

**APPENDIX**

**CHAPTER ILHR 83  
WIS. ADM. CODE**

**FORMS USED BY THE DEPARTMENT  
IN ADMINISTRATION OF THIS  
ADMINISTRATIVE CODE**

**INSTRUCTIONS AND EXAMPLE OF  
SIZING PRESSURE DISTRIBUTION SYSTEMS**

DEPARTMENT OF  
INDUSTRY,  
LABOR AND  
HUMAN RELATIONS

## REPORT ON SOIL BORINGS AND PERCOLATION TESTS (115)

(H63.09(1) & Chapter 145.045)

SAFETY & BUILDINGS  
DIVISION  
P. O. BOX 7969  
MADISON, WI 53707

LOCATION $\frac{1}{4}$ $\frac{1}{4}$	SECTION /T N/R E or W	TOWNSHIP/MUNICIPALITY	LOT NO. TRK. NO.	SUBDIVISION NAME
COUNTY	OWNER'S/BUYER'S NAME	MAILING ADDRESS		
USE Residence	ON BEDROCK	COMMERCIAL DESCRIPTION	DESIGN RATE	PERMEATION TESTS

RATING: S= Site suitable for system U= Site unsuitable for system

CONVENTIONAL	MOUND	IN-GROUND-PRESSURE SYSTEM	IN-FILL HOLDING TANK	RECOMMENDED SYSTEM (optional)
<input type="checkbox"/> S <input type="checkbox"/> U	<input type="checkbox"/> S <input type="checkbox"/> U	<input type="checkbox"/> S <input type="checkbox"/> U	<input type="checkbox"/> S <input type="checkbox"/> U	<input type="checkbox"/> S <input type="checkbox"/> U

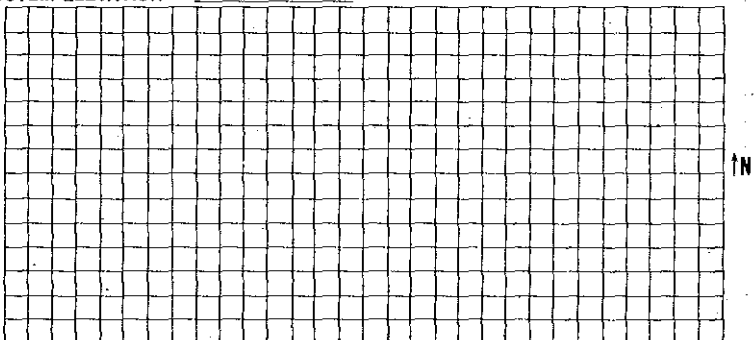
If Percolation Tests are NOT required under s.H63.09(5)(M), indicate	DESIGN RATE
If any portion of the testing area is in the Fremont, indicate Fremont elevation	

PROFILE DESCRIPTIONS					
BORING NUMBER	TOTAL DEPTH IN	ELEVATION	DEPTH TO GROUNDWATER INCHES		CHARACTER OF SOIL WITH THICKNESS, COLOR, TEXTURE, AND DEPTH TO BEDROCK, IF OBSERVED (SEE ABBY. ON BACK)
			OBSERVED	EST. HIGHEST	
B-					
B-					
B-					
B-					
B-					
B-					

PERCOLATION TESTS							
TEST NUMBER	DEPTH INCHES	WATER IN HOLE AFTER SWELLING	TEST TIME INTERVAL MIN.	DROP IN WATER LEVEL INCHES			RATE (MINUTES PER INCH)
				PERIOD 1	PERIOD 2	PERIOD 3	
P-							
P-							
P-							
P-							
P-							
P-							

**PLOT PLAN:** Show locations of percolation tests, soil borings and the dimensions of suitable sod area. Indicate scale in distances. Describe what are the four zonal and vertical elevation reference points and show their locations on the plot plan. Show the surface elevation of all borings and the direction and percent of land slope.

### SYSTEM ELEVATION



I, the undersigned, hereby certify that the soil tests reported on this form were made by me in accord with the procedures and methods specified in the Wisconsin Administrative Code, and that the data recorded and the locations of the tests are correct to the best of my knowledge and belief.

NAME (print)	TESTS WERE CONDUCTED ON
ADDRESS	CERTIFICATION NUMBER
	TEST SIGNATURE



APPLICATION FOR SANITARY PERMIT

(PLB 67)

DATE: \_\_\_\_\_ COUNTY: \_\_\_\_\_

- Attach complete plans in accord with S.H. 63.05, Wis. Admin. Code for the location of permit on the R-11 zoning map.  
 - See reverse side for instructions for completion of this application. PLEASE PRINT

PROPERTY OWNER			OWNER'S ADDRESS		
PROPERTY LOCATION			CITY, VILLAGE OR TOWNSHIP		
1/4	1/4, S	T, N, R	E (or) W		
LOT NUMBER	BLOCK NUMBER	SUBDIVISION NAME	PLAT REFERENCE, MAP OR PLAT NUMBER	SECTION, TOWNSHIP, RANGE	

TYPE OF BUILDING OR USE SERVED		Permit to Occupy
For 2 Family	Number of Bedrooms	

THIS PERMIT IS FOR A:			Line Replacement	Re-use
<input type="checkbox"/> New System	<input type="checkbox"/> Replacement Soil Absorption System	<input type="checkbox"/> Alternate System	Re-use	Permit for Modification

IF THIS IS A CONVENTIONAL SYSTEM COMPLETE THIS BLOCK:				
<input type="checkbox"/> Seepage Bed	<input type="checkbox"/> Seepage Trench	<input type="checkbox"/> Seepage Pit	<input type="checkbox"/> Horizontal Trench	
<input type="checkbox"/> System-In-Fill	<input type="checkbox"/> In Ground Pressure	<input type="checkbox"/> Vault Pit	<input type="checkbox"/> Pit Pit	
<input type="checkbox"/> Existing, For Which A Previous Permit Is On File, Permit # _____				
<input type="checkbox"/> An Existing System That Has Been Inspected And Is Compliant As For A, Soil Conditions				

	Total Capacity	Soil Tank	Perforated Gasoline	Soil Gasoline	Soil	Soil	Perforated	Pit
Soil Tank Capacity								
Lift Pump Siphon Chamber								
Holding Tank Capacity								
Manufacturer								

	Total Capacity	Soil Tank	Perforated Gasoline	Soil Gasoline	Soil	Soil	Perforated	Pit
Soil Tank Capacity								
Lift Pump Siphon Chamber								
Manufacturer								

PERCOLATION RATE (Inches per inch)	ABSORPTION AREA REQUIRED (Square Feet)	ABSORPTION AREA PROPOSED (Square Feet)	WATER SUPPLY
			Private Joint Public

I, the undersigned, hereby assume responsibility for installation of the private sewage system shown on the attached plans

Name of Plumber (Print)	Signature	PLB/PHSW No.	Plat No.
Plumber's Address	Name of Inspector		

COUNTY/DEPARTMENT USE ONLY			
Signature of Issuing Agent	Fee	Date	Approved County Given final Adverse Determination
Reason for Disapproval			
Alternate course(s) of Action Available			

DILHR SBD 6398 (R 5 82) DISTRIBUTION Original to County, One Copy To, Bureau of Plumbing, Other, Plumber



## SANITARY PERMIT TRANSFER/RENEWAL (PLB 67-T)

\_\_\_\_\_ COUNTY  
UNIFORM PERMIT # \_\_\_\_\_

PERMIT RENEWAL DATE:	PERMIT TRANSFER DATE:	ORIGINAL PERMIT ISSUANCE DATE:	STATE PLAN I.D. NUMBER:
PROPERTY LOCATION: <div style="text-align: center;"> <math>\frac{1}{4}</math>    <math>\frac{1}{4}</math> S    T    N, R    E (or) W         </div>		CITY: VILLAGE: TOWN OF:	
LOT NUMBER:	BLOCK NUMBER:	SUBDIVISION NAME:	NEAREST ROAD, LAKE OR LANDMARK:

PREVIOUS SANITARY PERMIT HOLDER (IF CHANGED):

SANITARY PERMIT TRANSFERRED TO:

NAME:	SIGNATURE:	NAME:	PHONE NUMBER:
ADDRESS:	PHONE NUMBER:	ADDRESS:	

I, the undersigned, hereby assume responsibility for installation of the private sewage system that has previously been approved for this property.

PLUMBER'S SIGNATURE:		PREVIOUS PLUMBER'S NAME (IF CHANGED):	
PLUMBER'S ADDRESS:		PREVIOUS PLUMBER'S ADDRESS:	
MP/MPSRW NUMBER:	PHONE NUMBER: (    )	MP/MPSRW NUMBER:	PHONE NUMBER: (    )

SIGNATURE OF ISSUING AGENT:	DATE APPROVED:
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**DISTRIBUTION:** Original - County  
Copy - Bureau of Plumbing  
Copy - Owner  
Copy - Plumber

DILHR-SBD-6399 (R. 5/82)

PLB 68

COUNTY \_\_\_\_\_

# SANITARY PERMIT

OWNER \_\_\_\_\_

PLUMBER \_\_\_\_\_ LIC. # \_\_\_\_\_

TOWN OF \_\_\_\_\_ LOCATED \_\_\_\_\_

\_\_\_\_\_ SEC \_\_\_\_\_ T \_\_\_\_\_ N/R \_\_\_\_\_

AND/OR LOT \_\_\_\_\_ BLOCK \_\_\_\_\_

\_\_\_\_\_ SUBDIVISION \_\_\_\_\_

**CHAPTER 145.135 WISCONSIN STATUTES**

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

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

(c) The sanitary permit is valid for 2 years from original date of issuance and may be renewed for similar periods thereafter. Application for renewal shall be made through the county and shall comply with regulations in effect at the time.

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

(e) Renewal of the sanitary permit will be based on regulations in force at the time renewal is sought. Changed regulations may require renewal.

(f) The sanitary permit is transferable. A sanitary permit transfer shall be obtained from the county authority.

\* If you wish to follow the permit, or transfer ownership of the permit, please contact the county authority.

\_\_\_\_\_ AUTHORIZED ISSUING OFFICER - DATE \_\_\_\_\_

THIS PERMIT EXPIRES \_\_\_\_\_ UNLESS RENEWED BEFORE THAT DATE

# POST IN PLAIN VIEW

VISIBLE FROM THE ROAD FRONTING THE LOT  
DURING CONSTRUCTION

PLB 68-T

COUNTY

# SANITARY PERMIT

No. \_\_\_\_\_

## TRANSFER/RENEWAL

OWNER \_\_\_\_\_

PLUMBER \_\_\_\_\_ LIC. # \_\_\_\_\_

TOWN OF \_\_\_\_\_ LOCATED \_\_\_\_\_

\_\_\_\_\_ SEC. \_\_\_\_\_ T. \_\_\_\_\_ N/R.

AND/OR LOT \_\_\_\_\_ BLOCK \_\_\_\_\_

\_\_\_\_\_ SUBDIVISION \_\_\_\_\_

CHAPTER 145.135 WISCONSIN STATUTES

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

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

(c) The sanitary permit is valid for 2 years from original date of issuance and may be renewed for similar periods thereafter. Application for renewal shall be made through the county and shall comply with regulations in effect at the time.

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

(e) Renewal of the sanitary permit will be based on requirements in force at the time renewal is sought. Changed regulations may impede renewal.

(f) The sanitary permit is transferable. A sanitary permit transfer shall be obtained from the county authority.

\* If you wish to renew the permit, or transfer ownership of the permit, please contact the county authority.

\_\_\_\_\_ AUTHORIZED ISSUING OFFICER - DATE \_\_\_\_\_

THIS PERMIT EXPIRES \_\_\_\_\_ UNLESS RENEWED BEFORE THAT DATE

# POST IN PLAIN VIEW

VISIBLE FROM THE ROAD FRONTING THE LOT  
DURING CONSTRUCTION

DILHR 58D 6494 (Rev. 04/92)

HEALTH AND SOCIAL SERVICES  
ILHR 83 Appendix

SDD 6678 (9/81) (PLB 1003)

Detach And Return Upper  
Portion of This Form With  
Any Return Correspondence



STATE OF WISCONSIN ILHR  
DIVISION OF SAFETY & BUILDINGS  
BUREAU OF PLUMBING  
201 E. WASHINGTON AVE. RM 178  
P.O. BOX 7969  
MADISON, WI 53707  
608 266 1815

DATE:

PROJECT:

PLAN ID. #

DETACH HERE

PROJECT NAME \_\_\_\_\_

PLAN ID. # \_\_\_\_\_

This is to acknowledge receipt of your plans and specifications for the above-indicated project.

Preliminary review indicates the required fee is \$ \_\_\_\_\_

Fee Received is \$ \_\_\_\_\_

- |   |  |
|---|--|
| <input type="checkbox"/> Underpayment - Please submit the additional fee.                                 | <input type="checkbox"/> Overpayment - Refund forthcoming.           |
| <input type="checkbox"/> Plan accepted for review.  | <input type="checkbox"/> Plans being returned.                       |
| <input type="checkbox"/> No fee has been remitted. Plans submitted with no fees will be held in abeyance. | <input type="checkbox"/> Additional information required. SEE BELOW. |

## I. Plan Submission

- Additional information shall be submitted in duplicate unless specifically noted.
- Plans not clear, legible or permanent.
- All information submitted shall be signed, dated and sealed or stamped in accord with Section H 63.0812(a) Wisconsin Administrative Code.  Affidavit enclosed.

## II. Pressurize Distribution Systems (Mound or In Ground Pressure)

- Application for use of an alternative system signed by owner and notarized. (1 copy)
- County onsite required (1 copy).  Design calculations for pressurize distribution.  Soil boring & percolation test data.
- Cross section of system.  Pipe lateral layout.
- Plan view of system.  Plot plan.
- Verification of Exception Status Form by County. (1 copy)

## III. Private Sewage Disposal Systems

- Ground slope with 2' contours in entire area of soil absorption system extending 25' on all sides.
- Elevation of permanent reference point (benchmark).
- Location of area suitable for replacement system - provide soil data.
- Plot plan showing lot size and all lateral distances from sewage disposal system to buildings, lot lines, well, water course, swimming pools, water service piping, Etc.
- Construction detail of septic, holding or lift pump tank if site constructed or tank manufacturer if precast.
- Construction detail and cross-section of soil absorption system.
- Soil boring and percolation test on 115 completed by certified soil tester (1 Copy).

- Complete data relative to anticipated use of bldg.  
 12 copies of PLB 60 enclosed.
- Deed restriction required (1 copy).
- Condominium declaration. (1 copy)

## IV. Holding Tanks

- Profile of holding tank showing vent, manhole alarm and manufacturer if precast. Complete construction details if site constructed.
- Holding tank agreement signed by owner and local unit of government (sample enclosed).
- Reason for installing holding tank. Soil test or statement from county (1 copy).
- Plot plan showing location of holding tank with lateral distances to any building, wells, water service piping, water course, lot lines, swimming pools, all weather service road, Etc. Provide benchmark with elevation reference point.

## V. Lift Pump

- Calculations for total lift pump discharge, head and gallons pumped per cycle.
- Size, length & depth of force main.
- Detail & model of pump or automatic siphons including size, pump curves, drawdown and average flow rate GPM.
- Cross section of lift pump tank showing pump(s) or siphon(s).

## VI. Systems In Fill (Fill must be placed prior to plan submission)

- Total area filled (fill to extend 20' beyond edge of trench before side slope begin).
- Depth and type of fill.
- Copy of onsite report by county or district staff.





DEPARTMENT OF INDUSTRY,  
LABOR & HUMAN RELATIONS  
P.O. BOX 7969  
MADISON, WI 53707

INSPECTION REPORT FOR  
PRIVATE SEWAGE SYSTEMS

SAFETY & BUILDINGS  
DIVISION  
BUREAU OF PLUMBING

CONVENTIONAL                      ALTERNATIVE  
Holding Tank                      In Ground Pressure                      Mound

NAME OF PERMIT HOLDER		ADDRESS OF PERMIT HOLDER		CITY		COUNTY		STATE	
BENCH MARK		ELEVATION		DATE		TIME		INSPECTOR	
SEPTIC TANK/HOLDING TANK:									
MANUFACTURER									
STODDS		INVERT		DRAIN		NUMBER OF FEET FROM NEAREST		YES NO YES NO	
YES NO		YES NO		YES NO		NUMBER OF FEET FROM NEAREST		YES NO YES NO	
DOSING CHAMBER:									
MANUFACTURER									
YES NO		YES NO		YES NO		NUMBER OF FEET FROM NEAREST		YES NO YES NO	
GALLONS PER CYCLE (DIFFERENCE BETWEEN PUMP ON AND OFF)		YES NO		FORCE MAIN		NUMBER OF FEET FROM NEAREST		YES NO YES NO	
SOIL ABSORPTION SYSTEM. Check the soil moisture at the depth of plowing or excavation. (If soil can be rolled into a cone, construction shall be until the soil is dry enough to continue.)		YES NO		FORCE MAIN		NUMBER OF FEET FROM NEAREST		YES NO YES NO	
CONVENTIONAL SYSTEM:									
BED/TRENCH DIMENSIONS		FOUR FT. WATER		PIT		NUMBER OF FEET FROM NEAREST		YES NO YES NO	
BED/TRENCH DIMENSIONS		FOUR FT. WATER		PIT		NUMBER OF FEET FROM NEAREST		YES NO YES NO	
MOUND SYSTEM:									
Mound site plowed perpendicular to slope and furrows thrown upslope.		Check the texture of the fill material for mound systems to make certain that it meets the criteria for medium sand.		PROVIDE A DIAGRAM OF SYSTEM ON REVERSE SIDE. SHOW ELEVATIONS MEASURED.		YES NO		YES NO YES NO	
SOIL COVER		YES NO		YES NO		YES NO		YES NO	
YES NO		YES NO		YES NO		YES NO		YES NO	
PRESSURIZED DISTRIBUTION SYSTEM:									
BED/TRENCH DIMENSIONS		FOUR FT. WATER		PIT		NUMBER OF FEET FROM NEAREST		YES NO YES NO	
ELEVATION AND DISTRIBUTION INFORMATION		FOUR FT. WATER		PIT		NUMBER OF FEET FROM NEAREST		YES NO YES NO	
COMMENTS:		PERMANENT VARIATIONS		CALCULATIONS APPLICABLE		NUMBER OF FEET FROM NEAREST		YES NO YES NO	
YES NO		YES NO		YES NO		NUMBER OF FEET FROM NEAREST		YES NO YES NO	

Sketch System on  
Reverse Side.

Retain in county file for audit.

DILHR SBD 8710 (R. 01/82)

CITY	COUNTY
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State of Wisconsin \ Department of Industry, Labor and Human Relations

SAFETY & BUILDINGS DIVISION

Bureau of Plumbing  
P.O. Box 7869  
Madison, WI 53707

Plan Identification No. \_\_\_\_\_

Re:

Dear Sir:

Plans and specifications have been received and assigned the above plan identification number. Preliminary review of these plans indicate the plans have not been sealed or stamped in accord with Section H 62.25 (2)(a) or H 63.08 (2)(a), Wisconsin Administrative Code.

These sections specifically indicate that all plans shall be sealed or stamped in accord with Chapter A-E 1, Wisconsin Administrative Code. A master plumber or master plumber restricted sewer may design and submit plans and specifications for those systems he is to install. Each sheet of plans and specifications the master plumber or master plumber restricted sewer submits shall be signed, dated and include his license number. Where more than one sheet is bound together into one volume, only the title sheet need be signed, dated and include the license number.

Rather than return the plans at this time, please have the party preparing the plans sign the affidavit below and return to this office.

AFFIDAVIT

I, the undersigned, hereby certify that the plans and specifications submitted and assigned the above project number were prepared by or under my direction and control.

NAME \_\_\_\_\_ TITLE \_\_\_\_\_  
(Type or Print)

REGISTRATION NUMBER \_\_\_\_\_ OR MASTER PLUMBER LICENSE NO. \_\_\_\_\_

ADDRESS \_\_\_\_\_

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

DILHR SBD-6212 (R.08/81)

Pfb. - 60  
1/78

## PROJECT DETAIL DATA SHEET

NAME OF BUSINESS \_\_\_\_\_

LEGAL DESCRIPTION \_\_\_\_\_

OWNER \_\_\_\_\_

MAILING ADDRESS \_\_\_\_\_ Zip \_\_\_\_\_

ARCHITECT, ENGINEER,  
PLUMBER OR DESIGNER \_\_\_\_\_

ADDRESS \_\_\_\_\_ Zip \_\_\_\_\_

TELEPHONE NUMBER \_\_\_\_\_

1. Check appropriate building usage(s) and fill in the information requested opposite each usage listed. Please consult Section H 62.20.

Existing building \_\_\_\_\_ New building \_\_\_\_\_ Addition \_\_\_\_\_

- ( ) Apartments and condominiums ..... Number of bedrooms \_\_\_\_\_  
 ( ) Assembly hall ..... Seating capacity \_\_\_\_\_  
 ( ) Bar ..... Seating Capacity \_\_\_\_\_ # of meals served \_\_\_\_\_  
 ( ) Bowling alley ..... Number of lanes \_\_\_\_\_ ( ) With Bar \_\_\_\_\_  
 ( ) Campground and camping resorts ..... Number of sewerer sites \_\_\_\_\_  
 ..... Number of unsewered sites \_\_\_\_\_  
 ..... Total number of sites \_\_\_\_\_  
 ( ) Camps ..... ( ) Day use only Number of persons \_\_\_\_\_  
 ..... ( ) Day and night Number of persons \_\_\_\_\_  
 ( ) Catchbasin ..... Number \_\_\_\_\_  
 ( ) Church ..... ( ) No kitchen Number of persons \_\_\_\_\_  
 ..... ( ) With kitchen Number of persons \_\_\_\_\_  
 ( ) Dance hall ..... Number of persons \_\_\_\_\_  
 ( ) Dining hall ..... Number of meals served daily \_\_\_\_\_  
 ( ) Dog kennels ..... Number of of enclosures \_\_\_\_\_  
 ( ) Drive-in restaurant ..... Inside seating capacity \_\_\_\_\_  
 ( ) Dump station ..... Number of dump stations \_\_\_\_\_  
 ..... Car-service—Number of car spaces \_\_\_\_\_  
 ( ) Employes (total of all shifts) ..... Number of employes \_\_\_\_\_  
 ( ) Hotel ( ) Motel ( ) Cottages ..... Number of units with 2 persons per unit \_\_\_\_\_  
 ..... Number of units with 4 persons per unit \_\_\_\_\_  
 ( ) Medical and dental office bldgs ..... Number of doctors, nurses, medical staff \_\_\_\_\_  
 ..... Number of office personnel \_\_\_\_\_  
 ..... Number of of patients \_\_\_\_\_  
 ( ) Mobile home parks: ..... Number of sites \_\_\_\_\_  
 ( ) Nursing homes ..... Number of beds \_\_\_\_\_  
 ( ) Parks ..... Number of persons \_\_\_\_\_  
 ( ) Restaurant ..... ( ) Toilets ( ) Showers \_\_\_\_\_  
 ..... Seating capacity \_\_\_\_\_  
 ..... ( ) Dishwasher and/or disposal? \_\_\_\_\_  
 ..... ( ) 24-Hour service \_\_\_\_\_  
 ( ) Retail store ..... Total number of customers \_\_\_\_\_

HEALTH AND SOCIAL SERVICES

ILHR 83 Appendix

- ( ) Schools ..... Number of classrooms \_\_\_\_\_ ( ) Meals ( ) Showers
- ( ) Self service laundry ..... Total number of machines \_\_\_\_\_
- ( ) Service station ..... Number of cars served daily \_\_\_\_\_
- ( ) OTHER .....(Specify) .....

COMPLETE OTHER SIDE

2. Indicate whether the following facilities are present.
 

Floor drain	yes _____ no _____	Number of drains _____
Flood waste grinder	yes _____ no _____	
Dishwasher	yes _____ no _____	
Automatic clothes washer	yes _____ no _____	Number of clothes washers _____
  
3. Septic tank capacity \_\_\_\_\_  
 Holding tank capacity \_\_\_\_\_  
 Septic or holding tank manufacturer \_\_\_\_\_
  
4. SEEPAGE TRENCHES: Total square feet \_\_\_\_\_ width of trenches \_\_\_\_\_  
 length of trenches \_\_\_\_\_ depth \_\_\_\_\_  
 number of trenches \_\_\_\_\_
  
- SEEPAGE BEDS: total square feet \_\_\_\_\_ width \_\_\_\_\_  
 length of bed \_\_\_\_\_ depth \_\_\_\_\_
  
- SEEPAGE PITS: total square feet \_\_\_\_\_  
 outside diameter \_\_\_\_\_  
 depth below inlet \_\_\_\_\_  
 total depth from top to bottom of pit: \_\_\_\_\_

Signature of person completing form: FOR DEPARTMENTAL USE ONLY

Address \_\_\_\_\_

Zip

Telephone Number \_\_\_\_\_

Date \_\_\_\_\_



ON-SITE INVESTIGATION FOR CONVENTIONAL SYSTEM IN-FILL

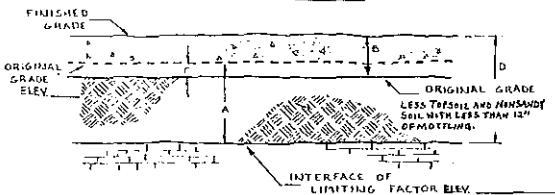
Safety & Buildings Division  
Bureau Of Plumbing  
P.O. BOX 7969  
MADISON, WI 53707

Agency Name:		Legal Description:			
Building Usage:	<input type="checkbox"/> New Building <input type="checkbox"/> Replacement System <input type="checkbox"/> Public <input type="checkbox"/> Residential	No. of Bedrooms			
Water Feet	Depth in Inches to Limiting Factor from Original Grade	Fill Is Placed To Overcome Depth To:	Fill Placed 30 Feet Around Area Proposed For Initial And Replacement Area	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Soil Absorption System Required:		Groundwater	Bedrock	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Type Fill Placed:	Topsoil and Nonwaxy Soil Removed Prior to Placement of Fill:	Removed Prior To Placement of Fill:	Monitoring Required:	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Nature of Fill Material: (are <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Existing Soil)	Indicate Nature of Fill Material:	Does Fill Conform To Section H 63.10(6) Via. Admin. Code:	Yes <input type="checkbox"/> No <input type="checkbox"/>		

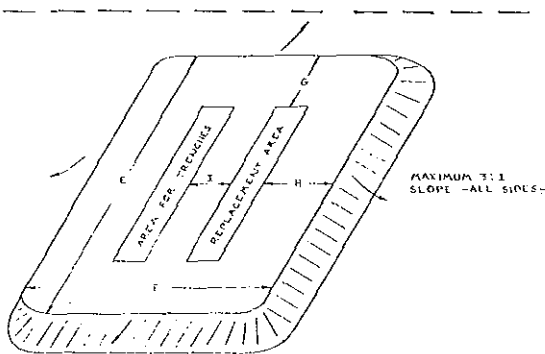
Explain Any Problems:

Complete The Following:

Bench Mark Elevation As Established On 115 \_\_\_\_\_ Finished Grade Elevation \_\_\_\_\_



A	Depth To Limiting Factor:
B	Depth of Fill Material:
C	Depth of Topsoil and Nonwaxy Soil With Less Than 12" of Notchings:
D	Finished Depth To Limiting Factor:



E	Total Length of Area Filled:
F	Total Width of Area Filled:
G	Dimension from Freest. Edge of Trench to Edge of Fill (min. 20')
H	Dimension from Freest. Edge of Trench to Edge of Fill (min. 20')
I	Separation of Trench - Min. 6'

Signature of County Representative/On-Site Waste Specialist

DILHR SBD-6196 (R.02/83)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**GROUND WATER MONITORING:**

**REQUEST FOR ADDITIONAL INFORMATION**

**PLEASE PROVIDE OR CLARIFY THE FOLLOWING:**

- Legal description of property
- Owner's name and mailing address
- Depth and/or location of monitoring wells
- Monthly rainfall
- Daily rainfall data for March, April and May
- Observations and reporting of data is incomplete
- Plot plan required showing location of all monitoring wells
- Surface elevation of all monitoring wells
- Information regarding artificial drainage
- EH-115: Report on Soil Borings and Percolation Tests
- Data report form not signed by Certified Soil Tester
- Data not submitted on PLB. 119 form
- Data not submitted in duplicate—one additional copy required
- Verification of data and procedures from county



Plan Identification No. \_\_\_\_\_

Gentlemen:

We have received a (PLB. 119) Groundwater Monitoring Report form from \_\_\_\_\_, CST for the \_\_\_\_\_ property located in the \_\_\_\_\_

Please answer or verify the following and return to this office. Monitoring data will be reviewed upon receipt of this information.

1. Were you notified by the CST of the intent to monitor groundwater levels at the above-mentioned site?
2. Were the wells properly installed?
3. Provide all observations you made during the time the site was monitored.
4. Did the soil tester monitor the site according to chapter ILHR 83, Wis. Adm. Code?
5. List any comments or pertinent information.

---

Signature of Person Completing Form



WISCONSIN ADMINISTRATIVE CODE

ILHR 83 Appendix

STATE OF WISCONSIN-DEPARTMENT OF INDUSTRY, LABOR & HUMAN RELATIONS  
 DIVISION OF SAFETY & BUILDINGS - BUREAU OF PLUMBING  
 P.O. BOX 7969 - MADISON, WI, 53707

APPLICATION FOR THE USE OF AN ALTERNATIVE SYSTEM

Location:	Township/Municipality:				
$\frac{1}{2}$   $\frac{1}{4}$ S   T   N/R   E(or)W	Subdivision:		County:		
Street Address:	Mailing Address:				
Landowners Name:					

I (We), the undersigned, hereby make application for an alternative system on the above-described premises. I recognize that the above premises are not suited for a conventional private sewage system. If approval is granted, I agree to have the system installed in conformance with the Bureau's approval of plans and specifications.

I further understand that an alternative system is more complex in nature than a conventional private sewage system and as such will require detailed inspection during construction and monitoring after the system is put into use. I agree to permit both county officials charged with administering county sanitary ordinances and Bureau employes or other authorized persons to have access to the above described premises at any reasonable time for the purpose of inspection the construction of or monitoring of the system. I further agree to either personally or by my agent contact the proper county official to arrange the time and date to begin construction of the system.

I understand that this application does not permit me (the applicant) or my agent (the contractor) to begin installation. If the system is approved, the Bureau will send the applicant a letter of approval which authorizes construction of the alternative system after all necessary permits have been obtained.

I agree to give notice to any subsequent buyer that an application for an alternative system has been made and if installed, that the premises are served by an alternative system and further agree to give the buyer a copy of this application.

The Bureau accepts this application subject to this understanding and subject to all the conditions and obligations set out in this application.

STATE OF WISCONSIN }  
 ) SS.  
 COUNTY OF \_\_\_\_\_ }

Signature of Applicant \_\_\_\_\_ Date \_\_\_\_\_

Subscribed and sworn to before me

This \_\_\_\_\_ day of \_\_\_\_\_ 19\_\_.

Notary Public, State of Wisconsin

DILHR-SBD-6413 (N. 05/81)

My Commission Expires: \_\_\_\_\_

HEALTH AND SOCIAL SERVICES

ILHR 83 Appendix

DLHR SBD-6698  
(Pib.89)

APPLICATION FOR DEVELOPMENT OF FLOOD PLAIN  
DEPARTMENT OF INDUSTRY, LABOR & HUMAN RELATIONS

When the installation of a new, replacement or expanded private sewage disposal system is proposed for a flood plain area, this form must be completed and submitted to the Department of Industry, Labor & Human Relations along with plans and other necessary data.

OWNER'S NAME \_\_\_\_\_ DATE \_\_\_\_\_

ADDRESS \_\_\_\_\_

ADDRESS OF BUILDING OR LOCATION OF PROPERTY \_\_\_\_\_

LEGAL DESCRIPTION \_\_\_\_\_

TOWNSHIP \_\_\_\_\_ COUNTY \_\_\_\_\_

Is this system new \_\_\_\_\_ replacement \_\_\_\_\_ expanded \_\_\_\_\_

In area:

In regional floodway? yes \_\_\_\_\_ no \_\_\_\_\_ not determined \_\_\_\_\_

In regional fringe flood area? yes \_\_\_\_\_ no \_\_\_\_\_ not determined \_\_\_\_\_

Contiguous to ground higher than any of the above? yes \_\_\_\_\_ no \_\_\_\_\_

What is the established regional flood elevation? \_\_\_\_\_

Are flood plain maps published and available or determined by the Department of Natural Resources? \_\_\_\_\_

Has or will permission be granted for the following:

Fill required for building? yes \_\_\_\_\_ no \_\_\_\_\_

Building permit? yes \_\_\_\_\_ no \_\_\_\_\_

Sewage disposal system (sanitary permit)? yes \_\_\_\_\_ no \_\_\_\_\_

Action taken locally by \_\_\_\_\_

Comments regarding development (zoning administrator, board of appeals, etc.):

Favorable \_\_\_\_\_ Unfavorable \_\_\_\_\_

Special Recommendations: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signatures:

County Representative \_\_\_\_\_

Department of Natural Resources \_\_\_\_\_

Department of Industry, Labor & Human Relations \_\_\_\_\_

NOTE: This document is to be recorded in the Tract Index at the office of the Register of Deeds in the county indicated below.

### HOLDING TANK AGREEMENT

This Agreement is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, by \_\_\_\_\_ and between the \_\_\_\_\_, hereinafter called "\_\_\_\_\_" and \_\_\_\_\_ hereinafter called the "Owner".

We hereby acknowledge that application has been made for a building permit on the following described property, to wit:

or that continued use of the existing premises requires that a holding tank be installed on the property for the purpose of proper containment of sewage. We also acknowledge that said property cannot now be served by a municipal sewer or septic tank-soil absorption system.

THEREFORE, as an inducement to the County of \_\_\_\_\_ to issue a sanitary permit for the above described premises, we hereby agree and bind ourselves as follows:

1. Owner agrees to conform to all applicable requirements of the Plumbing Code relating to holding tanks. Any time the Town or Municipality of \_\_\_\_\_ through its Plumbing Inspector or Health Officer, deems it necessary to pump out the subject holding tank, the Owner shall have same pumped out in twenty-four (24) hours, or \_\_\_\_\_ will have said work done and charge same back to Owner and place same on the tax bill as a special charge. The Owner further agrees that the Town or Municipality of \_\_\_\_\_ may enter upon the property described above at any reasonable time, to inspect, or pump and haul wastes from the subject holding tank.

2. Owner agrees to pay all charges and costs incurred by the Town or Municipality of \_\_\_\_\_ for inspection, pumping, hauling or otherwise servicing and maintaining the subject holding tank in such a manner as to prevent or abate any nuisance or health hazard caused by such holding tank. \_\_\_\_\_ shall notify the Owner of any such cost which shall be paid by Owner within thirty (30) days from the date of notice and in the event that the Owner does not pay said cost within thirty (30) days, Owner hereby specifically agrees that all of said costs and charges may be placed on the tax roll as a special assessment for the abatement of nuisance, and said tax shall be collected as provided by Wisconsin Statute.

3. Owner agrees to have a quarterly pumping report submitted to the local government and the county which will state the Owner's name, location of the property on which the holding tank is located, the pumper's name, the dates, volumes pumped and the disposal site. An annual pumping report or the fourth quarter report including a summary of the pumping history of the previous year shall be submitted to the Department of Industry, Labor and Human Relations by the governmental unit responsible, per section 145.01 (15), Wisconsin Statutes.

4. We guarantee that the holding tank contents will be disposed of at a site meeting the requirements of chapter NR 113, Wisconsin Administrative Code.

5. This agreement will remain in effect only until the sanitary permit issuing agent in \_\_\_\_\_ County certifies that the subject property is served by either a public sewer or a septic tank-soil absorption system that complies with ch. ILHR 83, Wis. Adm. Code. In addition, this Agreement may be cancelled by executing and recording said certification with reference to this Agreement, in the Tract Index indicated above.

(OVER)

Page 2

6. This agreement shall be binding upon the indicated governmental unit and the Owner or heirs and assignees and shall run with the deed.

WITNESS our hands and seals this \_\_\_\_\_ day of \_\_\_\_\_.

SIGNATURE OF TOWN OR MUNICIPAL OFFICIAL (Include Title): \_\_\_\_\_

SIGNATURE OF OWNER(S): \_\_\_\_\_

Personally came before me this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, the above named \_\_\_\_\_ to me known to be the persons who executed the foregoing instrument and acknowledged the same.

THIS INSTRUMENT  
DRAFTED BY:

\_\_\_\_\_  
NOTARY PUBLIC

My commission expires:

SANITARY PERMIT SUBMITTAL FORM

COUNTY \_\_\_\_\_

DATE \_\_\_\_\_

TOTAL AMOUNT \_\_\_\_\_

TOTAL PERMITS \_\_\_\_\_

PERMITS BY NUMBER AND DATE ISSUED:

This form must accompany each group of Sanitary Permits upon submission for State Funding.

PLEASE USE ADDITIONAL SHEETS IF NECESSARY.

DILHR-SB11-6153 (N. 7/80)

Wisconsin Department of  
**DILHR**  
 Industry, Labor and Human Relations

# MATERIAL REQUEST

STATE OF WISCONSIN DILHR  
 DIVISION OF SAFETY & BUILDINGS  
 BUREAU OF PLUMBING  
 201 E. WASHINGTON AVE, RM 178  
 P.O. BOX 7969  
 MADISON, WI 53707

PLEASE MAIL ALL REQUESTS TO:

COUNTY OF: _____	TELEPHONE: _____	ADDRESS CHANGE: <input type="checkbox"/> YES <input type="checkbox"/> NO
MAILING ADDRESS: _____		ZIP CODE _____

FORM NO.:	TITLE OF MATERIALS REQUESTED:	QUANTITY ORDERED:	QUANTITY SENT:
PLB - 68	SANITARY PERMIT		
PLB - 68T	SANITARY PERMIT TRANSFER		
SBD - 6398	PERMIT APP. FOR PRIVATE DOMESTIC SEWAGE SYSTEMS (PLB-67)		
SBD - 6399	TRANSFER FORM FOR SANITARY PERMIT (PLB-67T)		
SBD - 6095	REPORT ON INSPECTION OF SANITARY PERMIT		
SBD - 6153	SANITARY PERMIT SUBMITTAL		
SBD - 6395	REPORT ON SOIL BORINGS AND PERCOLATION TESTS (115)		
SBD - 6421	GROUNDEWATER MONITORING REPORT (PLB-119)		
SBD - 6309	RPT. ON SOIL BORINGS AND PERC. TESTS- SUBDIVISION (EH-44)		
SBD - 6413	APPLICATION FOR AN ALTERNATIVE SYSTEM (PLB-108)		
SBD - 6158	VERIFICATION FOR THE USE OF AN ALTERNATIVE SYSTEM		

STATE USE ONLY-ASSIGNMENT OF SANITARY PERMIT NUMBERS!

01000

THE FOLLOWING PERMIT NUMBERS ARE ASSIGNED TO THE COUNTY IDENTIFIED ABOVE.

(PLB-68) PERMIT NO. \_\_\_\_\_ THROUGH & INCLUDING \_\_\_\_\_ PERMITS

(PLB-68T) PERMIT NO. \_\_\_\_\_ THROUGH & INCLUDING \_\_\_\_\_ PERMITS

INITIALS: _____	DATE SHIPPED: _____
-----------------	---------------------

TOTAL PERMITS ISSUED
----------------------

(Detach Here)  
**CONFIRMATION OF SANITARY PERMITS RECEIVED**

001000

COUNTY OF: _____	DATE RECEIVED BY COUNTY: _____
PERMIT NUMBERS: _____ THROUGH: _____	SIGNATURE OF ISSUING AGENT: _____

## WISCONSIN ADMINISTRATIVE CODE

ILHR 83 Appendix

WISCONSIN DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS  
 DIVISION OF SAFETY & BUILDINGS, BUREAU OF PLUMBING  
 P.O. BOX 7969, MADISON, WISCONSIN 53707

Verification of Exception Status for an Alternative Private Sewage System  
 In the County of \_\_\_\_\_

Location \_\_\_\_\_ 1/4, \_\_\_\_\_ 1/4, Sec. \_\_\_\_\_, T \_\_\_\_\_ N, R \_\_\_\_\_ E (or) W

Town or Municipality \_\_\_\_\_ Street Address \_\_\_\_\_

Lot No. \_\_\_\_\_, Block \_\_\_\_\_, Subdivision \_\_\_\_\_

Landowner's Name: \_\_\_\_\_

The application for this site is for:

new construction use.

replacement system use.

If this is NEW CONSTRUCTION USE, the alternative private sewage system is:

to have one of the first five approvals guaranteed for this year. This is number \_\_\_\_\_ of those applications. (Use one of the first five quota numbers issued to you.)

one of the applications needing a quota number. The quota number assigned to this application is \_\_\_\_\_.

for one additional homesite on a farm to be occupied by a parent, child, grandchild, sibling, niece, nephew, or first cousin.

for an individual lot for which a sanitary permit was issued but was later ruled unsuitable due to new or changed soil criteria established by the department.

for an application on file prior to February 1, 1980.

for a lot that meets the criteria for a conventional private sewage system.

If this is a REPLACEMENT SYSTEM USE, the alternative private sewage system is replacing:

a failing conventional soil absorption system.

a holding tank that was installed and in use prior to February 1, 1980.

a privy that was installed and in use prior to February 1, 1980.

If this is a REPLACEMENT SYSTEM USE and the lot meets the criteria for a conventional private sewage system, check here.

I certify that the above information is true and accurate to the best of my knowledge.

Name \_\_\_\_\_ Signature \_\_\_\_\_  
 (County Official)

Title \_\_\_\_\_ Date \_\_\_\_\_

DILHR-SBO-6158 (R 12/82)

## PRIVY INSTALLATION AGREEMENT

*NOTE: This document is to be recorded in the Tract Index at the office of the Register of Deeds in the county indicated below.*

**COPY TO BE ATTACHED TO PLB. 67 WHEN APPLYING FOR A SANITARY PERMIT**

PROPERTY OWNER:	MAILING ADDRESS:
LOCATION: <b>¼ ¼ S /T N/R E (or) W</b>	CITY, VILLAGE OR TOWNSHIP: COUNTY:

I (we) acknowledge the following privy installation conditions:

1. No plumbing will be installed on the premises. Plumbing means any piping, fixtures, equipment, devices or appurtenances in connection with water supplies, water distribution and drainage systems, including hot water storage tanks, water softeners and water heaters connected with such water and drainage systems.
2. The privy will not be erected within 50 feet of any well, stream or lake, 25 feet of a door or window of any building, 10 feet of the line of any street or public thoroughfare and 5 feet of a property line. Set backs not mentioned shall not be less than those shown in section H63.10(1), (Wis. Administrative Code).
3. The privy will not be installed on soils that do not have at least 3 feet of soil below the bottom of the proposed excavation that is free of periodic saturation or bedrock. Where these conditions cannot be met a vault constructed in accordance with section H63.18(6), Wisconsin Administrative Code will be used.
4. The soil condition has been verified by an appropriate county official or certified soil tester as signed here.
 

SIGNATURE AND TITLE:
5. The privy will be installed; (mark one)  over a soil pit  over a vault.
6. This agreement shall be binding on the owner(s) or heirs and assignees.

OWNER(S):	OWNER(S):
-----------	-----------

STATE OF WISCONSIN

Personally came before me this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, the above named \_\_\_\_\_

\_\_\_\_\_, to me known to be the persons who executed the foregoing instrument and acknowledged the same.

THIS INSTRUMENT DRAFTED BY:	NOTARY PUBLIC:	MY COMMISSION EXPIRES:
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Revised June 1999 NLS 00A



OPTIONAL WORKSHEET

I. MOUND SYSTEM

1. Wastewater Load, Total Daily Flow = \_\_\_\_\_ gal.  
Use section H 63.15 (1) (c), Wis. Adm. Code and PROVIDE A DETAILED LIST OF SIZING ON PLANS.
2. Depth to Limiting Factor = \_\_\_\_\_ ft.
3. Landslope = \_\_\_\_\_ %
4. Distance from Dose Chamber to Distribution System = \_\_\_\_\_ ft.
5. Elevation Difference Between Pump and Distribution System = \_\_\_\_\_ ft.
6. Absorption Area Sizing:  
Area Required = \_\_\_\_\_ sq. ft.  
Bed or Trench Length (B) = \_\_\_\_\_ ft.  
Bed or Trench Width (A) = \_\_\_\_\_ ft.  
Trench Spacing (C) = \_\_\_\_\_ ft.
7. Mound Height:  
Fill Depth (D) = \_\_\_\_\_ ft.  
Fill Depth Downslope (E) = \_\_\_\_\_ ft.  
Bed or Trench Depth (F) = \_\_\_\_\_ ft.  
Cap and Topsoil Depth (G) = \_\_\_\_\_ ft.  
Cap and Topsoil Depth (H) = \_\_\_\_\_ ft.
8. Mound Length:  
End Slope (K) = \_\_\_\_\_ ft.  
Total Mound Length (L) = \_\_\_\_\_ ft.
9. Mound Width:  
Upslope Correction Factor = \_\_\_\_\_ ft.  
Upslope Width (J) = \_\_\_\_\_ ft.  
Downslope Correction Factor = \_\_\_\_\_ ft.  
Downslope Width (I) = \_\_\_\_\_ ft.  
Total Mound Width (W) = \_\_\_\_\_ ft.
10. Basal Area:  
Infiltrative Capacity of Natural Soil = \_\_\_\_\_ gal./sq.ft./day  
Basal Area Required = \_\_\_\_\_ sq. ft.  
Basal Area Available = \_\_\_\_\_ sq. ft.
11. If standard Tables from Chapter H 63 are Used, Indicate Table No. \_\_\_\_\_
12. For the Distribution Network, Use Numbers 5-14 in Section II.

II. IN-GROUND PRESSURE SYSTEM

1. Depth to Limiting Factor = \_\_\_\_\_ ft.
2. Landslope = \_\_\_\_\_ %
3. Percolation Rate = \_\_\_\_\_ min./in.
4. Proposed System Elevation = \_\_\_\_\_ ft.
5. Wastewater Load, Total Daily Flow: Use section H 63.15 (1) (c), Wis. Adm. Code and PROVIDE A DETAILED LIST OF SIZING ON PLANS.  
Required Septic Tank Capacity = \_\_\_\_\_ gal.
6. Absorption Area Sizing:  
Percolation Rate = \_\_\_\_\_ min./in.  
Area Required = \_\_\_\_\_ sq. ft.  
System Length = \_\_\_\_\_ ft.  
System Width = \_\_\_\_\_ ft.
7. Distribution Pipe Sizing:  
Hole Size = \_\_\_\_\_ in.  
Hole Spacing - Lateral Length = \_\_\_\_\_ ft.  
Lateral Size = \_\_\_\_\_ in.  
Lateral Spacing = \_\_\_\_\_ ft.  
Distance from Sewerall to Pipe = \_\_\_\_\_ in.
8. Distribution Pipe Discharge Rate:  
Number of Holes Per Pipe = \_\_\_\_\_  
Flow Per Pipe = \_\_\_\_\_ gpm.
9. Manifold Sizing:  
Type (center in end) = \_\_\_\_\_  
Length = \_\_\_\_\_ ft.  
Diameter = \_\_\_\_\_ in.

III. IN-GROUND PRESSURE SYSTEM (continued)

10. Force Main:  
Minimum Dosing Rate = \_\_\_\_\_ gpm  
Diameter = \_\_\_\_\_ in.
11. Total Dynamic Head:  
System Head = \_\_\_\_\_ ft.  
Vertical Lift = \_\_\_\_\_ ft.  
Friction Loss = \_\_\_\_\_ ft.  
TDH = \_\_\_\_\_ ft.
12. Pump Selection:  
Pump will discharge at least \_\_\_\_\_ gpm  
Pump model and manufacturer = \_\_\_\_\_
13. Dose Volume:  
ft. Times Load Volume of Distribution Lines = \_\_\_\_\_ gal.  
Dose Wastewater Volume = \_\_\_\_\_ gal  
Doses in 24 hrs. = \_\_\_\_\_ gal  
Backflow = \_\_\_\_\_ gal  
Minimum Dose = \_\_\_\_\_ gal
14. Dose Chamber:  
Volume = \_\_\_\_\_ gal.

III. CONVENTIONAL PRIVATE SEWAGE SYSTEM

1. Wastewater Load, Total Daily Flow: Use section H 63.15 (1) (c), Wis. Adm. Code and PROVIDE DETAILED LIST OF SIZING ON PLANS.  
Required Septic Tank Capacity = \_\_\_\_\_ gal.
2. Percolation Rate = \_\_\_\_\_ min./in.
3. Absorption Area Sizing:  
Refer to Table 2 in chapter H 63 and PROVIDE A DETAILED LIST OF SIZING ON PLANS.  
Required Area = \_\_\_\_\_ sq. ft.  
Length = \_\_\_\_\_ ft.  
Width = \_\_\_\_\_ ft.  
Number of Trenches = \_\_\_\_\_  
Trench Spacing = \_\_\_\_\_ ft.
5. Distribution System:  
Lateral Length = \_\_\_\_\_ ft.  
Number of Laterals = \_\_\_\_\_  
Lateral Spacing = \_\_\_\_\_ in.  
Distance from Sewerall to Pipe = \_\_\_\_\_ in.  
System Elevation = \_\_\_\_\_ ft.

IV. SYSTEM-IN-FILL

Fill in All Items from Section III

V. SEPTIC TANK

1. Capacity = \_\_\_\_\_ gal.
2. Manufacturer: \_\_\_\_\_
3. Show Site Constructed Tank Details on Plan

VI. DOSING TANK

1. Capacity = \_\_\_\_\_ gal.
2. Manufacturer: \_\_\_\_\_
3. Pump Manufacturer: \_\_\_\_\_
5. Pump Model: \_\_\_\_\_
6. Operating Head = \_\_\_\_\_ ft.
7. Flow Rate = \_\_\_\_\_ gpm.
7. Show Site Constructed Tank Details on Plans

VII. BOILING TANK

1. Capacity = \_\_\_\_\_ gal.
2. Manufacturer: \_\_\_\_\_
1. Show Site Constructed Tank Details on Plans

—SHOW ALL INFORMATION ON PLANS—



**PRIVATE SEWAGE SYSTEMS  
PLAN APPROVAL APPLICATION**

STATE OF WISCONSIN DILHR  
DIVISION OF SAFETY & BUILDINGS  
BUREAU OF PLUMBING  
201 E. Washington Avenue, Rm 178  
P.O. Box 7969, Madison, WI 53707  
608-266-3815

**INSTRUCTIONS:** Please fill in all applicable data and submit this form with plans. Plans will not be reviewed until all fees are received. The back side of this form describes required plan information. Plumbing codes can be purchased from the Department of Administration, Document Sales, 202 South Thornton Ave., Madison, Wisconsin 53703, Telephone (608) 266-3358.

<b>1. PROJECT INFORMATION (Type or print clearly)</b>				Revision To Plan Number: _____	
Name of Submitting Party (Plans returned to same)				Project Name	
Street & No. or Rural Route				Project Location - Street & No. or Legal Description	
City or Village	State	Zip	City Village <input type="checkbox"/> DF Town <input type="checkbox"/>	County	
Telephone No. (Include area code)					
Designer		Telephone No. (Include area code)		Owners Name	
Street & No.		Telephone No. (Include area code)		Street & No.	
City or Village	State	Zip	City or Village	State	Zip

**2. APPLICATION FOR:**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Conventional System — Public Building (1) | <input type="checkbox"/> New Mound System (3a)       | <input type="checkbox"/> Holding Tank (2)              |
| <input type="checkbox"/> Replacement Pressurized System (4b)       | <input type="checkbox"/> Replacement Mound (4a)      | <input type="checkbox"/> Petition For Modification (6) |
| <input type="checkbox"/> New Pressurized System (3b)               | <input type="checkbox"/> System in Fill (1f)         | <input type="checkbox"/> Other Alternatives (5)        |
|  | <input type="checkbox"/> System in Flood Fringe (1f) |  |
|  | <input type="checkbox"/> Groundwater Monitoring (7)  |  |

**3. FEE COMPUTATIONS (Include existing tanks)**

MAKE ALL CHECKS PAYABLE TO DILHR

3a. 750 - 1,500 gallon septic tank	— 30.00
3b. 1,501 - 2,500 gallon septic tank	— 40.00
3c. 2,501 - 4,000 gallon septic tank	— 55.00
3d. 4,001 - 8,000 gallon septic tank	— 70.00
3e. 8,001 - 12,000 gallon septic tank	— 85.00
3f. Over 12,000 gallon septic tank	— 100.00

3g. 500 - 1,000 gallon dose chamber	— 30.00
3h. 1,001 - 2,000 gallon dose chamber	— 35.00
3i. 2,001 - 4,000 gallon dose chamber	— 50.00
3j. 4,001 - 8,000 gallon dose chamber	— 65.00
3k. 8,001 - 12,000 gallon dose chamber	— 80.00
3l. Over 12,000 gallon dose chamber	— 95.00

3m. 500 - 5,000 gallon holding tank	— 30.00
3n. 5,001 - 10,000 gallon holding tank	— 40.00
3o. Over 10,000 gallon holding tank	— 50.00

3p. Groundwater Monitoring Per Lot (other than a proposed subdivision)	— 32.00
3q. Priority plan review: (walk through) Submittal of plans in person, by appointment, with double fee	
3r. Petition for Modification	
Setback	— 20.00
Site evaluation	— 60.00

**4. FEE SUBMITTED**

**FOR OFFICE USE**

4a. _____	_____
4b. _____	_____
4c. _____	_____
4d. _____	_____
4e. _____	_____
4f. _____	_____
4g. _____	_____
4h. _____	_____
4i. _____	_____
4j. _____	_____
4k. _____	_____
4l. _____	_____
4m. _____	_____
4n. _____	_____
4o. _____	_____
4p. _____	_____
Subtotal	_____
4q. _____	_____
4r. _____	_____
Total Fee	_____

DILHR-SBD-6748 (R. 02/83)

NOTE: Fees subject to change on July 1, annually.

—OVER

The following information is required for plan review. An index page or each page of the plans must be signed, sealed and dated by the designer.

#### 5. MOUNDS & IN-GROUND PRESSURE DISTRIBUTION SYSTEMS

- 5a. Application for Use of an Alternative System (DILHR-SBD-6413) signed by owner and notarized.
- 5b. County ordinance.
- 5c. Verification form signed by county (DILHR-SBD-6158).
- 5d. 115 photocopy.
- 5e. Plot plan showing lot size and all lateral distances from the system to buildings, wells, watercourses, etc. Show permanent reference points. Direction and percent of slope or two foot contours must be included. Provide system elevation for in-ground pressure, show area for replacement if for new construction. (TWO COPIES).
- 5f. Plan view of system with observation pipes and permanent lateral markers (TWO COPIES).
- 5g. System cross section (TWO COPIES).
- 5h. Pipe lateral layout (TWO COPIES).
- 5i. Construction detail of septic tank if site-constructed, or manufacturer if prefabricated (TWO COPIES).
- 5j. Dosing Chamber cross section with construction details if site-constructed (TWO COPIES).
- 5k. Pump or siphon model, performance curve, total dynamic head calculations and minimum dose volume (TWO COPIES)
- 5l. If the site is suitable for a conventional private sewage system, items a and b from this section are not required.

#### 6. CONVENTIONAL PRIVATE SEWAGE SYSTEMS

- 6a. Photocopy of soil test (115) by CST, including data for replacement system, if new construction.
- 6b. Project Detail Data Sheet providing all sizing information (TWO COPIES).
- 6c. Plot plan showing location of septic tank, soil absorption system and replacement area. Indicate lateral distances to any buildings, well, water courses, lot lines, etc. The plot plan must also show the location of permanent horizontal and vertical reference points (benchmark). Also indicate ground slope with 2 foot contours in entire area, extending 25 feet on all sides of initial and replacement systems. (TWO COPIES).
- 6d. Plan view of soil absorption system showing all dimensions, pipe lengths, spacing, etc. (TWO COPIES).
- 6e. Cross section of soil absorption system showing system elevation, aggregate, cover material, depths, etc. (TWO COPIES).
- 6f. Construction detail of septic tank if site-constructed, or manufacturer if prefabricated (TWO COPIES).
- 6g. Detail of lift pump tank or automatic siphon, tank size, pump, gallons per cycle, vertical lift, friction loss, etc. (TWO COPIES).

#### 7. HOLDING TANKS

- 7a. Photocopy of soil test (115) by CST. A full evaluation must be made to eliminate the possibility of any other system being installed.
- 7b. Agreement document between owner and local unit of government, notarized and recorded in reference to the deed. This agreement must include a statement about the quarterly pumping report.
- 7c. Plot plan showing location of holding tank with lateral distances to any buildings, well, water service piping, water courses, lot lines, etc. Provide horizontal and vertical reference points. Include all weather service road within ten feet of the service port. (TWO COPIES).
- 7d. Holding tank profile showing vent, manhole, alarm and manufacturer if prefabricated. Complete construction details if site-constructed, (TWO COPIES).
- 7e. Project Detail Data Sheet providing all sizing information (TWO COPIES). This is not required for residential installations where the number of bedrooms is indicated on the plans.

#### 8. SYSTEMS IN FILL

- 8a. Systems in fill must include an on-site investigation form (DILHR-SBD-6196), as well as all of the appropriate items listed in sections 6.

#### 9. GROUNDWATER MONITORING

- 9a. 115 photocopy (TWO COPIES)
- 9b. Groundwater Monitoring Report (DILHR-SBD-6412) (TWO COPIES).
- 9c. Verification of data and procedures from county (TWO COPIES).
- 9d. Precipitation data

#### 10. PETITION FOR MODIFICATION

- 10a. Private Sewage Petition for Modification Form (DILHR-SBD-6689).

STATE OF WISCONSIN  
 DILHR-DIVISION OF SAFETY & BUILDINGS  
 BUREAU OF PLUMBING  
 P.O. BOX 7368  
 MADISON, WISCONSIN 53707



WISCONSIN PRIVATE SEWAGE SYSTEM  
 COUNTY AUDIT  
 SECTION 145.19 (b), WISCONSIN STATUTES

CALENDAR YEAR 1982

I. ORDINANCE & PERSONNEL

1. County Ordinance Adopted? YES NO
2. Ordinance - Complies H 63? YES NO
3. Changes to Ordinance Since Approval? YES NO
4. County Participates in the Wisconsin Fund? YES NO
  - a. No. of Orders Issued \_\_\_\_\_
  - b. No. of Grants Applied For \_\_\_\_\_
  - c. No. of Grants Approved \_\_\_\_\_
  - d. No. of Systems Installed \_\_\_\_\_
  - e. No. of Maintenance Reports Required \_\_\_\_\_
  - f. No. of Maintenance Reports Filled \_\_\_\_\_
  - g. No. of Orders or Enforcement Actions Against Non-Filers \_\_\_\_\_
  - h. Total Dollar Value of Grants \_\_\_\_\_
5. Total Number of Staff \_\_\_\_\_
6. No. of Certified Inspectors \_\_\_\_\_
7. No. of Certified Soil Testers
  - a. CST Co. Employee? YES NO
  - b. Name and Reg. No. of CST(s) \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - c. CST on Contract? YES NO  
Name and Reg. No. of CST(s) \_\_\_\_\_
  - d. Contract Available for Review? YES NO

II. PERMITS

1. No. of Sanitary Permits Issued Jan. 1, 1982 through Dec. 31, 1982 \_\_\_\_\_
2. No. of Permits New Construction \_\_\_\_\_
3. No. of Permits State Facilities \_\_\_\_\_
4. No. of Permits Replacement (SAS) \_\_\_\_\_
5. No. of Permits Replacement (Tank Only) \_\_\_\_\_
6. No. of Permits for Repair \_\_\_\_\_
7. No. of Permits Transferred \_\_\_\_\_
8. No. of Permit Renewals \_\_\_\_\_
9. No. of Permits Submitted to the Department \_\_\_\_\_
10. No. of Permits Rescinded \_\_\_\_\_
11. No. of Permit Applications Rejected on Review \_\_\_\_\_

III. SYSTEM INSTALLATIONS & INSPECTION

- |  |     |                  |
|--|-----|------------------|
|  | NEW | REPLACE-<br>MENT |
|--|-----|------------------|
1. No. of Systems Installed in Following Categories:
    - A. Conventional Gravity Type \_\_\_\_\_
    2. Inground Pressure \_\_\_\_\_
    - B. Alternate System
      1. Mound \_\_\_\_\_
      2. Inground Pressure \_\_\_\_\_
      3. Other \_\_\_\_\_
    - C. Holding Tanks \_\_\_\_\_
    - D. Privies \_\_\_\_\_
    - E. Repaired/Altered \_\_\_\_\_
    - F. Replacement Tanks \_\_\_\_\_
  2. No. of Systems Inspected
    - a. Was Every System Inspected Prior to Backfill? YES NO
  3. No. of Construction Inspections
    - a. NEW \_\_\_\_\_
    - b. Replacement \_\_\_\_\_
    - c. Repaired/Altered \_\_\_\_\_
  4. No. of Failing System Inspections (Specify in Summary) \_\_\_\_\_
  5. Other Inspections (Specify in Summary) \_\_\_\_\_
  6. Total No. of Inspections \_\_\_\_\_

IV. ENFORCEMENT ACTIONS

1. Construction Directives and Orders
  - a. No. of Field Directives \_\_\_\_\_
  - b. No. of Directives Complied With \_\_\_\_\_
  - c. No. of Orders Issued (After Directive) \_\_\_\_\_
  - d. No. of Orders Complied With \_\_\_\_\_
  - e. No. of Orders Taken to Corp Counsel/DA \_\_\_\_\_
  - f. No. of Orders Enforced \_\_\_\_\_
2. Failing System Inspections
  - a. No. of Failing System Insp. \_\_\_\_\_
  - b. No. of Failing Systems Replaced w/O Orders \_\_\_\_\_
  - c. No. of Orders for Replacement \_\_\_\_\_
  - d. No. of Systems Not Replaced After Orders \_\_\_\_\_
  - e. No. of Orders Taken to DA/Corp Counsel \_\_\_\_\_
  - f. Orders Enforced by DA/Corp Counsel \_\_\_\_\_

DILHR-88D-6461(R. 5/82)

V. COUNTY ADMINISTRATION

1. Building Permits Required by the County? YES NO
2. Land Use or Zoning Permit Issued by the County? YES NO
  - a. No. of Towns Requiring Building Permits \_\_\_\_\_ of \_\_\_\_\_
  - b. No. of Villages Requiring Building Permits \_\_\_\_\_ of \_\_\_\_\_
  - c. No. of Cities Requiring Building Permits \_\_\_\_\_ of \_\_\_\_\_
3. County Filing System:
  - a. No. of Soil Test Reports Filled With County \_\_\_\_\_
  - b. 1. Does the County Review All Soil Test Reports? YES NO
  2. No. of (115) Soil Reports Verified in the Field \_\_\_\_\_
  - c. 115 - Soil Tests Accepted Are Completed Properly: vg - g - f - p - vp \_\_\_\_\_
  - d. Does the County Review All Plans for 1 & 2 Fam. Dwellings? YES NO
  - e. Does the County Have an Effective Filing System For:
    1. 115's Before Permit Issuance? YES NO
    2. Plans Before Construction? YES NO
    3. Plans After Construction? YES NO
  - f. PLB 67's Accepted are Completed Properly?: vg - g - f - p - vp \_\_\_\_\_
4. No. of Written Notices of Sanitary Permit Rejection \_\_\_\_\_
5. Budget
  - a. Revenue From Sanitary Permit Issuance \_\_\_\_\_
  - b. Revenue From State Aids \_\_\_\_\_
  - c. Revenue From Inspection Fees \_\_\_\_\_
  - d. County Program Self Supporting or Tax Funded \_\_\_\_\_
  - \_\_\_\_\_ % GPR \_\_\_\_\_ % PRO
  - TOTAL BUDGET \_\_\_\_\_
- e. Fee for County Sanitary Permit \_\_\_\_\_
  1. Fee if different for Alternate Systems \_\_\_\_\_
  2. Fee if different for Holding Tanks \_\_\_\_\_
  3. Fee if different for Replacement Tanks \_\_\_\_\_
  4. Fee for Inspection \_\_\_\_\_
  5. Fee for Wisconsin Fund \_\_\_\_\_
  6. Fee for Transfer \_\_\_\_\_
  7. Fee for Plan Exam \_\_\_\_\_
  8. Fee for Privy \_\_\_\_\_
  9. Fee for Renewal \_\_\_\_\_
  10. Fee for Revision \_\_\_\_\_

VI. RANDOM FIELD REVIEW

1. Random Review in the Field 5 Systems Installed Where Permits Were Issued During Calendar Year 19d. Attach Summary.
    - a. % of Random Reviews Installed as Shown on Plans \_\_\_\_\_
  2. Review a Random Sample of Alternative Systems Installed During the Calendar Year. Randomly Select 10% or 5 Systems, whichever is Greater, or All of the Alternates if Less than 5 were Installed.
    - a. % of Random Alternates Installed as Shown on Plans \_\_\_\_\_
- VII. ON-SITE WASTE SPECIALIST USE ONLY
1. No. of Orders/Directives Issued by OWS This County \_\_\_\_\_
  2. No. of Soil Onsites by OWS This Co. \_\_\_\_\_
  3. No. of Filling System Inspections by OWS This County \_\_\_\_\_
  4. No. of Construction Inspections by OWS This County \_\_\_\_\_
  5. No. of Seminars by OWS This County \_\_\_\_\_
  6. No. of Persons Attending Seminars \_\_\_\_\_
- VIII. DILHR USE ONLY
1. No. of Sanitary Permits Received \_\_\_\_\_
  2. No. of Sanitary Permits Sent to Co. \_\_\_\_\_
  - From No. \_\_\_\_\_ To No. \_\_\_\_\_
  - TOTAL \* \_\_\_\_\_
  5. Receipts Total Dollars \$ \_\_\_\_\_
  6. Aid to County Distributed \$ \_\_\_\_\_
  7. Wisconsin Fund Monies to County \$ \_\_\_\_\_

HEALTH AND SOCIAL SERVICES

291

ILHR 83 Appendix



Department of Industry, Labor and Human Relations
Division of Safety & Buildings
Bureau of Plumbing
P.O. Box 7969
Madison, WI 53707
Tel. (608) 266-3815

IN ALL CORRESPONDENCE
REFER TO PLAN
IDENTIFICATION NO.

NAME OF PROJECT

- PRIVATE SEWAGE ONLY -
GENERAL PLUMBING PLANS

LOCATION

Fee Received:
Priority Plan Review Only

CITY OR TOWN

COUNTY

Examination of plumbing plans and specifications for this project has been completed. In accord with Chapter 195, Wisconsin Statutes and the Wisconsin Administrative Code, the plumbing plans and specifications are approved contingent upon compliance with the stipulations shown on the plans. Please review your code for the requirements of each code section noted.

The licensed plumber responsible for this installation shall keep at the construction site one set of plans bearing the department's stamp of approval. The installer shall also notify the appropriate inspector of when required inspections are to be made.

In the event installation has not begun within two years from this date, approval will be void and new plan approval shall be obtained before work may begin.

In granting this approval, the Division of Safety and Buildings does not hold itself liable for any defects in plans or specifications, plan omissions or examination oversight, and reserves the right to order changes or additions if necessary.

This approval is based on Wisconsin Administrative Code requirements. It shall be necessary to obtain and fulfill the permit requirements of the city, village, township or county in which this installation is to be made. Failure to obtain local permits will automatically void this approval.

Sincerely,

James Sargeant
James Sargeant
Bureau Director

PLANS REVIEWED BY:

DATE:

cc: DPS - OWS
Local PI
County

Owner
Plumber
Other

H & R & Rec. San. Section
Bur. of Health Fac. & Services

DILHR SBD-6099 (R. 05/82)

Petition for Modification of an Administrative Rule <b>PRIVATE SEWAGE</b>	WISCONSIN DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS DIVISION OF SAFETY & BUILDINGS P.O. BOX 7969, MADISON, WI 53707	OFFICE USE ONLY Filing No. _____ ID No. _____
	Name of Owner _____ Building Occupancy or Use _____ Agent, Architect or Engineering Firm or Master Plumber _____	

Name of Owner _____ Building Occupancy or Use _____ Agent, Architect or Engineering Firm or Master Plumber _____	Tenant Name, if any _____	Street & No. _____ City _____ State & Zip _____
Company _____ Street & No. _____ City _____ State & Zip _____	Building Location, Street & No. _____ City _____ County _____	Street & No. _____ City _____ State & Zip _____
Phone _____	Plan Numbers (if known) _____	Phone _____

Type of Petition _____ Fee \$ _____	<input checked="" type="checkbox"/> Set Backs (Soil Absorption and Septic Systems)	<input type="checkbox"/> Experimental and Loading Rates	<input type="checkbox"/> Site Evaluations
--	--	---	---

**LEGAL DESCRIPTION**

\_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 Section \_\_\_\_\_ T \_\_\_\_\_ N, R \_\_\_\_\_ E (or) W, Township \_\_\_\_\_  
 Subdivision Name \_\_\_\_\_ County \_\_\_\_\_

**WISCONSIN ADMINISTRATIVE RULE BEING PETITIONED**

- Rule \_\_\_\_\_ of the Wisconsin Administrative code cannot be entirely satisfied due to the following reasons:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- In lieu of complying exactly with the rule, the following alternative is proposed as a means of providing an equivalent degree of safety or health:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- Supporting arguments (For site evaluations, include Form 115—"Report on Soil Boring and Perforation Tests"):  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

THIS FORM IS TO BE FILLED OUT BY THE PETITIONER AND IS TO BE SUBMITTED TO THE COUNTY CLERK OF THE COUNTY IN WHICH THE PROPERTY IS LOCATED.

<b>DETAILED PLAN OR DRAWING</b>					
TO BE COMPLETED BY THE PETITIONER AT THE TIME OF FILING THIS PETITION.					
I, _____, of the County of _____, State of Wisconsin, do hereby certify that the following described property is now owned by _____ and that the same is subject to the provisions of Chapter _____, Wisconsin Statutes, and that I am the owner of the same.					
COUNTY PERSONNEL AUTHORIZATION <input type="checkbox"/> Rule _____ being petitioned <input type="checkbox"/>					
On-site inspection conducted (date) _____					
I, _____, indicate the information recorded on this request form is accurate and correct to the best of my knowledge and belief.					
<b>VERIFICATION BY OWNER—PETITION IS VALID ONLY IF NOTARIZED.</b> FOR INFORMATION CONTACT THE DEPARTMENT AT (608) 266-3815.					
_____ being duly sworn, says he is petitioner herein, thus he has read the foregoing petition and that the same is true, as he verily believes.					
Subscribed and sworn to me this _____ day of 19____,					
				_____ County, Wisconsin. Signature of owner,	
				_____ Notary Public	
My commission expires: _____					
<b>OFFICE USE ONLY</b>					
<b>SITE EVALUATIONS</b>			<b>DEPARTMENT ACTION</b>		
Date Received	Amount Paid	Receipt No.	Date Received	Amount Paid	Receipt No.
Department Action			Department Action		
ADMINISTRATOR			BUREAU DIRECTOR OR DESIGNEE		
Date			Date		



NOTE: This document is to be recorded in the Tract Index at the office of the Register of Deeds in the county indicated below.

CANCELLATION OF A HOLDING TANK AGREEMENT

As the sanitary permit issuing agent in the county stated below, I hereby certify that the following described property is now served by either a public sewer or a septic tank — soil absorption system that complies with ch. H 63, Wis. Adm. Code.

In addition, I understand that execution and recording of this document cancels a holding tank agreement between the \_\_\_\_\_ and \_\_\_\_\_ that was recorded on the \_\_\_\_ day of \_\_\_\_\_, 19\_\_ in volume \_\_\_\_\_, page \_\_\_\_ as document number \_\_\_\_\_.

Witness my hand and seal this \_\_\_\_ day of \_\_\_\_\_, 19\_\_.  
County of \_\_\_\_\_  
by \_\_\_\_\_ (include title)

STATE OF WISCONSIN

Personally came before me this \_\_\_\_ day of \_\_\_\_\_, 19\_\_.  
the above named \_\_\_\_\_,  
to me known to be the person who executed the foregoing instrument and acknowledged the same.

THIS INSTRUMENT  
DRAFTED BY:

\_\_\_\_\_  
NOTARY PUBLIC

MY COMMISSION EXPIRES:  
\_\_\_\_\_

**DESIGN OF PRESSURE DISTRIBUTION NETWORKS  
FOR SOIL ABSORPTION FIELDS**

To obtain uniform application of wastewater effluent over the entire infiltrative surface of a soil absorption field, pressure distribution systems are required. Section H 63.14 specifies the design criteria for pressure distribution systems. They are designed by balancing the headlosses such that the volume of water passing out each hole in the network will be equal. This is achieved by allowing 75 to 85 percent of the total headloss in the network to be lost when the water passes through the hole while only 10 to 15 percent of the total headloss occurs in delivering the water to each hole.

Since the design can become quite tedious, a simplified method has been developed by the use of the tables and nomographs in s. 63.14. With this method, only a straight edge and pencil is needed to complete the design. To demonstrate the use of the tables and nomographs, this example is given.

**Example:**

Design a pressure system for a soil absorption system consisting of 5 trenches, each 3 feet wide by 40 feet long. The trenches are to be spaced 9 feet on center.

- Step 1:** Select the desired distribution pipe length from the dimensions of the required soil absorption area. Two layouts would be suitable for this system. The distribution pipes in each trench may be fed by a manifold along one end of the trenches or by a central manifold. In the first design, 5 distribution pipes are used, each 40 feet long. In the second design, there are 8 distribution pipes, each 20 feet long. The first design will be used in this example.
- Step 2:** Select an appropriate distribution pipe diameter compatible with the chosen hole diameter and hole spacing from Table 5.

Holes in  $\frac{1}{4}$ -in diameter spaced every 2.5 feet will be used in this example, though other combinations would be just as suitable: From Table 5, either a  $1\frac{1}{4}$ -in or  $1\frac{1}{2}$ -in distribution pipe is required for a 40 foot distribution pipe. Select the larger  $1\frac{1}{2}$ -in diameter distribution pipe.

- Step 3:** Determine the total discharge rate of each distribution pipe and the number of holes required by using the nomograph in Table 6.

Place a straight edge on the nomograph in Table 6 aligning the 40 foot mark on the Distribution Pipe Length scale with the 2.5 ft mark on the Hole Spacing scale. Where the straight edge crosses the Number of Holes scale, read off the number of holes per distribution pipe; 16 in this example. To obtain the distribution pipe discharge rate, realign the straight edge to join the 16 mark on the Number of Holes scale with the  $\frac{1}{4}$ -in mark on the Hole Diameter scale. Where the straight edge crosses the Distribution Pipe Discharge scale, the discharge rate is given. In this example, it is nearly 20 gpm as shown.

- Step 4:** Select the appropriate manifold size based on the number, length and discharge rate of the distribution pipes from Table 7. For central manifold designs use the lower column headings and left

row headings. For end manifold designs, use the lower column headings and the right row headings. (If necessary, repeat steps 1 through 4 until an acceptable network is laid out.)

The manifold length is that length of pipe required to connect all the distribution pipes downstream from the manifold inlet. In this example, the inlet to the manifold is to be at one end. There are to be 5 distribution pipes spaced 9 feet apart requiring a manifold 36 feet long. Since an end manifold design is to be used, the flow per distribution pipe of 20 gpm (from step 3) is read on the right side of Table 7; the number of 5 read on the bottom under the manifold length at 35 feet. In this design, a 3-in manifold is sufficient (See Table 7.) (If the inlet had been in the center of the manifold, the manifold length would have been 18 feet serving 2 distribution pipes. In that case, the manifold could be 2-in diameter.)

**Step 5:** Determine the minimum dose volume required based on the total pipe volume from the nomograph in Table 11.

On the nomograph in Table 11, the straight edge is placed on 1½-in mark on the Distribution Pipe Diameter scale (from step 2), and the 40 mark on the Distribution Pipe Length scale. The volume of the distribution pipe is read off the Pipe Volume scale. In this example, it is approximately 3.7 gal. Next, turn the straight edge maintaining the point on the Pipe Volume scale and align it with 5 on the Number of Distribution Pipes scale. The minimum dose volume read off the Dose Volume scale is approximately 200 gal. However, the final dose volume selected may be larger than this minimum depending on the desired number of doses per day. (See s. ILHR 83.14 (6), Wis. Adm. Code).

**Step 6:** Determine the minimum pump or siphon discharge rate from the nomograph in Table 8.

Using the nomograph in Table 8, the dosage rate is read from the Dosing Rate scale by aligning the straight edge with 20 gpm on the Distribution Pipe Discharge Rate scale (step 3) with 5 on the Number of Distribution Pipes scale. The minimum rate is 100 gpm.

**Step 7:** Select the proper pump or siphon from the head-discharge characteristics described by the manufacturers.

The total dynamic head of the network must first be computed. For a pump system, this is equal to the elevation differences between the pump and the distribution pipe inverts, the friction loss in the pipe which delivers the liquid from the pump to the distribution system at the required rate, and 3 feet of head to compensate for losses in the distribution system. The pump able to pump the minimum discharge rate at the total dynamic head computed is selected.

Siphon selection is based on the manufacturer's stated average discharge rate. This rate is for free discharge. Therefore, to maintain this rate, the siphon discharge pipe invert must be elevated above the distribution pipe inverts a distance equal to the estimated distribution system. These losses included the friction loss in the delivery pipe from the siphon to the network at the minimum discharge rate determined in step 7 plus 3 feet of head

to compensate for losses within the distribution system. Where the delivery pipe is more than 50 feet long, its diameter should be one size larger than the siphon discharge diameter to facilitate air venting.

Assume the dosing tank is located 25 feet from the distribution system inlet, and the difference in elevation between the pump and the inverts of the distribution pipes is 5 feet. At a rate of 100 gpm the headloss in 100 feet of a 3-in plastic delivery pipe can be read from Table 9. Therefore, for 25 feet the headloss is 2.09 feet  $\times$  25 feet/100 ft = 0.52 ft. The total dynamic head of the system is 5 feet of elevation head plus 0.5 feet of friction head in the delivery pipe plus 3 feet of account for losses in the distribution system. Therefore, a pump should be selected which is able to pump at least 100 gpm against 8.5 feet of head.

If a siphon were used, its discharge invert would be elevated 0.5 feet plus 3 feet or a minimum of 3.5 feet above the distribution pipe inverts.

In summary, the final design consists of five 40 foot distribution pipes, each 1½-in. in diameter connected with a 3-in end manifold with the inlet from the dosing chamber at one end of the manifold. The inverts of the distribution pipes are perforated with ¼-in holes spaced every 2.5 feet. The first hole should be located one half of the hole spacing or 1.25 feet from the manifold. If the last hole is equal to or greater than half the hole spacing from the end of the distribution pipe, put another hole in the bottom of the cap or next to it.