

Potpourri

Private Onsite Wastewater Treatment Systems (POWTS)-Wisconsin

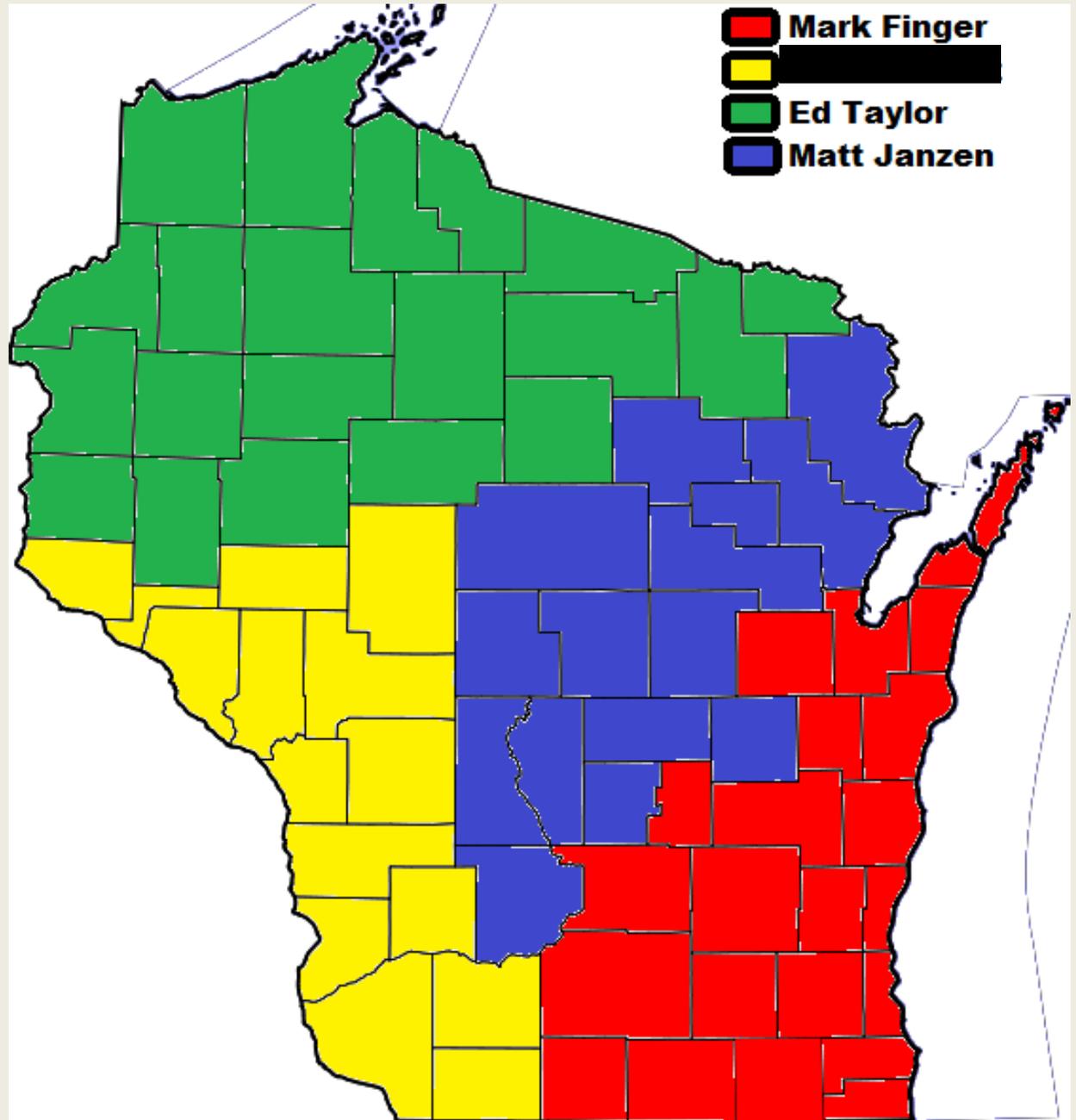
Matt Janzen
POWTS Program Lead

DSPS POWTS Personnel

- Wastewater Specialists
 - Matt Janzen (Lead) – Weston Mobile Resource
 - (715) 340-0407, matthew.janzen@wisconsin.gov
 - Mark Finger – Bear Creek Mobile Resource
 - (608) 574-1189, mark.finger@wisconsin.gov
 - Ed Taylor – Hayward Office
 - (715) 634-3484, edwin.taylor@wisconsin.gov
 - Vacant

Wastewater Specialists Map

January 2016



DSPS POWTS Personnel

- Plan Reviewers
 - Jerry Swim – Holmen Office
 - (608) 789-782, jerry.swim@wisconsin.gov
 - Pat Shandorf – Hayward Office
 - (715) 634-7810, pat.shandorf@wisconsin.gov
 - Vacant

DSPS Other Personnel

- Product Plan Reviewer
 - Glen Jones - Madison Office
 - (608) 267-5265, glen.jones@wisconsin.gov
- Grants Specialist – WI Fund
 - JoEllen Denure – Madison Office
 - (608) 266-3998, JoEllen.Denure[@wisconsin.gov](mailto:JoEllen.Denure@wisconsin.gov)

What's New at DSPS

- Standard Plan Pages
 - Distribution cells
 - In-ground Gravity
 - In-ground Pressure
 - At-grade
 - Mounds
 - Index pages
 - Plot Plan
 - Pressure Lateral
 - Tank cross sections
 - Management Plans

What's New at DSPS

- POWTS Code Council

- Steven Crosby – Septic Specialists & Exc. Inc

- Dale Dimond – Marathon County Conservation, Planning & Zoning

- Alan Kaddatz – Pat's Services

- Tony Birrittieri – Peterson Products

- Robert Schmidt Jr – Schmidt and Sons Inc

- Bryon Wooten – Lake Shore Burial Vault

What's New at DSPS

- POWTS Code Council
 - Officers elected
 - Has met thrice
 - Next meeting is March 16 in Madison (under “Boards and Councils”, look for POWTS)
 - Public comments / concerns are welcome, Under “Boards & Councils”, look for “Public Agenda Item”.

Rulemaking

WISCONSIN
DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES

Boards and Councils | Licenses/Permits/Registrations | Online Services | Plan Review | Complaints & Inspections | Other Services

Uniform Commercial Building Code Update

2013 Act 270 established the Wisconsin Uniform Commercial Building Code, while allowing municipalities to grandfather fire detection, prevention, and suppression ordinances.

[Click here](#) for more information and a list of grandfathered ordinances.

[Prescription Drug Monitoring Program \(PDMP\)](#)

[Industry Services \(Safety & Buildings\)](#)

[License Renewal](#)

[Application Forms](#)

[License Look-Up](#)

[Latest News](#)

[Rules and Regulations](#)

[Look Up Orders & Disciplinary Actions](#)

[Request List of License Holders](#)

[Calendar](#)

The mission of the Department of Safety and Professional Services is to promote economic growth and stability while protecting the citizens of Wisconsin as designated by statute.

[DSPS Home](#) | [About Us](#) | [Contact Us](#) | [Site Map](#) | [Wisconsin.Gov](#)

100% 4:21 PM 4/14/2015

Rulemaking

The screenshot shows a web browser window displaying the website for the Wisconsin Department of Safety and Professional Services. The browser's address bar shows the URL <http://dps.wi.gov/Boards-Councils>. The website header includes the Wisconsin state logo and the text "WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES". Below the header is a navigation menu with the following items: "Boards and Councils", "Licenses/Permits/Registrations", "Online Services", "Plan Review", "Complaints & Inspections", and "Other Services".

The main content area is titled "BOARDS AND COUNCILS" and features eight interactive tiles, each with an image and a text link:

- [Administrative Rules and Statutes](#)
- [Agendas](#)
- [Apply to Serve on a Board or Council](#)
- [Board Member Access](#)
- [Board and Council Listing](#)
- [Calendar](#)
- [Meeting Minutes](#)
- [Request Agenda Item](#)

A large blue arrow points from the right side of the screen towards the "Request Agenda Item" link.

At the bottom of the page, there is a footer with the text "DPS Home | About Us | Contact Us | Site Map | Wisconsin.Gov". The Windows taskbar at the very bottom shows the system tray with the date and time "4:24 PM 4/14/2015" and a zoom level of "100%".

Submit Items for Consideration

Boards and Councils

Licenses/Permits/Registrations

Online Services

Plan Review

Complaints & Inspections

Other Services

DSPS PUBLIC BOARD AGENDA ITEM

Please use this form to submit an item for consideration at a board or council meeting. Please visit our [Board and Council Listing](#) page for information on professions regulated by each board. You may be asked to appear at the meeting to present and explain your request. Before submitting your request, please consult your [Profession Specific Codebook](#) which will contain the answer to most questions. Please note, neither the Department nor the Boards can respond to the following issues: potential or ongoing litigation, billing, business advice, employer / employee disputes, legal opinions, and questions involving professional judgment or discretion.

FILL OUT THIS FORM

• Board:

• First Name:

• Last Name:

Association/Organization:

• Address Line 1:

Address Line 2:

• City:

• State:

• Zip:

Phone Number:

• Email:

• Subject:

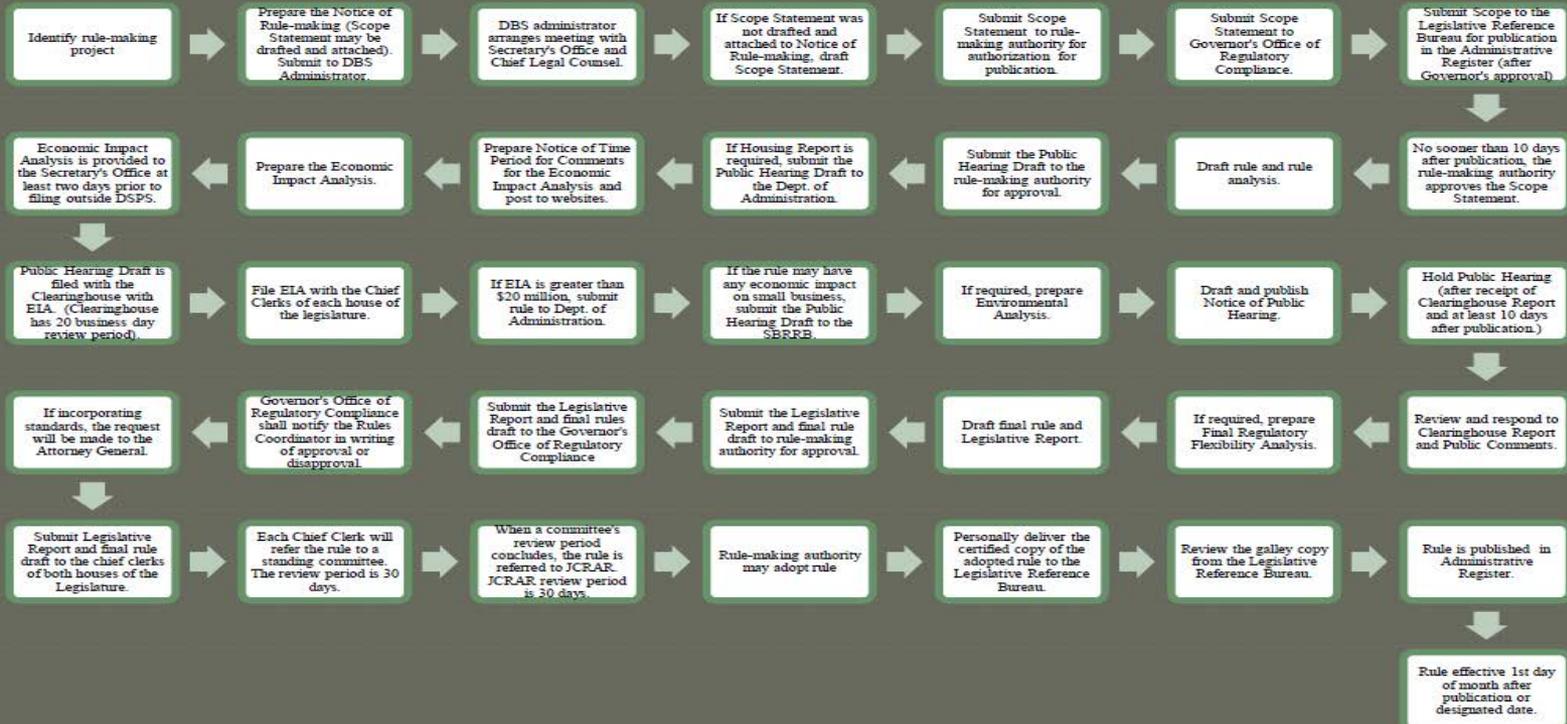
• Message:

Code Update Process

- Advisory committee needs to be assembled.
 - Members may need to be from specific group, ie. Inspectors, Contractors, A/E or material suppliers. Goal of a balanced committee of stakeholders.
- Committee review of new standard(s)
 - Typically monthly meetings to review sections and chapters of the standards. Several codes reference multiple standards. IBC has numerous secondary references that need review.
- Statutory rulemaking process 12-18 months.
- Publication and implementation date maybe delayed for seasonal reasons.

Rulemaking Process

Its Complicated



Rulemaking Packages(Completed)

- SPS 305 - Credentialing, Updates for Statute changes.
- SPS 314-Fire Prevention, adoption of 2012 NFPA 1
- SPS 318 – Elevators, Adoption of 2011 ASME A18.1 and 2013 ASME A17.1.
- SPS 320-325 Uniform Dwelling Code Updates, Wall Bracing and Deck packages
- SPS 321 Manufactured Homes – Ground Anchors
- SPS 326 – Manufactured Housing, Complete update.
- SPS 332 Public Employee Safety, Update to 2010 OSHA Standards
- SPS 333 Rope and Ski, Update to 2011 ANSI B77.1.
- SPS 341 – Boilers, Update to 2010 ASME
- SPS 384 – Emergency Rule on water treatment devices

Rulemaking Projects(In Progress)

- SPS 305 Certification to Inspect Fire Detection, Prevention and Suppression Devices(Emergency Rule in Effect)
- SPS 316 2017 NEC adoption
- SPS 330 Fire Department Health and Safety Update
- SPS 360-366 - Commercial Building Code,
 - Update to 2015 ICC Suite(IBC,IMC, IEBC, IEEC,IFGC)
- SPS 381-387 POWTS and Wisconsin Fund review and update

Rulemaking projects(On deck)

- SPS 307, 308 Explosives, Fireworks, Mines, Pits and Quarries - Updates
- SPS 320 Electronic Notification of Inspection Results
- SPS 321 Natural Light in Rooms over Garages
- SPS 322 Crawl Space Ventilation
- SPS 327 Camping Units
- SPS 360 Erosion Control, Update Package
- SPS 381-387 and 390 Plumbing, Update
- SPS 390 Swimming Pools

Additional Rulemaking

- Additional rulemaking that DSPS is responsible for includes:
- A/E, Chiropractic, Cosmetology, Dentistry, Medical Examining, Nursing, Optometry, Pharmacy, Psychology, Real Estate and other Boards and Councils.

Credential Web

- DSPTS Home Page: <http://dsps.wi.gov>

The screenshot shows the DSPTS website with a dark blue header. The header includes the Wisconsin state logo, the word "WISCONSIN", and the text "DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES". A search bar is located in the top right corner. Below the header is a navigation menu with the following items: "Boards and Councils", "Licenses/Permits/Registrations", "Online Services", "Plan Review", and "Complaints & Inspections".

The main content area features a large image of a pair of black scissors and a black comb. To the right of this image is a section titled "Barber/Cosmetology 2015 Renewal" with several links: "Click here for the 2015 Barber/Cosmetology FAQs", "Click here for Barber Continuing Education Information", "Click here for Cosmetology Continuing Education Courses", "Click here to Renew Online", and "Click here to Print License/Credential". A right-pointing arrow icon is located at the bottom right of this section.

Below the main content area is a grid of ten icons, each with a corresponding text label:

- Prescription Drug Monitoring Program (PDMP)
- Industry Services (Safety & Buildings)
- Rules and Regulations
- Application Forms
- Calendar
- Latest News
- License Look-Up
- Look Up Orders & Disciplinary Actions
- License Renewal
- Request List of License Holders

Fall Continuing Education

- Two Classes (Nov-Dec)
 - Pekwaukee
 - Stevens Point

DSPS Continuing Education

- **POWTS Potpourri**

- *Three hours of credit for CST, MP, JP, MPRS, JPRS, POWTS Inspector, POWTS Maintainer, and Comm PI.*
- Various short subjects on many different aspects of POWTS design, installation, operational theory and code interpretation will be covered. Topics discussions include but not limited to expectations at POWTS installation and inspection, when permits are required, addressing filled and compacted sites, State owned property permitting process, POWTS math, plan submittal and more. Bring additional questions and thoughts to share.

DSPS Continuing Education

- **Hands on Soil**

- *Three hours of credit for CST, MP, JP, MPRS, JPRS, POWTS Inspector, and Comm Pl.*
- This "hands on" educational opportunity will cover the basics of writing and reading profile descriptions, texturing soil samples from across the state and discussion of soil and site photographs. Attention will be given to determining sand sizing and identifying "good" mound sand, clay content, coarse fragment content, fill soils and wet sites along with relationships to POWTS sizing and design. Course will also address importance and practice of drawing appropriate plot plans and methodology of establishing surface contours. Be sure to bring your Munsell color book, engineer scale, calculator and pencil.

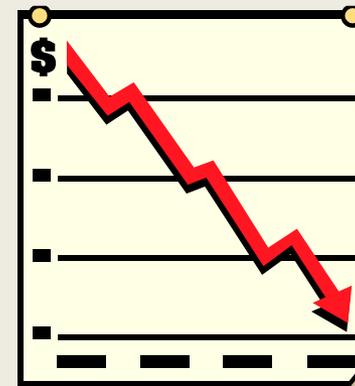
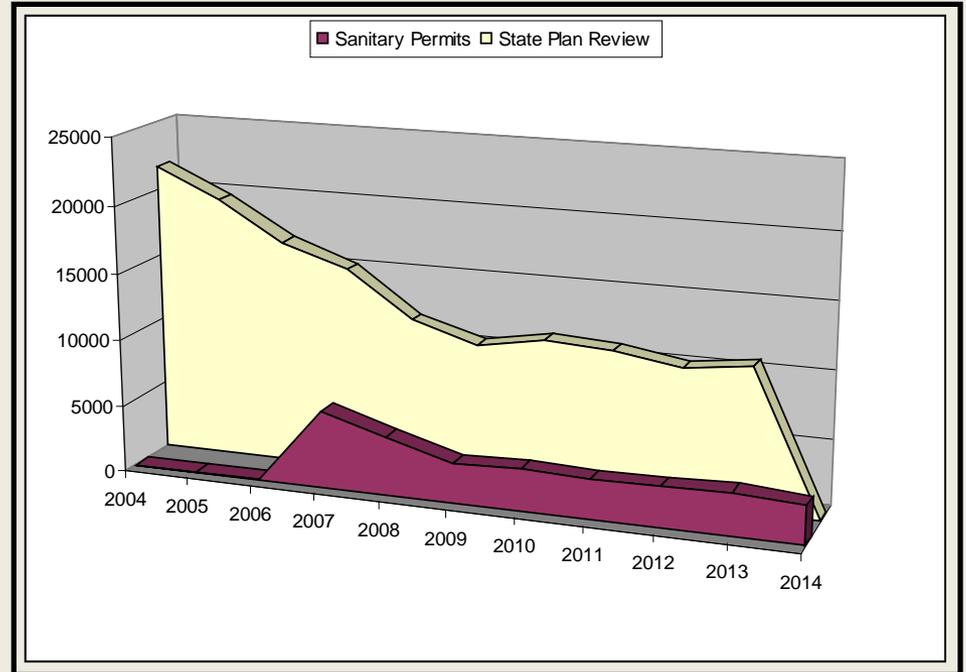
WI Fund Update

- Last funding cycle:
 - 45 counties participated
 - \$1.645 million allocated in budget
 - \$1.849 million disbursed (includes carry over from previous yr)
 - Residences prorated 94.1%
 - SCE prorated at 64.5%
 - Category 1 applications = 406
 - Category 2 = 45 (not funded)
- Next funding cycle
 - \$840,000 allocated in state budget for disbursement in 2016
- Program Future
 - Demand for grants exceeds available funds
 - Balancing state priorities

Permit Update

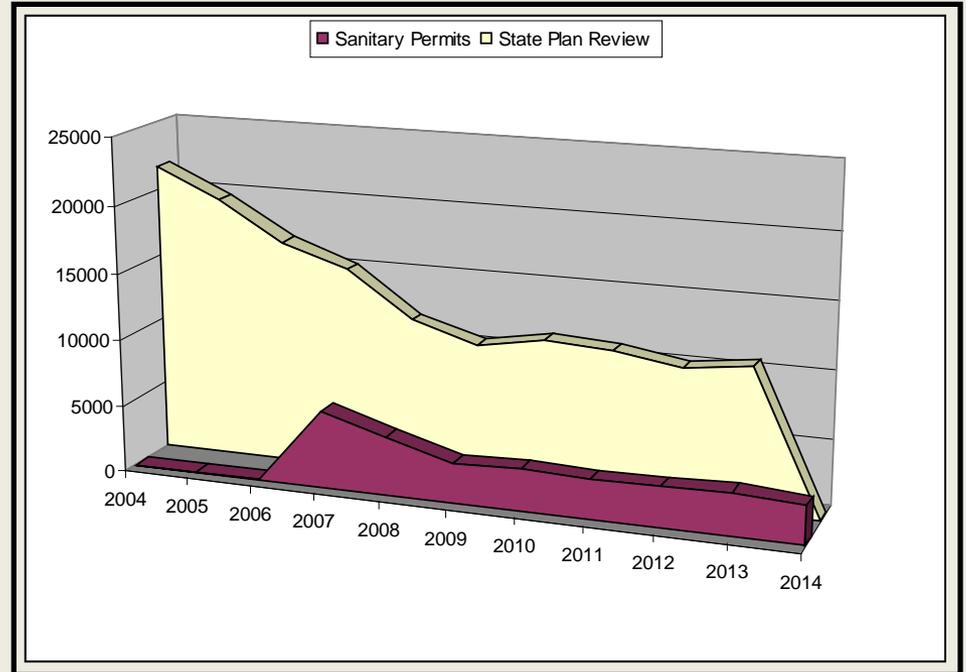
- Sanitary Permit Data

- 2005 19,577
- 2006 16,715
- 2007 15,137
- 2008 11,740
- 2009 10,319
- 2010 11,127
- 2011 10,914
- 2012 10,136
- 2013 10,691
- 2014 10,830
- 2015 11,861 (not complete)



State Plan Review Totals

- 2007 5,772
- 2008 4,367
- 2009 2,991
- 2010 3,140
- 2011 2,928
- 2012 3,053
- 2013 3,178
- 2014 2,960
- 2015 3,216



Electronic Plan Submittal

- Available for POWTS, Building and General Plumbing Plans
- Go to www.dsps.wi.gov
- Register for a SharePoint account
- Request a plan review appointment using online scheduler



POWTS Maintenance

- s145.20(5) Maintenance
 - Inventory complete by October 1, 2017
 - Maintenance by October 1, 2019

POWTS Maintenance

- 2010 Census (WI):
 - 880,761 rural households
 - 1,700,000 rural residents
- Estimates
 - 750,000+ POWTS
 - Serving 1.39 to 1.7 million residents
 - Roughly 30%

POWTS Maintenance

- 2012 data:
 - 83.43% of systems being maintained
 - 36 counties have completed their POWTS inventory
 - 24 counties have completed and are operating a maintenance reporting program
 - 47 counties are sending out notices to “Pre-WI Fund” system owners

POWTS Maintenance

- 2013 data:
 - 86.3% of systems being maintained
 - 39 counties have completed their POWTS inventory
 - 624,183 systems inventoried
 - 720,000+ systems estimated

POWTS Maintenance

- 2014 data:
 - 91.6% of systems being maintained
 - 43 counties have completed their POWTS inventory
 - 688,397 systems inventoried
 - 750,000+ systems estimated

Electrical Requirements

- Act 63 / s. 101.861 was created in 2007
- State License vs Municipality Ordinances
 - 5 Years to prepare for the enactment
- 2013, Act 4
 - Effective Date April 1, 2014

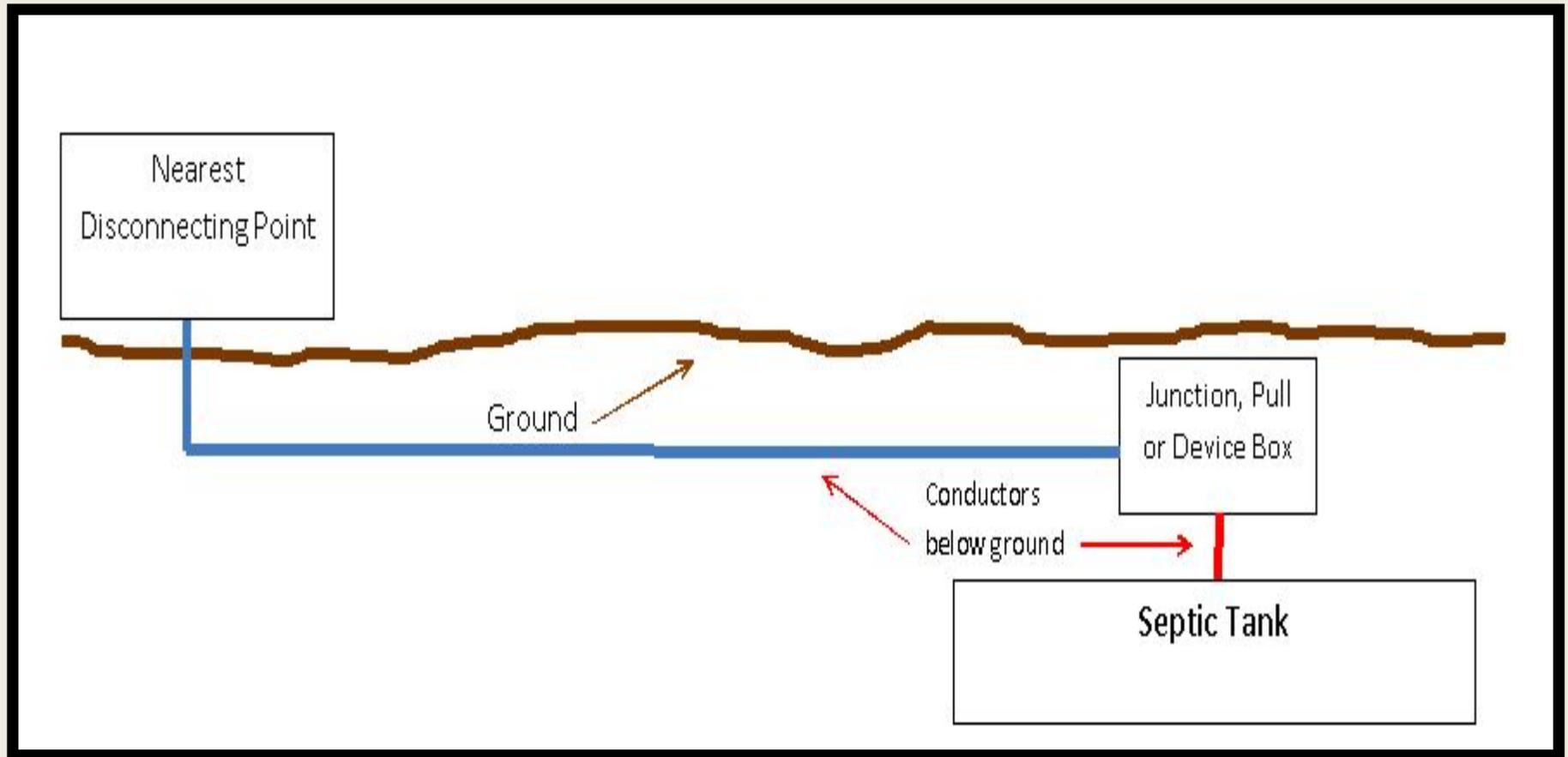
Electrical Requirements

- 101.862 License, registration or certification requirements.
 - **(1)** No person shall engage in the business of installing, repairing, or maintaining electrical wiring unless the person is licensed as an electrical contractor by the department.
 - **(2)** No person may install, repair, or maintain electrical wiring unless the person is licensed as an electrician by the department or unless the person is registered as a beginning electrician by the department.
 - **(3)** No person who is not a master electrician shall install, repair, or maintain electrical wiring unless a master electrician is at all times responsible for the person's work.

Electrical Requirements

- You CAN:
 - Lay all the cables in the trench with the system piping.
 - Attach the junction box to the manhole riser at the POWTS system.
 - Install any electrical wiring or equipment within any tank for the POWTS.
 - Connect all conductors associated with the POWTS system within the junction box at the dose chamber.
 - Connect all conductors associated with the POWTS system to the nearest disconnecting means at the house. The nearest disconnecting means is the first disconnecting means the POWTS system cables are connected to either at or within the house or other building served by the POWTS system.

Electrical Requirements



Religious Exemption Waiver

- 2015-2017 Biennial Budget (2015 WI Act 55), effective July 14, 2015, provides a waiver from certain UDC code requirements. Available to members of established religious sects whose tenets and beliefs prohibit compliance.
- Members must submit a signed application for a waiver (form 1000IS).
 - Found on the DSPS website under UDC.

Religious Exemption Waiver

- The following requirements may be waived:
 - 1) Smoke detectors as required under s. 101.645 (3), Stats., and section SPS 321.09
 - 2) Carbon monoxide detectors as required under s. 101.647 (3), Stats., and section SPS 321.097
 - 3) Any electrical or plumbing code requirement imposed under any provision of chs. 101 or 145, Stats., chs. SPS 324 or SPS 325, or under any ordinance of a political subdivision relating to standards for electrical wiring or **plumbing** in one- and 2-family dwellings.

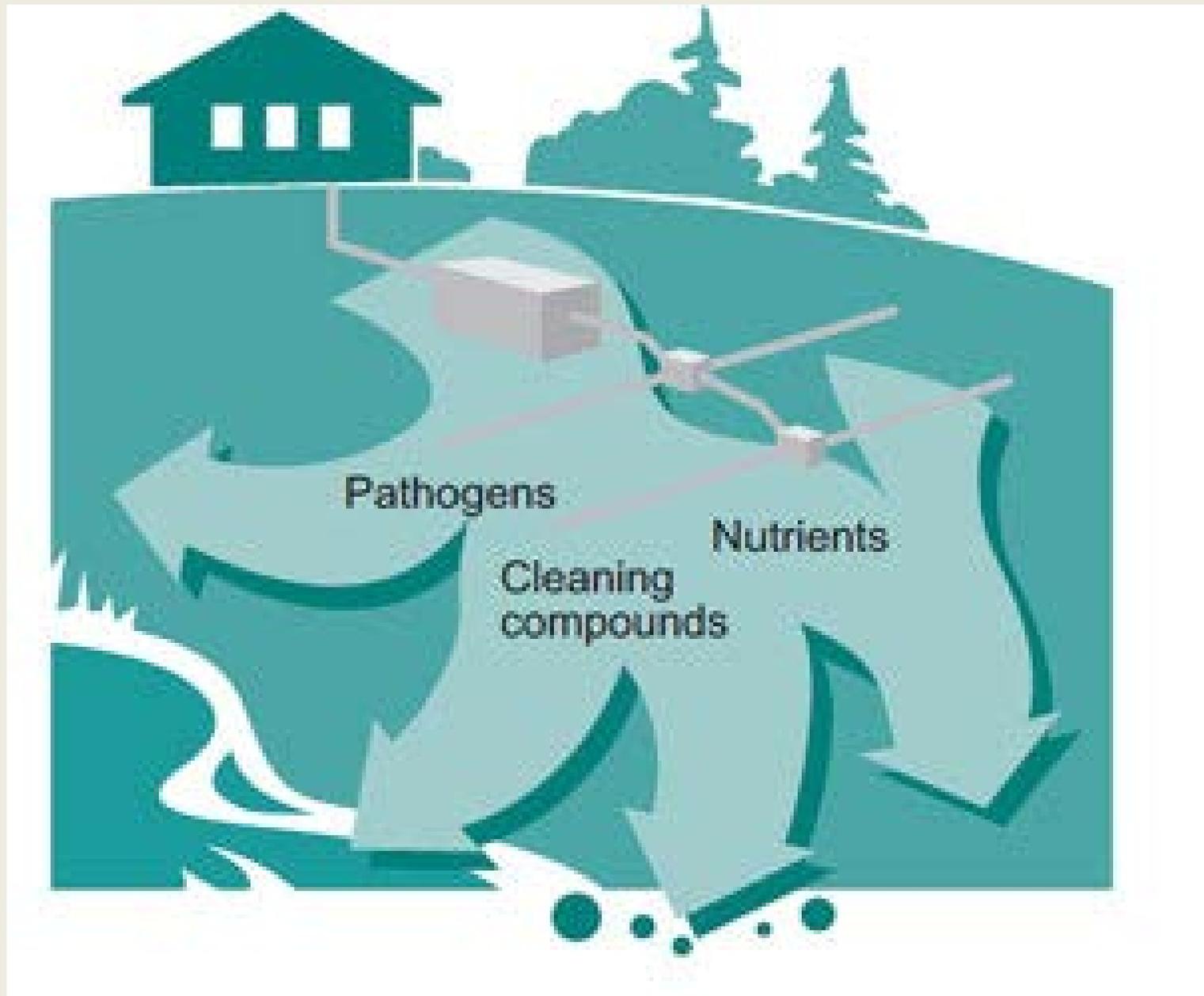
Product Approvals

- Issues
 - Incorrect application or use
 - Manufacturing defect / Quality Control
 - Manufacturer OK'd changes to stipulations
- Fixes
 - Be sure to read all product stipulations
 - Verify that product is not defective/meets approval requirements
 - Changes to product approval or stipulations can only come from DSPS

Technical Advisory Committee

- Still waiting to fill vacancies
 - Designer of POWTS
- Governor office makes appointments

Steps and Goals related to siting POWTS



Steps and Goals

**Provide Knowledgeable
Professional Service to Customer**

Investigate, Design and Install



Objectives

- Site Evaluations and Pre-design
- Design, Plan Review and Permitting
- Installation and Inspection

**Share Questions and Thoughts

Establishing Wastewater Flow and Characteristics-Fact Gathering

Residential

1. Size of residence-Bedrooms

- Occupancy
 - Single family or extended family?
 - Residents working multiple shifts?
 - Cultural impacts?
 - McMansion?

2. Wastewater Characteristics

- Typical residential strength wastewater?
- Possible dietary impacts?
- Home business?

3. Evaluate soil conditions and calculate estimate area required.

- Test as big an area as you can.
 - Allows for flexibility with dispersal area.

Establishing Wastewater Flow and Characteristics

Commercial

1. Source

- High strength wastewater is usually produced by specialized activities associated with a public building or a commercial enterprise.
- It usually does not contain industrial wastewater.
- It generally contains the same types of contaminants (BOD, TSS, and FOG) as residential wastewater.
- The quantity, concentration, and relative proportions of these wastewater contaminants may be significantly different from typical residential wastewater

2. Wastewater Characteristics

- Restaurants?
- Convenience Stores?
- Taverns?
- Home business?
- Domestic , Non-Domestic and Mixed Wastewater?
 - Plan Review and Permitting

Tavern



Sampling Wastewater



Don't guess, know!

Treatment Levels

SP

Table SPS 383.44-2 and 3

- **Effluent #1 (STE)**
 - Septic Tank Effluent
 - $BOD_5 > 30 \leq 220$ mg/L
 - $TSS > 30 \leq 150$ mg/L
 - $FC > 10^4$ cfu/100mL
- **Effluent #2 (HTE)**
 - Highly Treated Effluent
 - $BOD_5 \leq 30$ mg/L
 - $TSS \leq 30$ mg/L
 - $FC \leq 10^4$ cfu/100mL
- **Effluent quality is related to vertical separation and dispersal area longevity.**
- **Biomat or clogging mat formation is unlikely when effluent #2 is applied to the soil. Effluent #2 may even rejuvenate clogged distribution cells by oxidizing the organic biomat.**
- **A cleaner effluent requires less soil for final treatment. SPS 383 allows a one foot vertical separation credit.**

Sampling

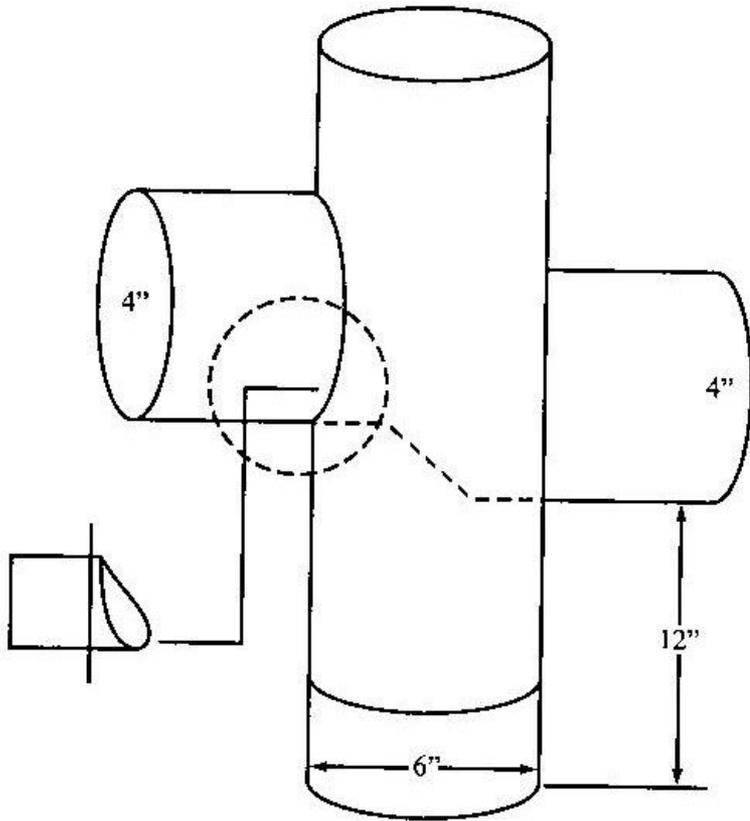


Figure B.1 Inline sampling port.



Purpose of Soil and Site Evaluations

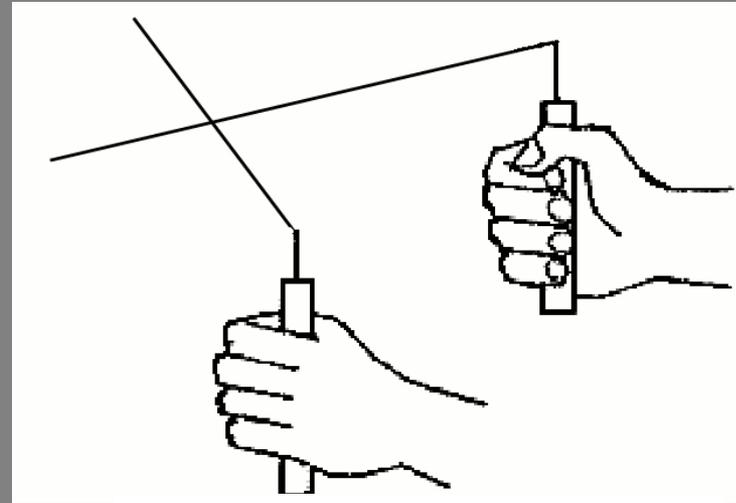
- All soil and site evaluations conducted are relative to the treatment or dispersal of wastewater, treated wastewater, final effluent or human wastes into soil.

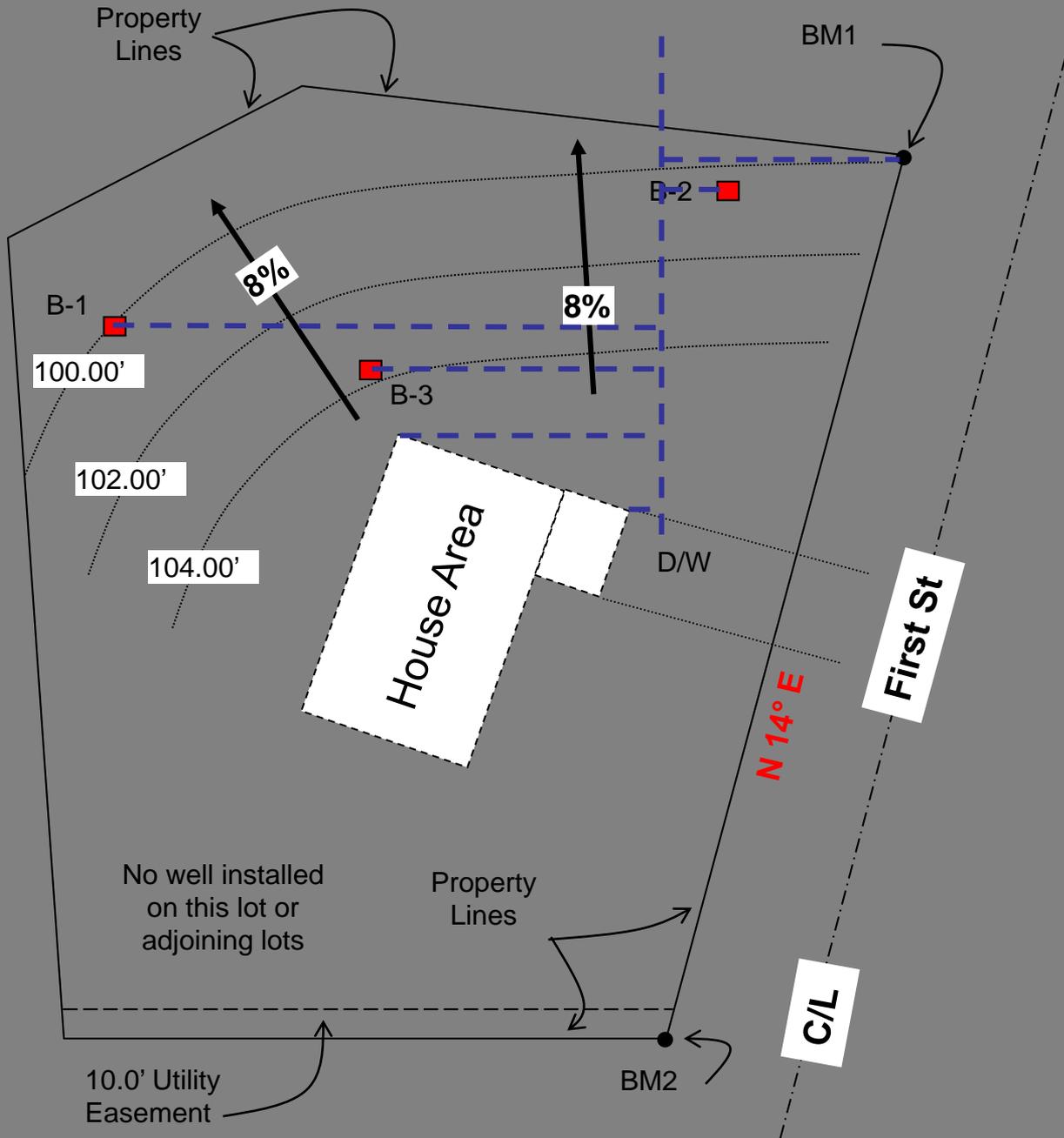
Soil Evaluations

Test Area Size



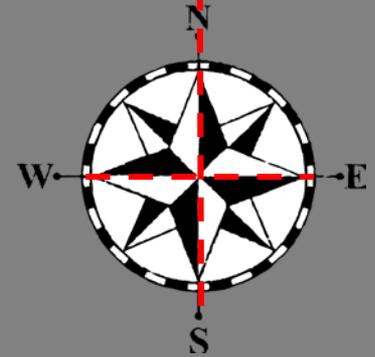
Locate Dispersal Area





Joe Smith

SW ¼, NW ¼, 16, 28, 10W
 Town of Hallie, Rusk Co, WI
 Lot 5, Blk 2, Prairie View Plat
 2.35 Acres



Scale 1" = 40'

BM1 = 100.00 ft on top of ¾" lot corner iron

BM2 = 107.25 ft on top of ¾" lot corner iron

B-1 = 100.00'

B-2 = 100.55'

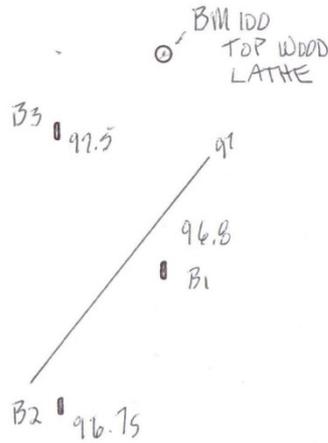
B-3 = 103.75'

Soil Evaluation Site Plan?

HARRY FOOTE FARMS
NW 1/4, NW 1/4, SEC 40
TOWN OF KORN
FOOTE CTY, WI



SCALE
1/4" = 40'



PEA FIELD

HARRY FOOTE, JR
CST 999666

- * 40 ACRES
- * NO WELLS < 50
- * PROPERTY LINES > 100'

JUNIOR RD

Soils

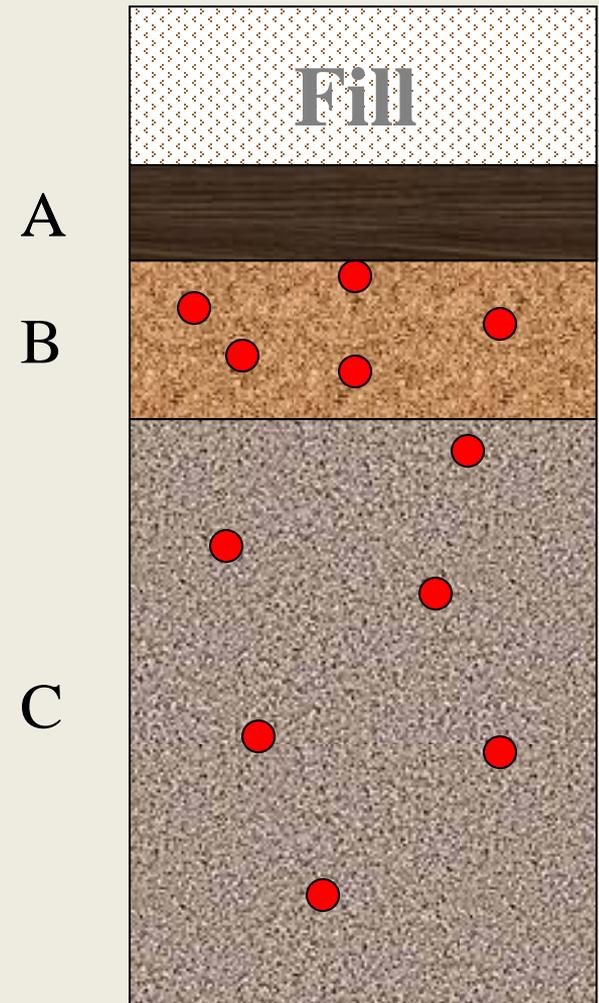
SPS 385.30(2)(b) SOIL INTERPRETATIONS.

The highest elevation of seasonal soil saturation shall be the ground surface where redoximorphic features are present within 4 inches of any of the following:

1. An A horizon that extends to the ground surface.
2. The lower boundary of overlying fill material where no buried A horizon exists.
3. An A horizon buried by overlying fill material.

SPS 385 - Soil and Site Evaluations

- 385.30(2)(b). The highest elevation of seasonal soil saturation shall be the ground surface where redox features are present within 4 inches of:
 - An A-horizon that extends to the ground surface
 - The lower boundary of overlying fill where no buried A-horizon exists
 - An A-horizon buried by overlying fill



<A+4 Soil



A-horizon that extends to the ground surface.



An A horizon buried by overlying fill material.



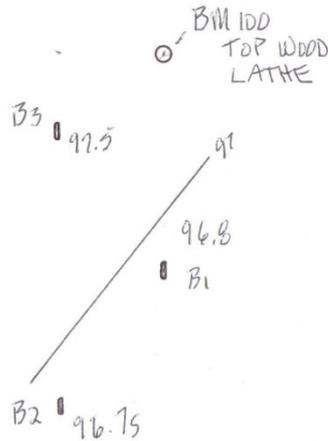
Plan Review and Permitting

System Installed in Test Area?

HARRY FOOTE FARMS
NW 1/4, NW 1/4, SEC 40
TOWN OF KORN
FOOTE CTY, WI



SCALE
1/4" = 40'



PEA FIELD

HARRY FOOTE, JR
CST 999666

- * 40 ACRES
- * NO WELLS < 50
- * PROPERTY LINES > 100'

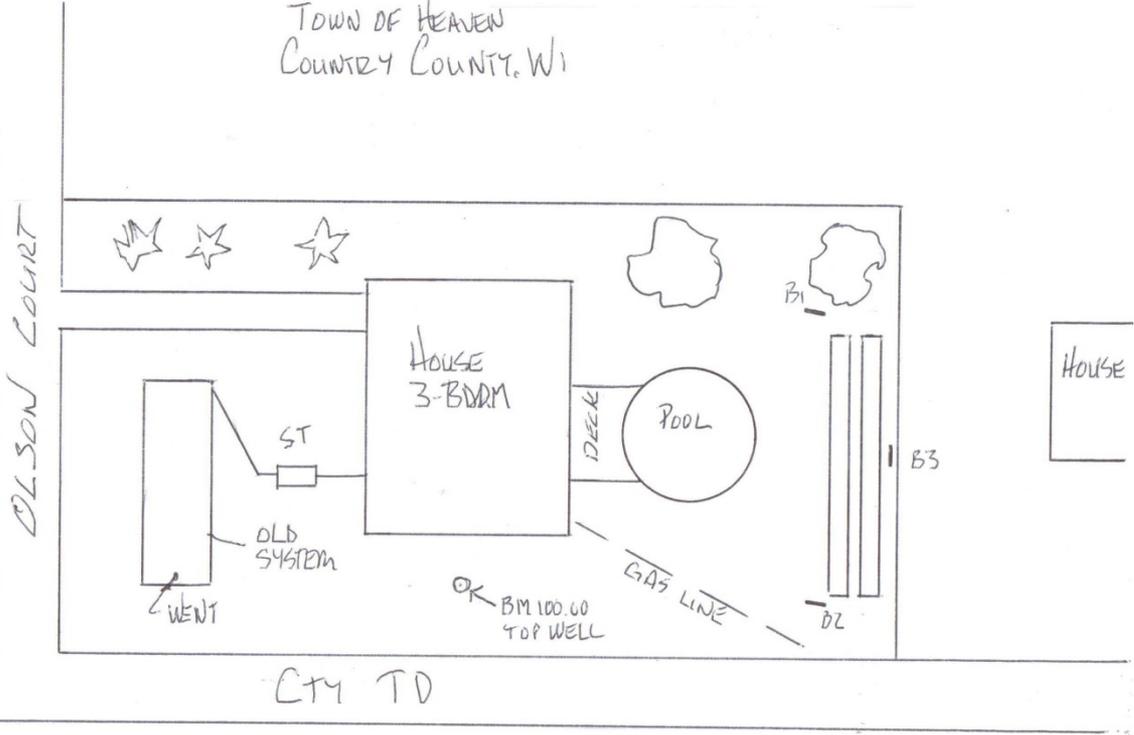
JUNIOR RD

Property Lines and Setbacks

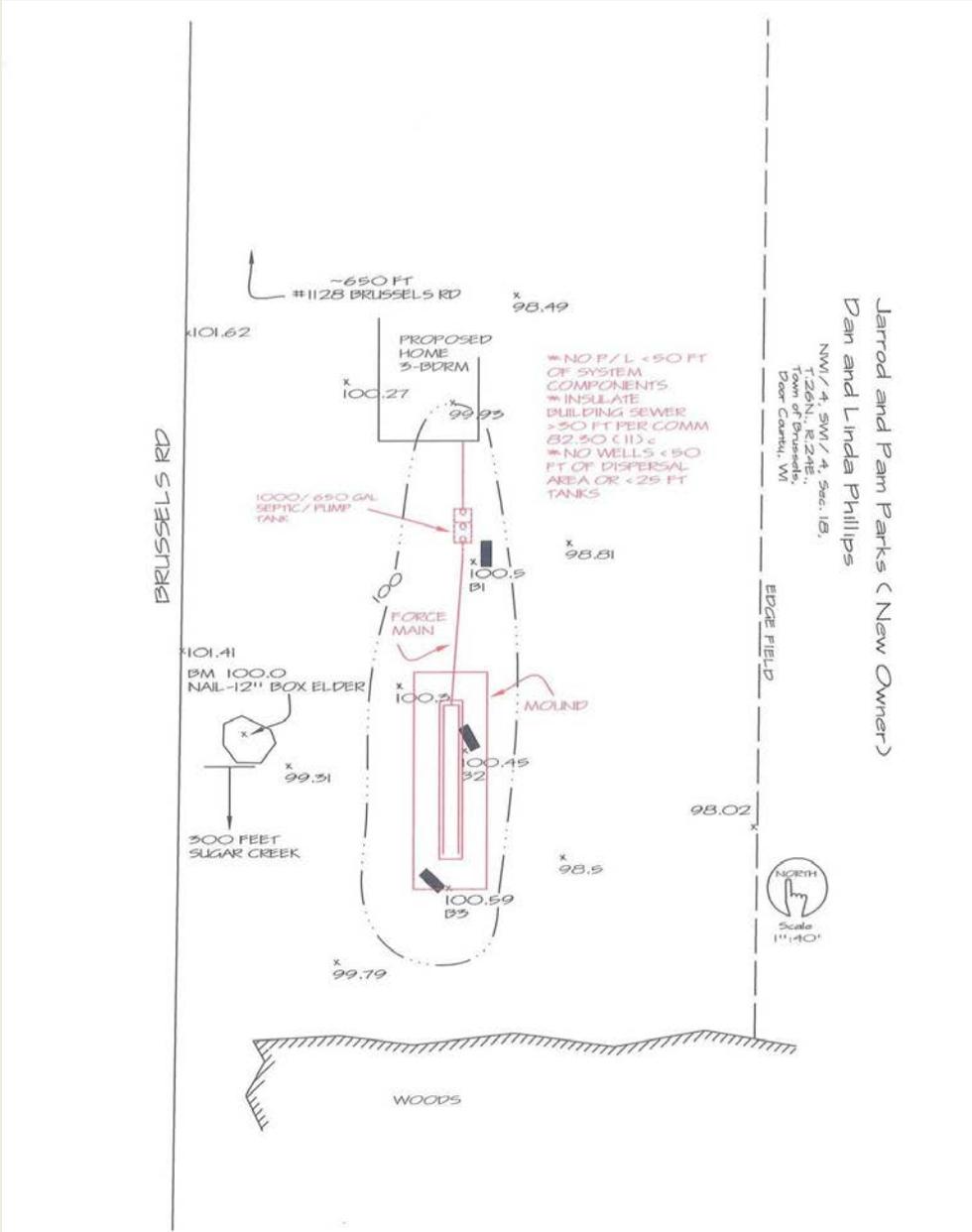
JIM JOHNS
SW 1/4 SW 1/4 SEC 1
TOWN OF HEAVEN
COUNTRY COUNTY, WI

North
↑

SCALE
1:40'



Site Plan OK?



SPS 383.21(2) Application

- 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.
- The application for a sanitary permit shall be submitted to the appropriate governmental unit where the POWTS is located or will be located.
- **SPS 382(2) EXEMPTIONS.** This chapter does not apply to:
 - (a) A POWTS owned by the federal government and located on federal lands;
and
 - (b) A POWTS located or to be located on land held in trust by the federal government for Native Americans.

What might trigger a Sanitary Permit?

- **SPS 383.03 Application. (1) INSTALLATIONS.**
- (a) *New POWTS installations.* The design, installation and management of a new POWTS shall conform with this chapter.
- (b) *Modifications to existing POWTS.* A modification to an existing POWTS, including the replacement, alteration or addition of materials, appurtenances or POWTS components, shall require that the modification conform to this chapter.
- (c) *Modifications to existing structures served by existing POWTS.* When an addition or alteration is proposed to an existing building, structure or facility that is served by an existing POWTS and the proposed addition or alteration will result in a change that affects the wastewater flow or wastewater contaminant load beyond the minimum or maximum capabilities of the existing POWTS, the POWTS shall be modified to conform to the rules of this chapter.

What else may spark the need for a Sanitary Permit?

- **SPS 383.22 Plan review and approval. (1)**
SUBMISSION OF PLANS.

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.

SPS 383.21 Sanitary Permits

- The owner of the property on which the POWTS is to be installed possesses a valid sanitary permit.
- Plan approval for the POWTS has been obtained in accordance with s. SPS 383.22.
- [Inspections start with a sanitary permit](#)

SPS 383.21 (2)(c) The application for a sanitary permit to the governmental unit shall be accompanied by all of the following (7 sub):

- At least one set of clear and legible plans and specifications delineating the information under s. SPS 383.22 (2) (a) 3. and (c).
- 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.
- 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 SPS 383.
- Documentation that the master plumber or the master plumber-restricted service who is to be responsible for the installation or modification of the POWTS has completed approved training (approved training by the department and/or product manufacturer).

The application for a sanitary permit to the governmental unit shall be accompanied by all of the following (7): (continued)

- 5. Documentation that maintenance requirements for the proposed POWTS technology or method have been recorded with the deed for the property, if the management plan for the installation involves one or more of the following:
 - a. Evaluating or monitoring any part of the system at an interval of 12 months or less.
 - b. Servicing or maintaining any part of the system at an interval of 12 months or less.
- Any other information as specified by local ordinance relating to POWTS installations.
- A fee as specified by the governmental unit.

SPS 383.22 (2) Plans and Specifications

- Important to you, as the reviewer, to read, understand and verify documentation.
- Role of the submitter, to provide a legible and clear understanding of what is proposed and how it complies with the codes.
- Also.. important to the owner to read and understand what they just purchased.

Can a township, village or city create rules and conditions regarding POWTS?

Wis Stats 59.70 (5) PRIVATE ON-SITE WASTEWATER TREATMENT SYSTEM ORDINANCE.

(a) Every governmental unit responsible for the regulation of private on-site wastewater treatment systems, as defined under s. 145.01 (5), shall enact an ordinance governing private on-site wastewater treatment systems, as defined in s. 145.01 (12), which conforms with the state plumbing code. The ordinance shall apply to the entire area of the governmental unit responsible for the regulation of private on-site wastewater treatment systems, as defined under s. 145.01 (5). After July 1, 1980, no municipality may enact or enforce a private on-site wastewater treatment system ordinance unless it is a governmental unit responsible for the regulation of private on-site wastewater treatment systems, as defined under s. 145.01 (5).

(b) The governmental unit responsible for the regulation of private on-site wastewater treatment systems, as defined under s. 145.01 (5), shall administer the private on-site wastewater treatment system ordinance under s. 145.20 and the rules promulgated under s. 145.20.

Can a township, village or city create rules and conditions regarding POWTS?

Wis Stats. 145.01 (5) GOVERNMENTAL UNIT RESPONSIBLE FOR REGULATION OF PRIVATE

ON-SITE WASTEWATER TREATMENT SYSTEMS. “Governmental unit responsible for the regulation of private on-site wastewater treatment systems” or “governmental unit”, unless otherwise qualified, means the county except that in a county with a population of **750,000 or more these terms mean the city, village or town** where the private on-site wastewater treatment system is located.

Installation and Inspection

ID Test Area

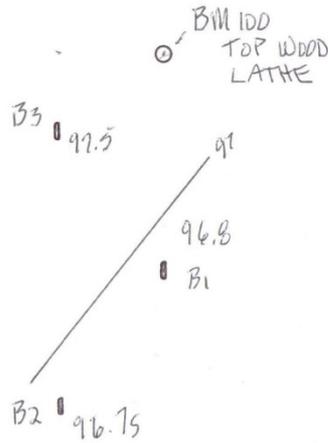


System Installed in Test Area?

HARRY FOOTE FARMS
NW 1/4, NW 1/4, SEC 40
TOWN OF KORN
FOOTE CTY, WI



SCALE
1/4" = 40'



PEA FIELD

HARRY FOOTE, JR
CST 999666

- * 40 ACRES
- * NO WELLS < 50
- * PROPERTY LINES > 100'

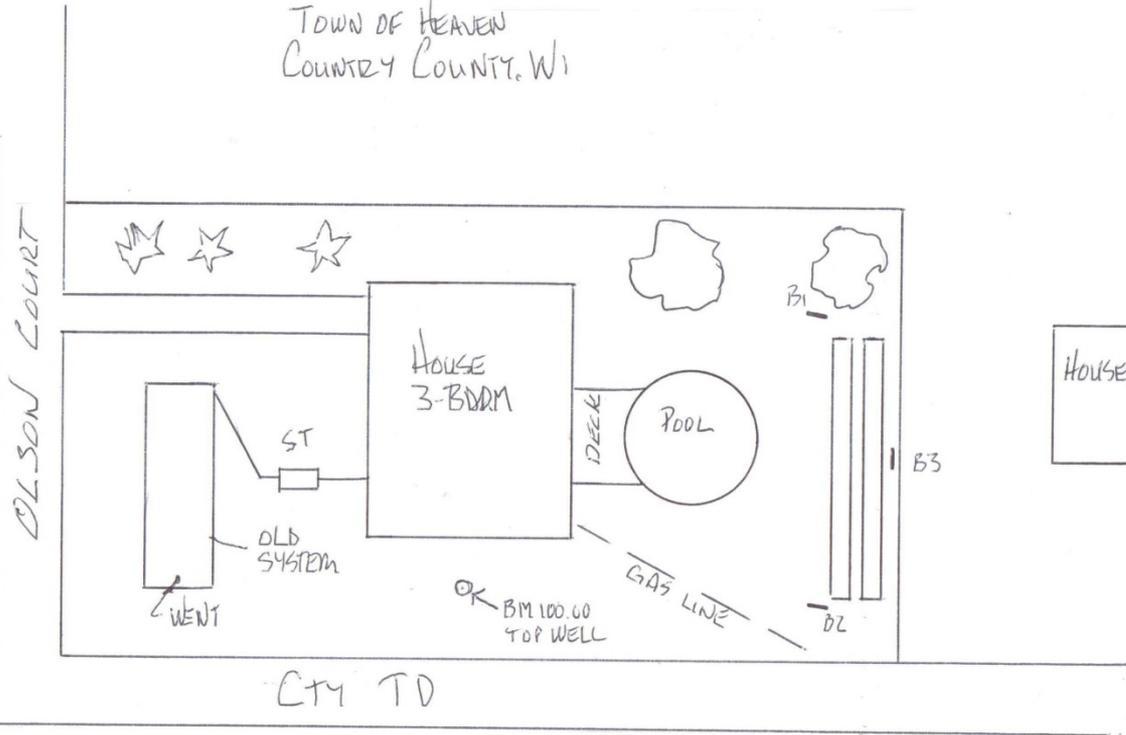
JUNIOR RD

System in Limited Test Area

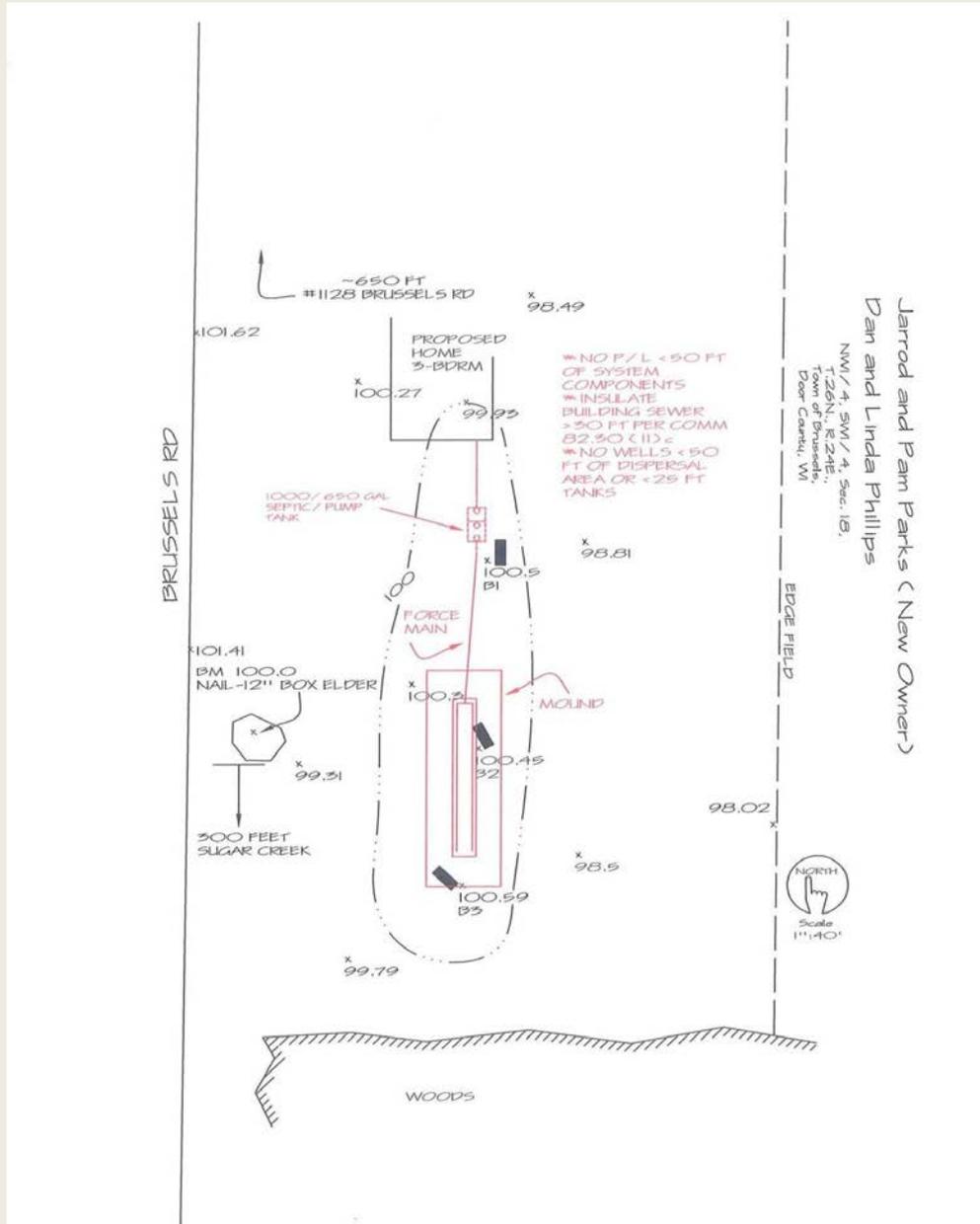
JIM JOHNS
SW 1/4 SW 1/4 SEC 1
TOWN OF HEAVEN
COUNTRY COUNTY, WI

North
↑

SCALE
1:40'



Site Plan OK?



POWTS Inspection Report



Private Onsite Wastewater Treatment Systems (POWTS) Inspection Report (Attach to Permit)

Industry Services Division
General Information

Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04 (1)(m)]

Permit Holder's Name:		<input type="checkbox"/> City	<input type="checkbox"/> Village	<input type="checkbox"/> Town of:
CST BM Elev:	Insp BM Elev:	BM Description:		

County
Sanitary Permit No:
State Plan Transaction ID#:
Parcel Tax No:

Tank Information

TYPE	MANUFACTURER	CAPACITY
Septic		
Dosing		
Aeration		
Holding		

Elevation Data

STATION	BS	HI	FS	ELEV
Benchmark				
Bldg. Sewer				
St / Ht Inlet				
St / Ht Outlet				
Dt Inlet				
Dt Bottom				
Installation Contour				
Header / Man.				
Dist. Pipe				
Infiltrative Surface				
Final Grade				

Tank Setback Information

TANK TO	P/L	WELL	BLDG	VENT TO AIR INTAKE	ROAD
Septic					NA
Dosing					NA
Aeration					NA
Holding					

Pump / Siphon Information

Manufacturer					Demand
Model Number					GPM
TDH	Lift	Friction Loss	System Head		TDH Ft
Foremain	Length	Dia	Dist. To Well		

Dispersal Cell Information

DIMENSIONS	Width	Length	No of Cells		
SETBACK INFORMATION	P / L	Bldg	Well	OHWM of Nav Waters	
CELL TO					

Type of System	LEACHING CHAMBER	Manufacturer:
		Model Number:

Distribution System

Header / Manifold Length _____ Dia _____	Distribution Pipe(s) Length _____ Dia _____ Spac _____	X Pressure Systems Only	
		X Hole Size	X Hole Spacing
		Observation Pipes <input type="checkbox"/> Yes <input type="checkbox"/> No	

Soil Cover

Depth Over Cell Center	Depth Over Cell Edges	Depth of Topsoil	Seeded / Sodded <input type="checkbox"/> Yes <input type="checkbox"/> No	Mulched <input type="checkbox"/> Yes <input type="checkbox"/> No
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COMMENTS: (Include code discrepancies, persons present, etc.)

Plan revision required? Yes No

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Use other side for additional information

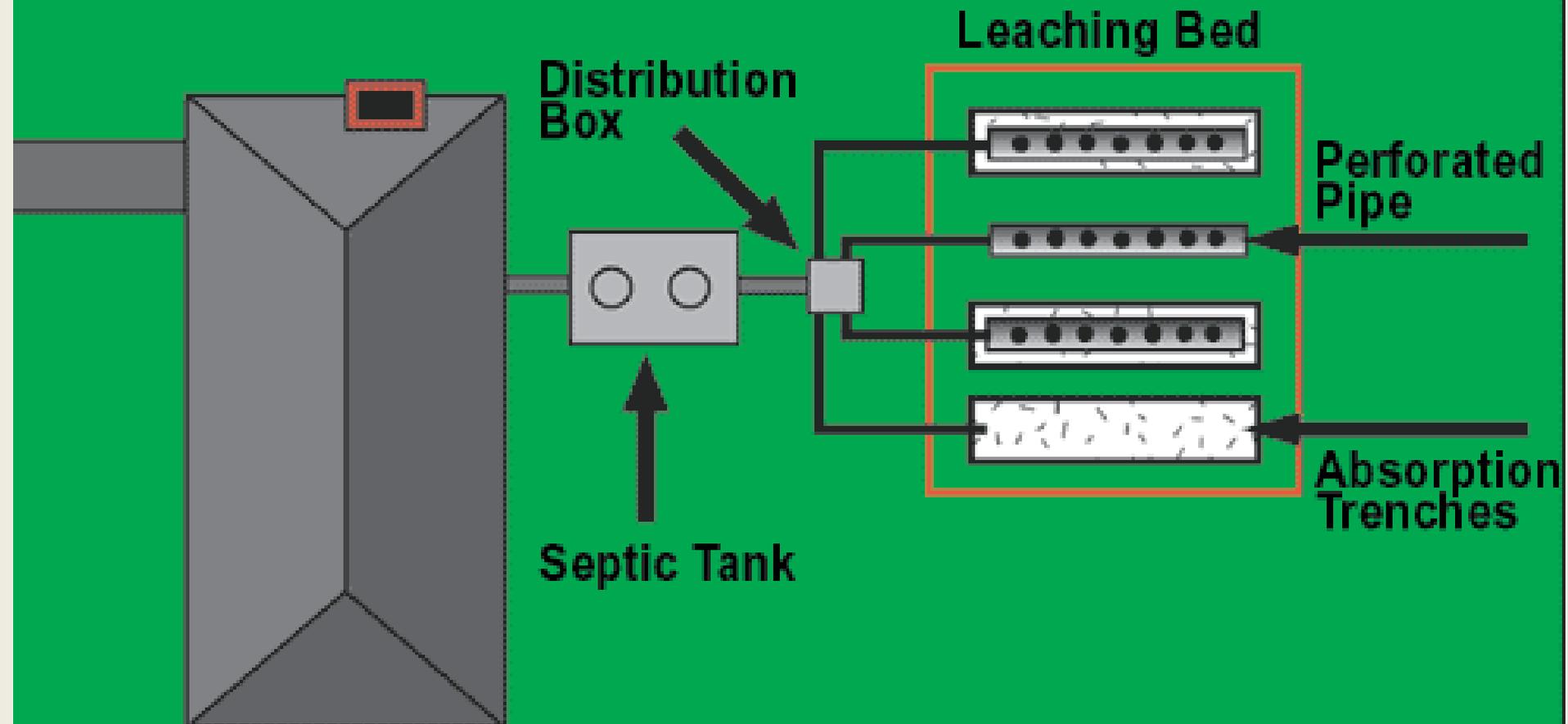
Date

POWTS Inspector's Signature

Cert No

Typical Conventional Trenches

Septic System and Typical Leaching Bed



Check Insulation Requirements

Table 382.30–5

Minimum Thickness of Insulation

Frost Protection Zone	Extruded Polystyrene Foam (in inches)	Insulating Concrete (in inches)
A	1.0	6
B	1.5	9
C	2.0	12
D	2.5	15

Table 382.30–6

Predicted Depth of Frost in Various Types of Backfill Soil (in feet)

Soil Type	Frost Protection Zone			
	A	B	C	D
Clay, Clay Loam	2.5	3.0	3.5	4.0
Silt Loam, Silty Clay Loam	3.5	4.0	4.5	5.5
Sandy Clay Loam	4.0	4.5	5.5	6.0
Sandy Loam, Loamy Sand	4.5	5.0	6.0	6.5
Sand	5.0	5.5	6.5	7.5
Gravelly Sand	6.0	7.5	9.0	10.0

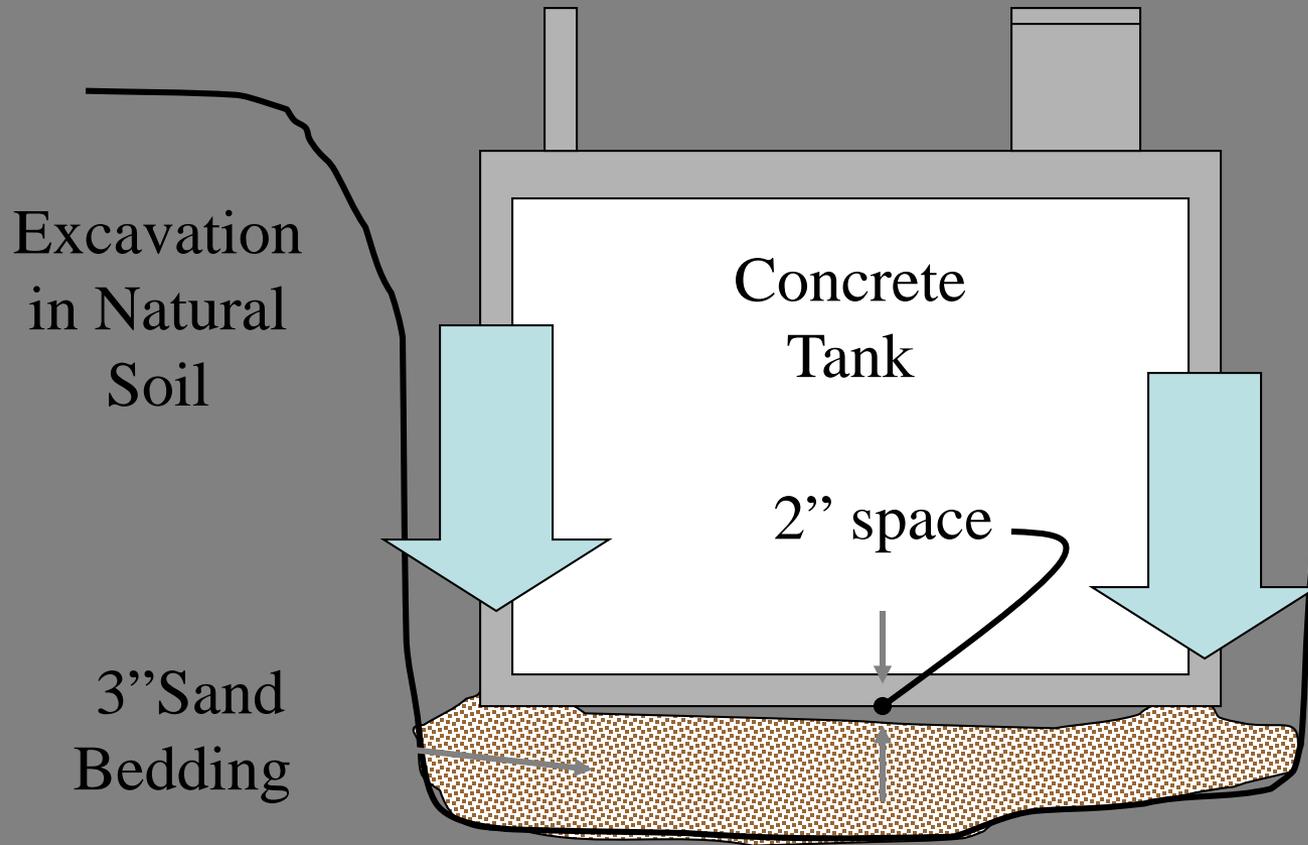
Tanks

Joints, weatherproof box, insulate, type of pipe



Typical Concrete Tank Bedding

Follow Product or Plan Approval Requirements



When the tank is back filled the walls bear the weight of the fill and tank cover. It must have a good foundation.

The 2" space prevents the bottom from pushing up.

Typical Tank Bedding

Leaking Tanks

All parties inspect before truck leaves



Effluent Filters

Approved for flow, hand accessible



Treatment Units



Bedding?



Installation Equipment

Tilling method, track or rubber tire?



Lateral and Gravel Installation

Size and clean aggregate, correct pipe, orifice spacing, orifice size?



Mound Site Preparation



Mound Sand

Check sand and source



Sand Fill Quality Issues

- ASTM C 33 specification
- Sieve analysis required
- Quality control
 - Review often
- Installer
 - Get copy of analysis



Mason Jar Field Test

Add 1/3 vol. sand sample, fill to 2/3 full with water, shake, and let stand for 30 min. More than 1/8" silt layer is questionable.

Installation?



Dispersal Cell?

Distraction



Installation?



Installation?



Installation?



Chamber Separation



Collapse and Filling



Collapse



Filling With Fine to Medium Sand



Pipe Connections

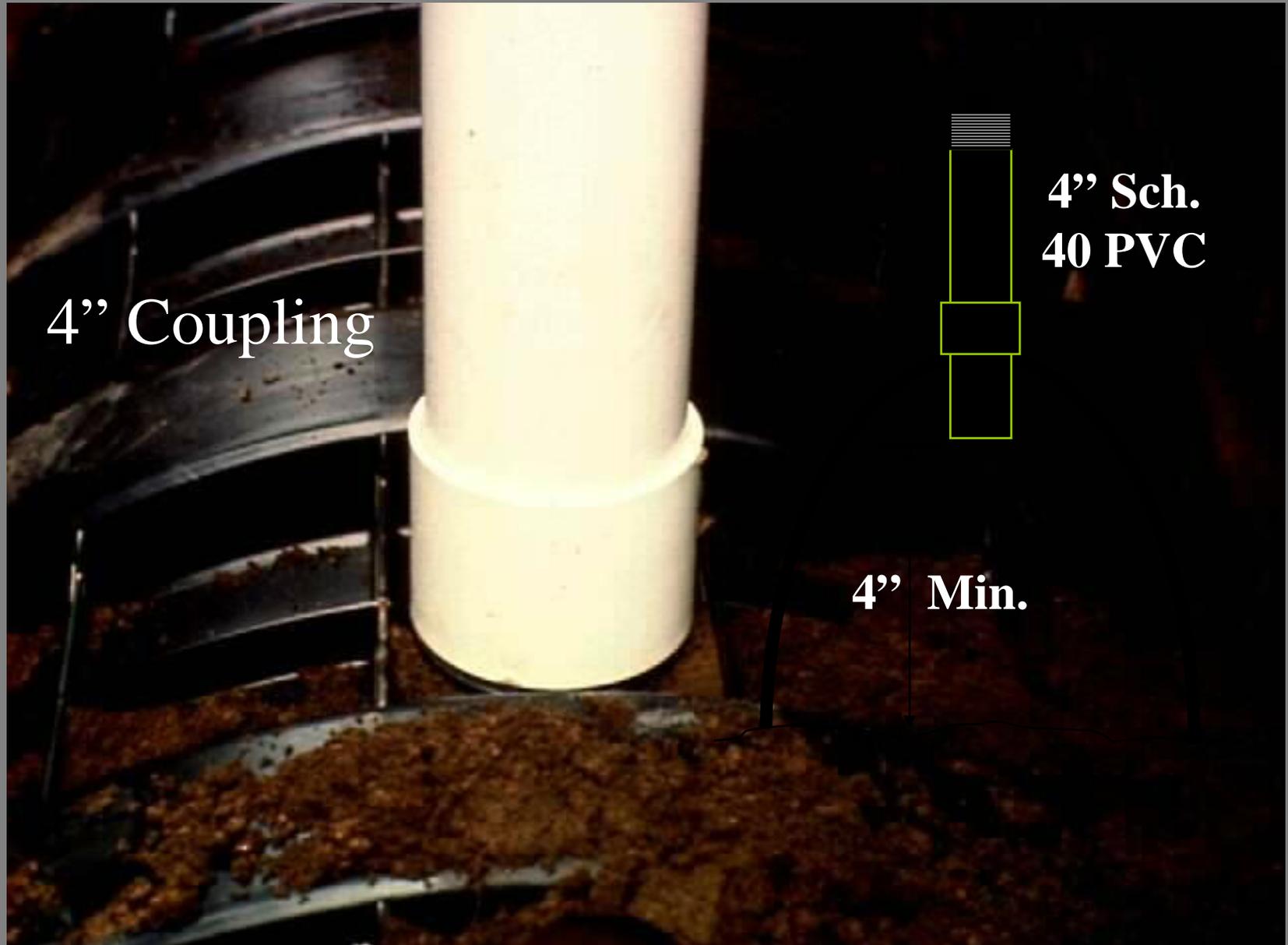
Needs to be a watertight connection



Venting



Observation Pipe Detail



Distribution Boxes



Electrical Messes to Avoid

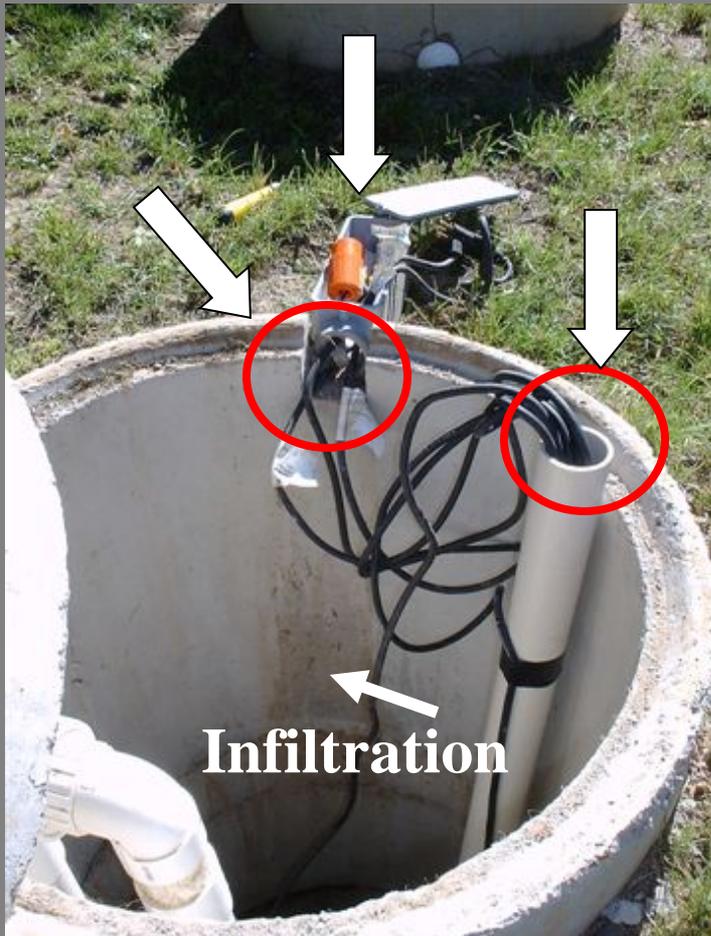


Non-Compliant Box



Unacceptable Boxes/Connections

LB fitting is for wire or cable pulling only.

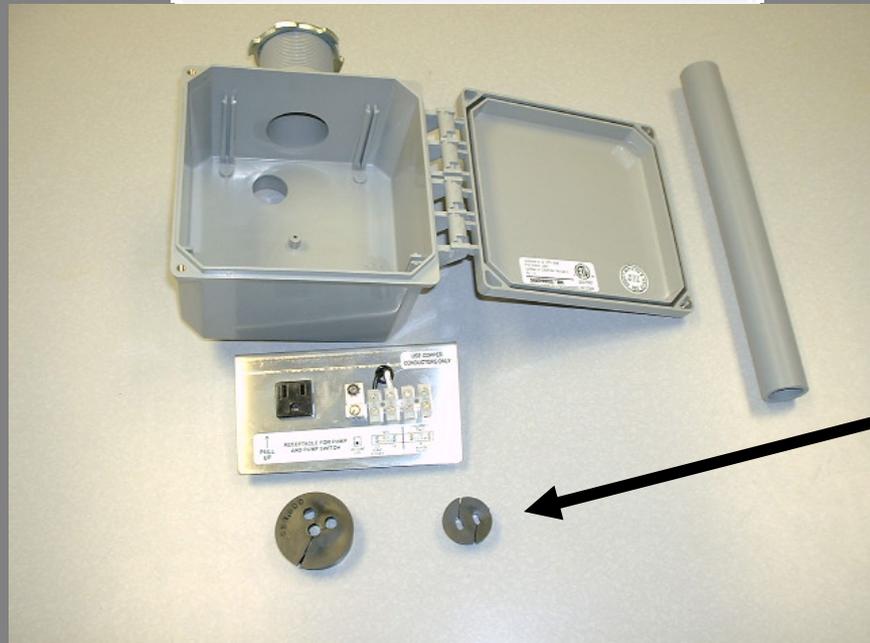


Note float tree is too high to close manhole and notched manhole opening for conduit.



Is this not a weather-proof box!

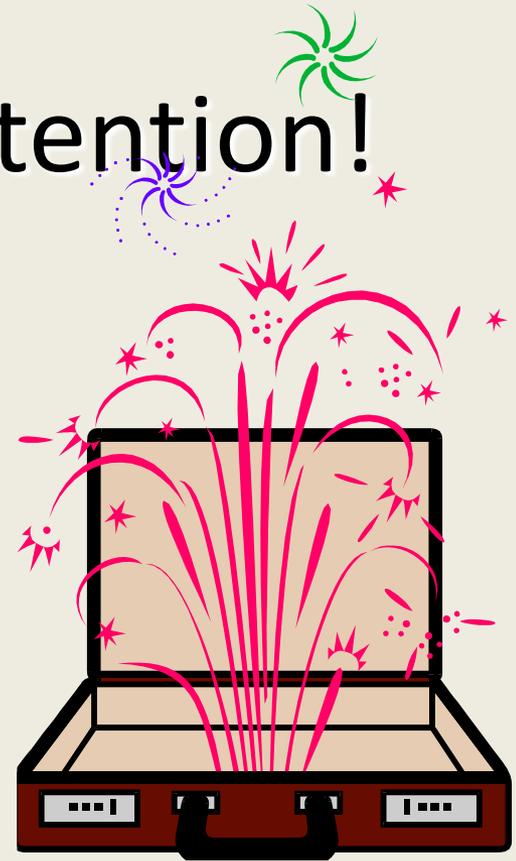
Weather Proof and Listed Boxes



PVC or rubber grommets to seal openings gas tight for cords and cables

Thanks for your attention!

- Questions?



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