

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

POWTS OVERVIEW

Monica Begley & Laura Rodriguez Alvarez
Water Quality Program



Outline

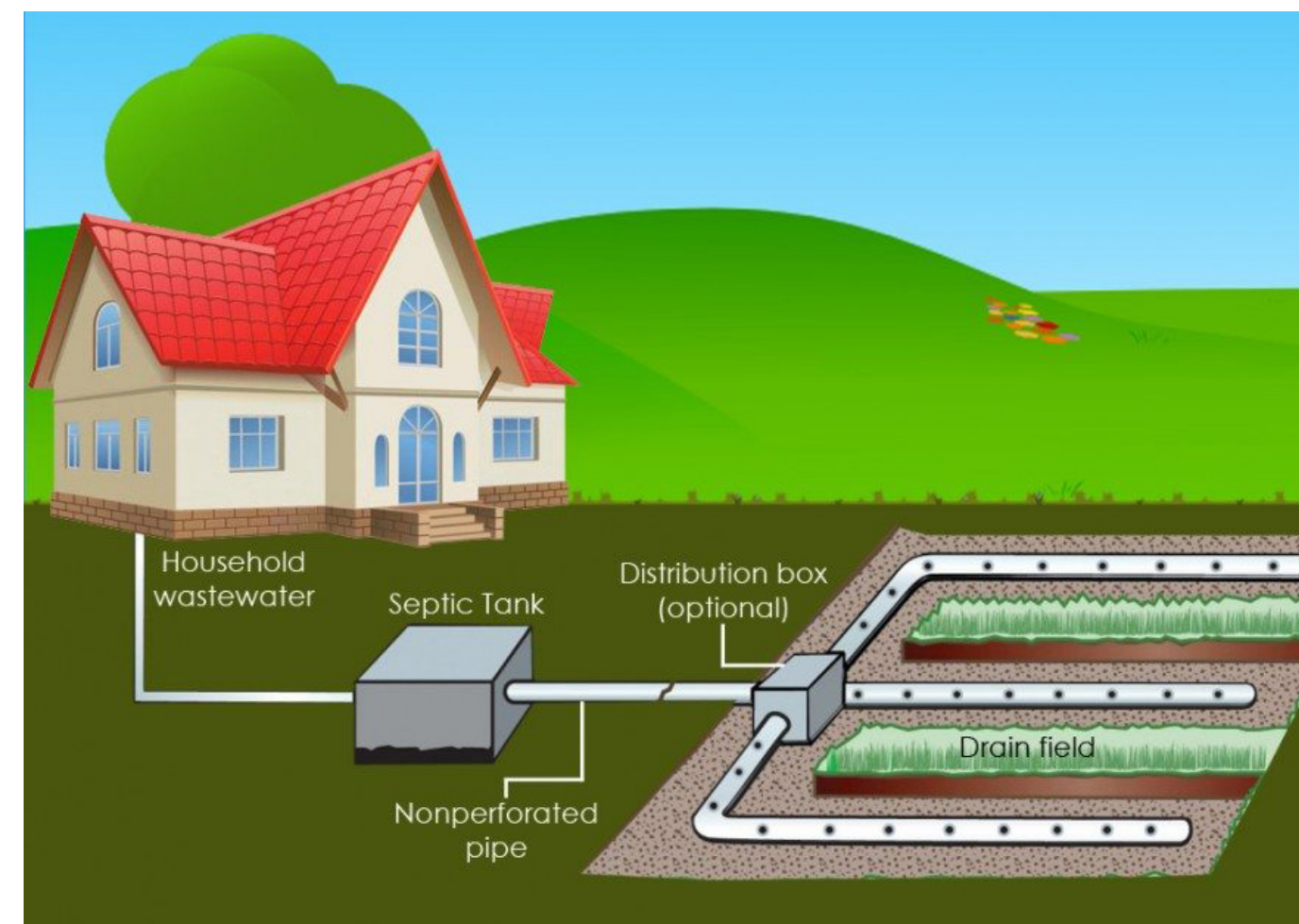
- POWTs Under DNR Regulation
- What is Domestic Wastewater?
- What is Industrial Wastewater?
- Cumulative Design Flow Rate
- Plan Review
- WPDES Permitting Requirements
- MOU between DSPS and DNR on POWTS Regulations - UPDATE

POWTS Under DNR Regulation

- Design flow rate $\geq 12,000$ gallons per day
- Residential dwellings with ≥ 85 bedrooms
 - unless existing flow data available and shows design flow rate $\leq 12,000$ gallons per day
- Systems receiving a mixture of industrial and domestic wastewater at any flow rate
- Systems receiving industrial wastewater at any flow rate

What is Domestic Wastewater?

- Waste generated from plumbing facilities in:
 - Private dwellings
 - Ex. Sanitary, bath, laundry, garbage disposal, household cleaning
 - Commercial domestic establishments
 - Ex. Restaurants, country clubs, mobile home parks, motels/hotels



Note

- High strength waste \neq industrial strength waste

What is Industrial Wastewater?

- Process wastewater and waste liquid products
 - Ex. Silage leachate, whey, whey permeate, whey filtrate, contact cooling water, cooling or boiler water containing water treatment additives, wash water in industrial, commercial or agricultural operations



Note

- POWTS CANNOT be used to treat commercial laundromats or motor vehicle cleaning unless approved on a case-by-case basis

Cumulative Design Flow Rate

- Design flow rates are added together if:
 - Within 1500 feet of the perimeter of any other system
 - Under common ownership

this is solely for the purpose of determining the regulatory authority

Examples

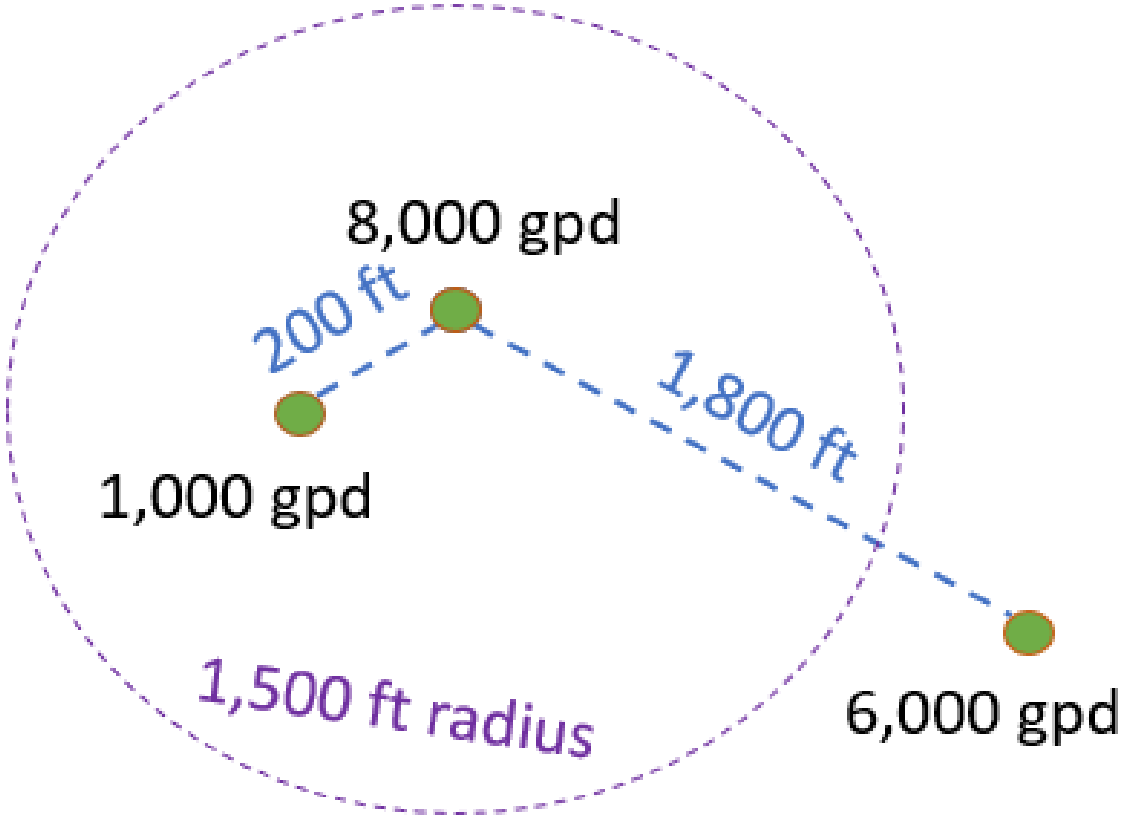
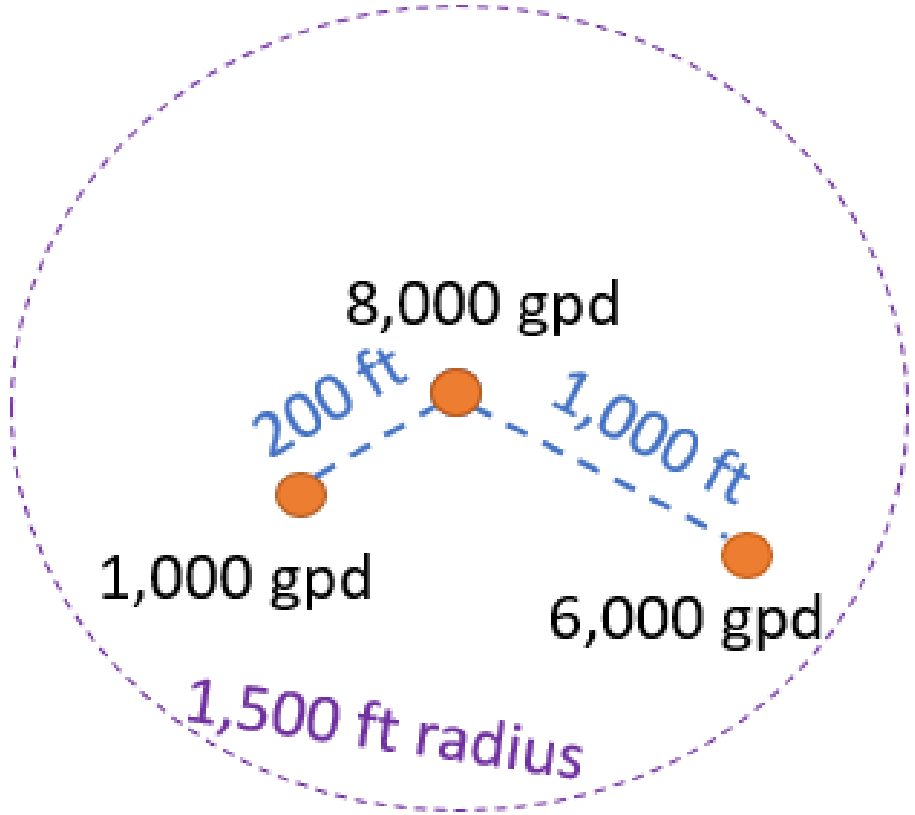
Key

● Large on-site wastewater treatment system

● Small on-site wastewater treatment system

--- Distance to nearest on-site system

*note: systems in these diagrams are assumed to be under single ownership



Plan Review



Plan Review Submission Checklist

Submittal Requirements (Domestic Only)

- Facility Ownership and Management
 - Site Information
 - Location and Design of Infiltration System
 - Treatment System Design
 - Compliance with NR 140 groundwater standards (N, BOD, Fecal Coliform, Cl)
 - Environmental Assessment
 - Conformance with Area Wide Water Quality Management Plan (if applicable)
- *vertical distance to bedrock and distance to nearest well should be explicit in drawings*
- *sampling point should be explicit in drawings*

Submittal Requirements (Mixed/Industrial)

- Facility Ownership and Treatment System Designer (contact information)
- Site Information
- Description of activities that produce wastewater
 - General nature/characteristics of contributing streams
 - Design flow rates
 - Solid residuals generated (and the proposed collection/disposal)
- Description of Treatment System and Subsurface Discharge System

vertical distance to bedrock and distance to nearest well should be explicit in drawings

sampling point should be explicit in drawings

Assessment of Mixed/Industrial Wastewater

- Determine nature/source of industrial wastewater
- Potential for impacts on treatment system and groundwater quality
- DNR may recommend preliminary treatment steps
- DNR assessment will determine regulatory authority

Who Can Submit This?

- Professional engineer, master plumber, designer of POWTS/plumbing systems

Designer must have a WI license number

Where are Submittals Sent?

- Domestic Only

- Electronic submittals (required):

- Email submittals to:
Jason.Knutson@wisconsin.gov
 - Dropbox, flashdrive, CD, etc. also accepted

- Paper submittals (not required):

- Mail submittals to:

Jason Knutson
Wastewater Section Chief
Wisconsin DNR - WY/3
101 S Webster St
PO Box 7921
Madison, WI 53707-7921

- Mixed/Industrial

- Electronic submittals (required):

- Email submittals to:
DNRMixedPOWTSReview@wisconsin.gov
 - Dropbox, flashdrive, CD, etc. also accepted

- Paper submittals (not required):

- Mail submittals to:

Jason Knutson
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WPDES Permitting Requirements



WPDES PERMIT

*STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES*

WPDES Permits Overview

- General Permits
 - One permit covers many dischargers
 - Expedited application process
 - Typically, less monitoring requirements
 - POWTS
 - Domestic only - “Domestic Wastewater to a Subsurface Soil Absorption System”
 - Mixed/Industrial - “Industrial Liquid Waste to a Subsurface Soil Absorption System”
- Individual Permits
 - One permit covers one discharger
 - Groundwater evaluation will be conducted prior to permit issuance

Permit Application

- How to apply for general permit

- Verify eligibility with online questionnaire
 - If system is ineligible, an individual permit **MUST** be acquired
- Submit electronic Notice of Intent (eNOI) 30 days before expected discharge
- Submit management plan

[Wastewater General Permits | | Wisconsin DNR](#)

- How to apply for individual permit

- Contact plan reviewer for more information

[Wastewater Plan Review | | Wisconsin DNR](#)

General Permit Monitoring Requirements

- “Domestic Wastewater to a Subsurface Soil Absorption System”
 - Quarter monitoring for BOD, TDS, Organic Dissolved N, Dissolved NH₃-N, Dissolved Cl
 - Daily flow rate
- “Industrial Liquid Waste to a Subsurface Soil Absorption System”
 - Annual monitoring for pH, BOD, TSS, Organic Dissolved N, Dissolved NO₂ + NO₃ (as N), Dissolved Cl, Oil and Grease (Hexane)
 - Daily flow rate

MOU between DSPTS and DNR on POWTS Regulations - UPDATE

- 1999 MOU between DComm (now DSPTS) and DNR on POWTS Regulations is being rewritten to clarify regulatory authority
- Currently in review by upper management
- The information presented today is not subject to change



CONNECT WITH US

Laura Rodriguez Alvarez

Laura.RodriguezAlvarez@wisconsin.gov

Monica Begley

Monica.Begley@wisconsin.gov



/WIDNR



@WIDNR



@WI_DNR



/WIDNRTV



"WILD WISCONSIN:
OFF THE RECORD"