paragraph dismisses any concern about removal of bacteria by systems that include disinfection by stating that "if installed as designed and maintained adequately, these are effective at removing bacteria..." There is no analysis of the specifics in the code which will ensure

the ongoing maintenance of these systems, and the risks to the environment and public health when these systems malfunction. The negative effects on groundwater and the risks to public health cannot be trivialized by the assertion that the effects will be local rather than statewide. The DEIS must evaluate this issue more thoroughly and realistically.

3.2.1 Page 71 The discussion of the drawbacks of a few pretreatment devices is very weak. This provides a brief litany of the one or two disinfection options and one possible drawback each. This is not an adequate evaluation of the problems and risks posed by these devices.

The assertion that the failure of a single onsite sewage system to remove bacteria from domestic wastewater would have limited adverse impacts is not supported by any citation of scientific literature. Conversely, the literature is replete with publications regarding the negative health effects related to untreated or partially treated domestic wastewater. This issue must be thoroughly evaluated including the risks to public health and groundwater. See Appendix A for a bibliography of research on this topic.

3.2.1 Page 72 Viruses. The assertion that viruses are not a common component of household wastewater is not supported by documentation in the DEIS and is contrary to the evidence available from the Wisconsin Division of Health. Staff at the WDOH confirm that viruses *are* common components of wastewater.

Also, the document asserts that viruses are not effectively filtered by soil, yet identifies that natural die off and adsorption are the most important means of reducing the virus content of sewage. This appears to support the importance of maintaining the three foot separation to limiting conditions in order to maximize the elimination of viruses. The area at least three feet below the surface will have minimal organic content and will have a higher fine soil content than the shallow *in situ* soils that many of the high tech systems will discharge into. The ramifications of this and the risks from improper maintenance of pre-treatment or disinfection systems must be evaluated by the EIS.

3.2.3 Page 76 The section on Nuisance Conditions and Safety Hazards totally ignores the public health concerns about improperly functioning onsite sewage systems. Ponded effluent or sewage at the ground surface does have public health implications beyond a "nuisance"due to the pathogenic components of sewage that can be transmitted by insects, vermin or even household pets that come in contact with it. The DEIS totally misses an evaluation of this concern.

3.2. Page 77 Economic Impacts . This section is extremely cursory. This does not evaluate the increased costs of the design of engineered systems, the increased permit costs due to more inspection time, their projected annual operating costs, the costs of servicing, maintenance etc. The ongoing operating costs definitely have an impact on the potential for improper maintenance, as holding tanks have shown us. The DEIS must thoroughly evaluate the costs of these systems and the impact of those costs.

Likewise the economic impact on local units of government must be evaluated. The training for staff, additional inspection time, developing local codes to replace repealed sections of the state code, plan review time for engineered systems to ensure proper installation, and monitoring of engineered systems will have significant impact on the resources of many local agencies. This is not included in the DEIS.

3.3.4 Page 83 Environmental Pollution. This section does not evaluate the risks to the environment from engineered systems that are not properly operated or maintained. The engineered

systems will open sensitive areas to development and create risks that otherwise would not occur. This aspect is not evaluated anywhere in this document.

3.4 Page 86 Cumulative Impacts. The document clearly is deficient in assessing the cumulative impacts from onsite sewage systems. The discussion starts with the assumption that all systems will be properly installed and operated, so the conclusion is there will be no problems. This ignores the reality of experiences we are already aware of and that systems will not be properly operated and maintained. There will be serious negative impacts from improperly maintained and operated systems designed to discharge into shallow soils, especially over shallow bedrock or shallow groundwater. The final EIS must address these important issues.

The assertion that viruses should have no cumulative impacts is not supported by any documentation. Information available from sources such as the Small Flows Clearing House of the University of West Virginia and the Wisconsin Division of Health indicates there are impacts from viruses. This issue needs thorough evaluation, and establishing standards for discharge from onsite sewage systems deserves serious consideration. It is inexcusable to ignore this component of sewage in an age when emerging pathogens are creating serious problems.

The issue of disposal of septage is dismissed with little more than comparison to problems with disposal of municipal sludge. This is not an adequate review of the problems that are associated with finding suitable field spreading sites or with the reluctance of municipal treatment plants to take holding tank waste. This information is readily available from the WDNR and should be a part of this evaluation of impacts.

3.5 Page 87 Summary . The summary is a cursory conclusion that there will be no difference between the impacts of onsite waste disposal systems allowed under the existing code or the proposed code. This is inaccurate. While the total number of systems may be expected to be the same, the potential risk to groundwater and public health is *much greater* from improper maintenance or operation of systems relying on mechanical or chemical processes to achieve all or a portion of the wastewater treatment. The DEIS fails to adequately recognize or evaluate this distinction.

Chapter 5

5.1 Page 135. Introduction. The introduction indicates that two alternatives are considered by the impact statement, with consideration given to several "sub-alternatives". There is no consideration given to the in-depth alternative code presented by the Wisconsin County Code Administrators at both previous public hearings, i.e., in 1995 and 1997. That proposal is a serious alternative to either of the proposals given full comparison in this document. The complete elimination of that or other similar options is a serious flaw in this document. The final EIS must provide an assessment of alternatives such as the one offered by the WCCA that offer solutions between the department's proposal and the so-called "no-action" alternative.

It is clear that the department wishes to provide a comparison with an alternative which almost universally is seen as undesirable. The willful refusal to consider full scale alternatives which are worthy of such consideration raises serious questions about the objectivity of this report This shortcoming was pointed out in our comments at the past public hearing so the omission must be viewed as more than an unintentional oversight.

5.2.2 Page 136. Scope and Application. This section asserts that the application of the minimum separation requirements to pre 1970 systems for determination of failing private sewage systems has been selectively used. This is an indictment against the department if it is true. There has been no uncertainty about the application of the minimum separation based on the interpretations from the department over the years. If it has been enforced non-uniformly, the department should have taken action in counties that were not adhering to this aspect of the code.

This section also asserts that the code does not address the use of non plumbing systems. This is false. The current definition of a private sewage system referenced in ch Comm 83 includes "..a substitute for the septic tank or soil absorption field..". Furthermore, sComm 83.20(6) authorizes the approval of alternate or experimental materials for use on private sewage systems. Finally, the department has a specific document for recording when a privy is installed, and the department's official sanitary permit application has a specific reference to Pit Privy under the section relating to Type of System. Therefore to claim that the current code is deficient in regard to these alternative waste disposal methods is disingenuous at best and deliberately misleading at worst.

5.2.5. Page 139 Design and Installation. This section states that reduction in the soil absorption area for new installations is *only* approved for experimental systems discharging highly pretreated effluent. This is not true. The department has approved downsizing of seepage trenches for new construction based solely on the design of the chamber that holds the cover material (soil) out of the system; *not* on pre-treatment, not on equal distribution within the absorption area, not even on water reducing fixtures in the dwelling.

5.2.6 Page 140. Management. This section claims that management plans are not required for all systems under the current code. While this may seem to be a deficiency, closer inspection reveals the truth. The code does require servicing of the septic tank and other treatment tanks when they become more than 1/3 occupied by sludge and scum. Counties that participate in the Wisconsin Fund (which is the vast majority) are required to establish a mandatory maintenance program for all new systems. Systems that utilize mechanical devices as part of the treatment process must provide maintenance criteria as part of their product approval process. Therefore it is again misleading to flatly state that the existing code does not require management plans for all systems.

5.3.1 Page 141 Definition. The section on Comm 82 touts the removal of the requirement to connect to public sewer and/or water service, in part because these powers reside in chs 66 and 144, Wis Stats. These requirements have been included in the plumbing code virtually since its inception. We remain opposed to this omission and the department's intransigence over this significant policy issue for local units of government. We fail to understand the effort to remove this portion of the code which has been a valuable tool and has withstood the test of time and many code revisions up to now.

5.3.2 Page 142 Scope and Application. This section touts the fact that retroactivity is clearly limited. One of these involves limiting application of current code criteria to the specific component(s) being modified when work is done on a system. This will sanction and encourage extending the life of systems that are discharging untreated or partially treated sewage into zones of groundwater or bedrock. This is clearly not in the interest of protecting public health or groundwater. The negative impact of this change is not evaluated in the impact statement. This deficiency must be corrected in the final EIS.

5.3.3 Page 142. Prohibitions and Limitations. This section enumerates various prohibitions that are included in the code. There is no evaluation of the mechanisms which will be utilized to

determine whether a violation is occurring. In cases such as discharges which could impair the functioning of the system, it will be extremely difficult and expensive. The final EIS must assess the potential negative impacts of system discharges that will be difficult or nearly impossible to test or evaluate.

5.3.6 Page 147. Management. The narrative explains that a system not maintained in accordance with the management plan will be considered a human health hazard. The weakness in this scenario is there is no specific mechanism for transfer of the maintenance information from owner to owner (such as an annual operating permit, recorded documents, etc.) The final EIS must address the problems that will likely arise due to lack of adequate notification about maintenance requirements to new owners.

This section also indicates that service providers for mechanical systems must demonstrate experience or training and be registered by the department. The draft EIS does not address the lack of any procedure or protocol for assessing the proficiency of the service providers, or the department's plans to develop such criteria. The final EIS must address this issue.

5.4 Sub-alternatives. Page 149. The section on holding tanks is significantly incomplete. The narrative addresses the economic impact but gives short shrift to the improper maintenance of holding tanks. Prof. Byron Shaw has done research which demonstrates the inadequacy of regulatory control over the disposal of holding tank wastes. If the problems associated with the inherent economic incentive to improperly dispose holding tank wastes is given due consideration, the conclusion will not be the same as the one arrived at in this document. The report needs to provide facts rather than anecdotal references about "other local governments" that don't have problems with improper disposal of holding tank waste. The report should specifically identify any such units so they can have the opportunity to challenge the veracity of this type of claim. The final EIS must provide a realistic assessment of the problems inherent with the use of holding tanks, esp. for residential use.

5.4 Local ban on systems. Page 150. The suggestion that the department will train installers and service personnel stresses credibility. Currently the department puts on recertification courses once a year. Systems will be approved by the department regardless of whether any training has been provided to the regulated community or county personnel, but the counties will be forced to accept the technology and get up to speed on their own before the system is installed. This will be a tremendous strain on many local offices with only one or two staff. The cavalier dismissal of the real concerns about a local unit of government's capabilities to adequately oversee the permitting, installation and operation of complex technology is disturbing. Since the EIS should be a document evaluating the potential problems, not a rationalization for doing what they please, the impacts of imposing complex technology on local governments without adequate resources must be given serious consideration in the final EIS.

5.4 Require field trials in Wisconsin. Page 151. The conclusion that field trials in Wisconsin would be of no additional value ignores the value of allowing the installers and inspectors to gradually become familiar with the intricacies of the installation and operation of the new design packages. The conclusion made here stresses the technological side and ignores the human side of introducing new designs. The final EIS should address the advantages of phasing in the new technologies.

5.4 Require final effluent standards...Page 152. The final effluent standards do not address significant components of human sewage, most notably viruses. Live viruses are being discharged

by humans every day in the form of rotovirus, hepatitis and even polio virus. Live viruses are used in many forms of vaccines, so households with children are especially prone to having viruses in their wastewater. There is also a substantial body of evidence that viruses are much hardier in the environment and will survive conditions or even disinfection that will eliminate bacteria. Viruses have been found in well water that has been tested and determined bacteriologically "safe". The EIS must address viruses as a significant component of human sewage even if the information is not readily available. We suggest reviewing "Environmental Virology", by Rao & Melnick, for information on viral transport and significance as a risk to human health.

5.4 Maintain minimum 36 inch vertical separation. Page 153. The narrative claims that the existing code does not contain safety measures to accommodate system malfunction or failure. There is no example of the threat to human health or groundwater that can occur due to failure of systems installed under the current code. The existing code already requires a replacement or repair strategy for all systems in case of failure. The DEIS fails to evaluate the potential negative impacts of systems that heavily rely on pretreatment rather than depth of suitable soil to provide sewage treatment. These systems can have a significant impact on groundwater or public health even before the failure is recognized. This fact must be evaluated in the final EIS.

5.5.2 Applicability. Page 153. This section states that the current code creates confusion and the new code will prevent confusion and those are the only two alternatives. There is no mention of amendments to the existing code that could just as effectively resolve any real or perceived problems. This is another example of this document's failure to really evaluate alternatives rather than act as a tool for justification of what the department wants to do.

5.5.2 Modifications to existing structures. Page 165. This narrative is totally misleading. The criteria in the existing code was developed on the basis of an opinion of the Wisconsin Attorney General's office. This procedure has worked well and is clearly understood by local units of government, the regulated community and the public at large. The proposed procedure departs form the attorney general's opinion, establishes a subjective criteria for triggering the system review requirements and makes it virtually impossible to determine when a change requiring review is occurring. This will result in totally random and unequal enforcement within counties as well as from county to county. The negative impact of this significant change is not addressed in the draft EIS and must be addressed in the final EIS.

5.5.3 State Prohibitions and Limitations. Page 167 The narrative relating to public sewer connection does not reflect reality. Local units of government have repeatedly requested that the current code provision be retained in the code. Although properly installed and maintained private sewage systems deserve to be recognized as adequate methods of disposing household wastewater, when the decision to provide public sewer is made, it is sound policy to require all dwellings to connect to the public sewer when it becomes available. There definitely is environmental advantage to be gained by requiring hook-up to public sewer, in the form of eliminating the risk of a failing private sewage system. This section reflects the over-all weakness of the DEIS in terms of ignoring the prevention aspects of many of the current code provisions. The final two sentences of paragraph two sum it up; it claims that hook-ups to public sewer can increase the load and flows to public sewer and that this could be "beneficial or adverse, depending on the capacity of the municipal plant". Does the department really believe a plan for sewer extension would not include an evaluation of the treatment plant's capacity to handle the additional load?

5.5.3 Discharge of wastewater... Page 167. This section concludes that there is no difference between the two alternatives in relation to the discharge of sewage into the soil. This totally ignores

the potential in the new code for inadequate treatment of sewage before it is discharged into only 12 inches of soil above bedrock or groundwater if the pretreatment devices are not properly operated or maintained. The conclusion that there is no adverse impact expected from systems allowed by the new code is a major flaw in this document. The final EIS must address the issue of having little or no margin of safety when utilizing systems that rely on mechanical devices or processes to achieve all or most of the treatment of the sewage load, versus the current code's built in safety factor.

5.5.3 Discharges to a system... Page 168. This section asserts that this prohibition is costly and difficult to determine an exceedence of an applicable standard in ch NR 140. This information is not used to evaluate the risks that will accompany the new system designs; rather the report suggests the need for education of the public. The final EIS must evaluate the new technologies in terms of the risks to sensitive areas because of the difficulties in determining an exceedance until after a negative outcome is experienced.

5.5.3 Holding tank usage. Page 170. This section reviews the department's changing attitude toward holding tanks. The dismissal of the significant impacts of improper management of holding tanks as merely an issue of closer oversight of septage haulers disregards the basic fact that most of the problems are due to the system owners, not the waste haulers. It is also well known that local governments simply can never have adequate resources to keep up the level of monitoring that it would take to ensure these systems are being properly operated. The management plans for holding tanks in the existing code are quite strict, but are of little or no use in the effort to ensure proper system maintenance. The final EIS needs to evaluate the problems that are inherent with holding tanks, and evaluate the known problems and the potential risks from allowing holding tanks as a system of choice. Since groundwater is a shared resource of the state which transcends political boundaries, this needs to be assessed as more than an economic or local control issue.

5.5.3 Prohibitions or Limitations by Local Government. Page 172 The section pertaining to local bans or limits is insufficient. The emphasis was placed strictly on the consumer choice aspect of the issue with no assessment of the availability of resources at the local level to adequately permit, inspect and monitor any particular new design. Forcing local units of government to accept all technology regardless of their capacity to properly oversee all aspects of the system installation and operation will have a significant potential for negative impacts on public health and the environment. The final EIS must assess the risks associated with expectations that exceed the resources of the local unit of government.

5.5.4 Administration and Enforcement Page 172-173. The section relating to the choices offered by the new code focuses on the issue of better treatment of effluent while ignoring the issues of exposing more sensitive areas to contamination because of the new options, and the risks to public health and groundwater from improperly operated or maintained systems. The potential for problems was hinted at in the earlier section dealing with exceedences of ch NR 140 limits. The dismissal of potential problems as "localized and limited" is a claim without supporting evidence. Transport of pathogens including viruses is well known and can have wide ranging effects. Also it verges on the incredible that the department views contamination so lightly as long as it is "localized and limited".

5.5.5 Design and Installation. Page 176. This section discusses the establishment of a numeric effluent quality standard. In part it acknowledges the role this may play in influencing research and design. The shortcoming is that the standard applies only to bacteria, with no mention of virus. There is a very real risk from viruses in human sewage. The transport and survival of virus are fairly well known, and are known to have higher resistance to environmental antagonists and to

have longer transport capabilities in soil systems than bacteria. Therefore it is a serious deficiency to omit viruses from these standards. Dave Botticelli, Environmental Virologist at the Sate Lab of Hygiene, would be an important contributor on this topic.

5.5.5 Minimum total unsaturated... Page 177-178. This section minimizes the risk from new designs that rely on pre-treatment or post treatment processes to achieve final effluent quality. A thorough analysis of the risks from improper use or maintenance as well as improper design needs to be evaluated. This should include assessment of the difficulties in detecting failure to meet performance specifications in order to paint a complete picture of the risks that will accompany these designs. The final paragraph of this section is transparent in its effort to paint the alternative as "status quo" only. True alternatives of equal or superior merit to the one presented must be included in the final EIS.

5.5.5 Application rates. Page 179. This section again belittles concern about contamination from system malfunction or misuse on a statewide basis. The impacts locally could be significant and should not so easily be dismissed. An evaluation of the risks to public health and groundwater needs to be included in the final EIS.

5.5.5 Surface treatment components. Page 1798-180. This section refers to problems experienced in Illinois and Ohio but does not provide any indication of the extent or severity of the problems. This information needs thorough discussion in the final EIS in order to evaluate the risks from these systems. There are significant public health concerns associated with insects and vermin that come in contact with untreated or partially treated sewage.

5.5.6 Management Page 181 Reporting Requirements. This section indicates the department has not communicated with local units of government on the effectiveness, or more accurately the lack of effectiveness, of the holding tank pumping and reporting requirements. The proposed code requirements will generate more reports, which will translate into more work for local government, but will do nothing to improve the accuracy or integrity of the reports. Relying on the reporting requirements as a protection from improper use and maintenance of holding tanks is a strategy which has no chance for success.

5.5.6 Failure to maintain... Page 181. This section asserts that the ability to declare a system to be failing if not maintained according to its approved plan is a safeguard. The issue of who has authority to enforce the human health hazard statute is still at issue, and will have significant enforcement impacts if only the health officer can take action in these instances. The second impact that is not addressed is the impact of not having a statewide monitoring system in place before the code is implemented. If there is no way to track the maintenance, there is no way to know if proper maintenance is being performed. If local units of government are forced to design tracking systems of their own, this will represent an unfunded mandate and could easily overstress their available resources. The final EIS must evaluate the impact of implementing the code without a monitoring system in place. Contrary to the last sentence of this subsection, wishing does not make it so!

5.6.1 Categories of Impacts... Page 182 This section indicates that adverse impacts will occur regardless of the alternative which is selected. The narrative fails to emphasize the significant differences in risk from systems which rely on mechanical or chemical processes to achieve treatment prior to discharge into shallow soil in sensitive environments such as areas of shallow bedrock or groundwater. The failure to recognize the very real and very significant differences , or even any alternatives between the two alternatives in this document is a major flaw in this report. The final EIS must realistically evaluate these differences.

5.6.2 Impacts... Page 183. the assertion that the new code will enhance enforcement by specifically mandating certain reports defies the reality of existing circumstances, to wit: holding tanks. While it looks good in writing, providing the resources to do the work is more important than a ream of mandates. This is why it is important for local governments to have the choice of not allowing technologies they know they don't have the resources to properly oversee. The final EIS needs to evaluate the risks associated with implementing all new designs regardless of the ability of the local governments to provide the necessary oversight.

5.6.4 Summary Page 186. The assertion that the unavoidable impacts of either alternative is not supported by the facts if the facts are squarely faced. This document consistently falls back on the abstract supposition that the words in the code will prevail and that all systems will continually operate per their design. This is an unrealistic assumption and defies the reality of even the current situation. the DEIS also fails to consider realistic alternatives which provide for the implementation of new technologies while also protecting public health and groundwater in concrete and demonstrable fashion.

5.8 Irreversible and Irretrievable Commitments of Resources. Page 187. This section touts the additional resources that will be committed by the department. The document is woefully lacking in the assessment of the impacts the new regulations will have on the local units of government who will be the recipients of the supposed training, must enforce the requirements relating to maintenance, must do follow-up on violations, must expend resources to collect evidence in suspected cases of exceedance of discharge standards, must immediately become familiar with each new technology as it is approved after the first 18 months have elapsed, etc.; all the while being expected to perform the permit issuance, inspection and other related activities associated with administering the program. The final EIS needs to look at the impact on all the effected parties, not just the department staff.