11.0152.001
Sept 08

te Septic System Application

Becker County Planning & Zoning
835 Lake Ave, P O Box 787
Detroit Lakes, MN 56502-0787
Phone (218)-846-7314; Fax (218)-846-7266

RECEIVED
AUG 12 2008
ZONING

1. **PROPERTY DATA (as it appears on the tax statement, purchase agreement or deed)**
Parcel Number(s) of property where the system will be installed: 11.0152.001

Is this a split of an existing property? Yes No
(If yes and a parcel number has not yet been assigned, indicate the main parcel number from which the new parcel was split.)

Section 30 Township 138 Range 38 Township Name Evergreen

Lake Name Non Shoreland Lake Classification _____

Legal Description: S 1100' of E 400' of SE¼ SE¼

Project Address: 11100 Co Hwy 39

2. **PROPERTY OWNER INFORMATION (as it appears on the tax statement, purchase agreement or deed)**

Owner's First Name Dan Owner's Last Name Meyer

Mailing Address 11100 Co Hwy 39 City, State, Zip Frazee, Mn. 56544

Phone Number 346-7128

3. **DESIGNER/INSTALLER INFORMATION**

Designer Name Dan Wegscheid Company Name Blatton Howe. Inc. License # 166

Address P.O. Box 56 Blatton Mn. 56518 Phone Number 218-385-2701
cell 218-639-3731

Installer Name Dan Wegscheid Company Name Same License # 166

Address Same Phone Number 218-385-2701
cell 218-639-3731

4. **SYSTEM DESIGN INFORMATION**

Existing System Status?

_____ No existing system-new structure
_____ Cesspool/Seepage
_____ Failing (other than cesspool)
_____ Undersized
_____ Replacement or repair to existing
adding bedrooms

What will new system serve? Check one

X Dwelling
_____ Resort/Commercial
_____ Commercial (Non-resort)
_____ Other – explain below

8-8-08 Date of site evaluation

Design Flow 750 Gallons Per Day
Number of Bedrooms 5
Garbage Disposal ____ Yes ✓ No
Dishwasher ✓ Yes ____ No
Lift station in House ____ Yes ✓ No
Grinder pump in House ____ Yes ✓ No

Well Depth _____
Depth of other wells within 100 ft of system _____

Original Soil X Compacted Soil _____
Type of Soil Observation
____ Pit ____ Probe X Boring
Depth to Restricting Layer 5'
Maximum Depth of System 2'

Size of All Tanks to be installed
1000 gal Septic Tank
_____ gal Holding Tank
1000 gal Lift Station
_____ Other Tank
1000 Existing tank to be used - yes

Compartmented tank _____ Yes X No Multiple Tanks X Yes _____ No
Total Number of tanks to be installed in this system 2 (This # will be reported to MPCA at end of year.)

✓

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Septic OS

Type of Drainfield	Full Size of Drainfield	Reduced/Warrantied size	
____ Chamber Trench	____ sq ft	____ sq ft	Type of chamber ____
____ Rock Trench	____ sq ft	____ sq ft	Depth of Rock 12"
____ Gravelless	____ sq ft	____ sq ft	
____ Mound	____ sq ft ***		
X Pressure Bed	625 sq ft ***		Alarm? Yes X No ____
____ Seepage Bed	____ sq ft ***		Type of Alarm SJ Electro
____ At-grade	____ sq ft ***		Size of Lift Pump 4/10 Goulds
____ Alternative / Performance	____ sq ft ***	***Attach Worksheets	Size of Lift Line 2"

SETBACKS

	TANK	DRAINFIELD
Distance to Well	86'	180
Distance to Building	20'	42'
Distance to Property Line	100+	75'
Distance to OHW of Lake	—	—
Distance to Pressure Line	50+	200+
Distance to Wetland/Protected Water	—	—

Perc Rate ____ Soil Sizing Factor .83 *If SSF other than .83, attach Perc Test Data

Soil Borings (three are required)

Depth	Texture	Color	Structure		Depth	Texture	Color	Structure
0-4"	Black topsoil				0-6"	Black topsoil		
4-41"	sand	10YR 4/4			6"-44	sand	10YR 4/4	
41-60"	sand	10YR 5/4			44-60"	sand	10YR 5/4	

Depth	Texture	Color	Structure		Depth	Texture	Color	Structure
0-8"	Black Topsoil							
8"-47"	sand	10YR 4/4						
47-60"	sand	10YR 5/4						

5. **REQUIRED DOCUMENTS**

U of MN worksheets are required for mounds, pressure beds, seepage beds, at-grades or Type IV or Type V systems. Are the required worksheets attached? ____ Yes ____ No

6. **DESIGNER'S CERTIFIED STATEMENT**

I, Dan Wegscheid (Print Name of Designer) certify that I have completed the preceding design work in accordance with all applicable requirements (including, but not limited to Minnesota Chapter 7080 and the Becker County Individual Sewage Treatment System Ordinance).

Dan Wegscheid
Signature of Designer

8-8-08
Date

11.0152.001 Septic 08

********** FOR OFFICE USE ONLY **********

Application Approved by: David Stoll Date: 8/12/08

Amount Paid $100.00 Receipt Number 174042-398168 Permit Number 8/12/08

NOTES:

****

INSPECTION REPORT

Home Information

Does the structure contain any of the following elements?

Garbage disposer _____ Yes _____ No Dishwasher _____ Yes _____ No

Grinder pump _____ Yes _____ No Lift pump in basement _____ Yes _____ No

Effluent screen installed? _____ Yes _____ No Effluent screen manufacturer _____

Alarm required? _____ Yes _____ No Alarm Type _____ Alarm manufacturer _____

Lift pump in system? _____ Yes _____ No Pump manufacturer _____

Number of bedrooms _____

Component Information

Tank size 1000 gal Existing - 1000 & 1000 Litt Tank manufacturer _____

Drainfield size 12.5' x 50' 625 Sq. Ft.

Drainfield medium _____ Medium manufacturer _____

Drainfield medium size/depth _____

Soil Verification

Good Soils - All Sand

Vertical separation verified for Boring #1 on _____ Depth _____

Vertical separation verified for Boring #2 on _____ Depth _____

Vertical separation verified for Boring #3 on _____ Depth _____

David Stoll

Setback Verification

	TANK	DRAINFIELD
Distance to Well		
Distance to Building		
Distance to Property Line		
Distance to OHW of Lake		
Distance to Pressure Line		
Distance to Wetland/Protected Water		

O.K.

Date System Installed 8/21/08 **Installer** Degsteel Exc **Inspector** David Stoll

****

****

CERTIFICATE OF COMPLIANCE

( ) Certificate Is Hereby Denied

(X) Certificate is Hereby Granted Based upon the Application, addendum from, plans, specifications and all other supporting data. With property maintenance, this system can be expected to function satisfactory, however, this is not a guarantee.

David Stoll — Signature

ISTS inspector — Title

8/21/08 — Date

(Certificate of Compliance is not valid unless signed by a Registered Qualified Employee)

BECKER COUNTY

835 LAKE AVENUE, P.O. BOX 787
DETROIT LAKES, MINNESOTA 56502-0787
(218) 846-7314

Application No.
Tax Parcel No. 11.0152.001

Septic OS

SKETCH PLAN
FORM H

Please be as complete as possible. Include all of the items listed below where applicable.

GENERAL CHECKLIST

- [ ] scale
- [ ] north arrow
- [ ] lot dimensions
- [ ] structure location
- [ ] side lot setback
- [ ] road setback
- [ ] septic tank location
- [ ] drainfield location
- [ ] location of all wells within 100' of drainfield
- [ ] fill & grading limits
- [ ] vegetation alteration limits

WATER RESOURCE CHECKLIST

- [ ] location of ordinary high water level (OHWL)
- [ ] location of present water line
- [ ] setback from OHWL
- [ ] location of highest known water level
- [ ] existing local drainage
- [ ] location of wetland areas

Scale of Diagram: 1 inch = 40 feet

Drawing By: Dan Wegscheid

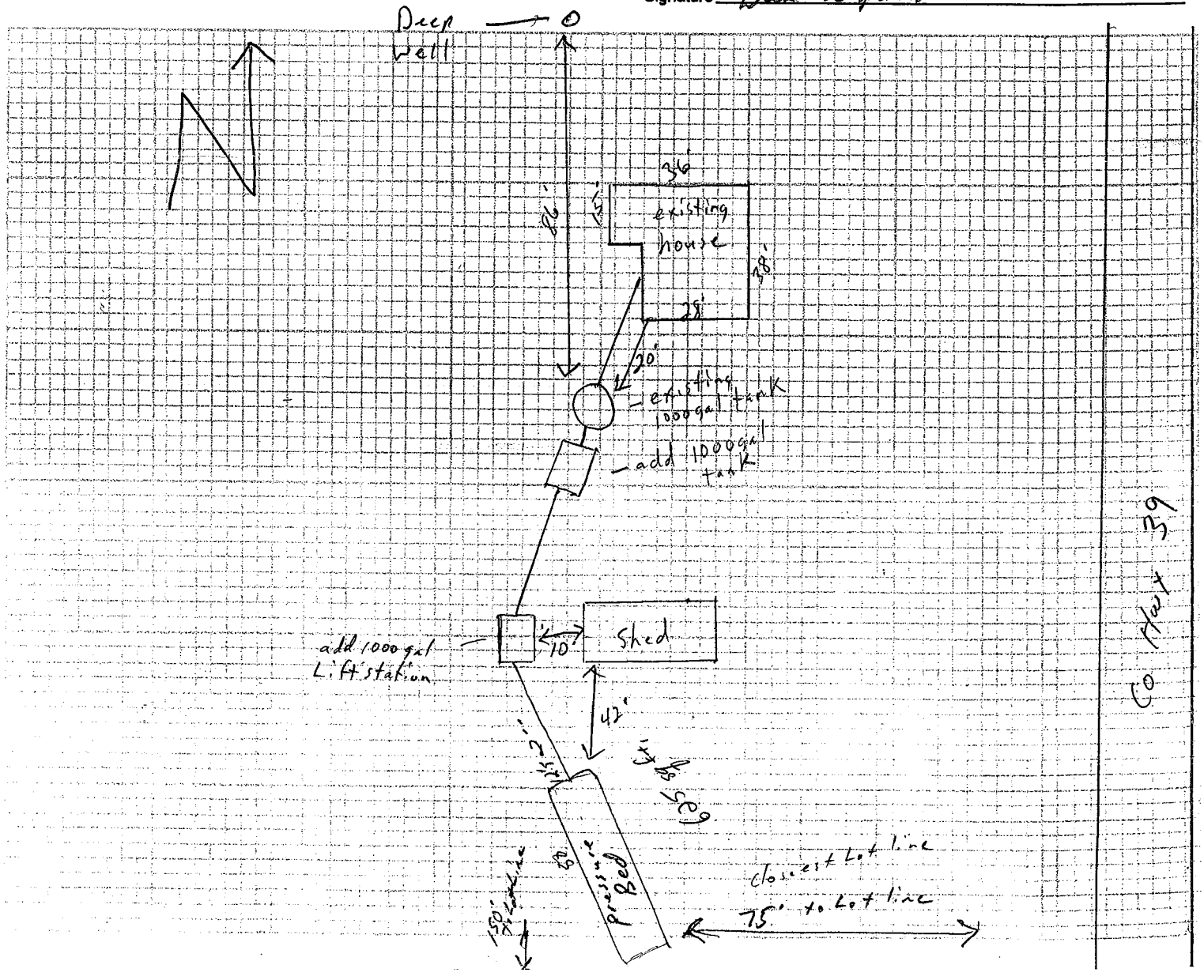
Date of Drawing: 8-8-08

Impervious surface coverage calculation

_____ ÷ _____
Impervious surface onsite Total Lot area ft²
= _____ x 100 = _____%
Total percentage of impervious coverage

Remarks: _____

Signature Dan Wegscheid



University of Minnesota Site Evaluation Form Trench / Bed

ONSITE SEWAGE TREATMENT PROGRAM

Property Owner(s) Dan Meyer Phone Number 346-7128

Address 11100 Co Hwy 39

P.I.D. _____ Section 30 Township 138 N Range 38

Date 8-8-08 Time 9:00 Weather conditions Fair

Location Information (check all that apply)
__ shoreland X dwelling __ replacement system
__ protection area __ other establishment __ new home construction

Homeowner Information

No. of bedrooms *(if applicable)* 5 bedrooms (includes possible additions)
No. of residents in home 2 adults 6 children
Estimated flow 750 gpd
Well casing depth deep feet

Water using devices *(check)* — Discharge location if checked
__ Garbage disposal X Water softener _____
X Dishwasher __ Sump pump _____
X Large bathtub __ High eff. furnace _____
X Laundry/large tub on 2nd floor __ Jucuzzi/hottub _____

Water use concerns *(check)*
__ Toilet/faucet leaks __ Max load laundry/day __ Long term prescription medications
__ Home business __ Lint screen __ Antibact. soap __ Frequent parties or out of town guests

Soil Data

Soil texture classification: Sand
Unnatural soil *(check)* __ Yes X No
Type of observation *(check)* __ Probe __ Pit X Boring
Parent material *(check)* X Till __ Outwash __ Loess __ Bedrock __ Alluvium
Vegetation type *(check)* __ Wet X Dry __ Unknown
Slope form *(check)* __ Summit __ Shoulder __ Back __ Foot __ Toe
Drainage *(check)* X Good __ Fair __ Poor __ Ponding __ Flooding
Located in floodplain *(check)* __ Yes X No

Site Summary Data

Standing water: NA inches
Bedrock: NA inches
Saturated soil: Below 5' inches
Maximum depth of system: 24 inches
Max elevation at system bottom: 2' feet
Soil sizing factor (SSF): .83 gpd/ft²
Linear loading rate (LLR): _____ gpd/ft
Was a perc test done ? __ Yes _____ mpi
X No

Soil Survey Data	Soil #1	Soil #2
Map unit sym & name		
Landscape position		
Flooding		
Slope		
Watertable depth		
Bedrock depth		
Possible system depth		
Texture at depth		
Permeability (P)		
Perc(MPI) = 60 / P		
NRCS onsite suitability		

Soil Boring Data

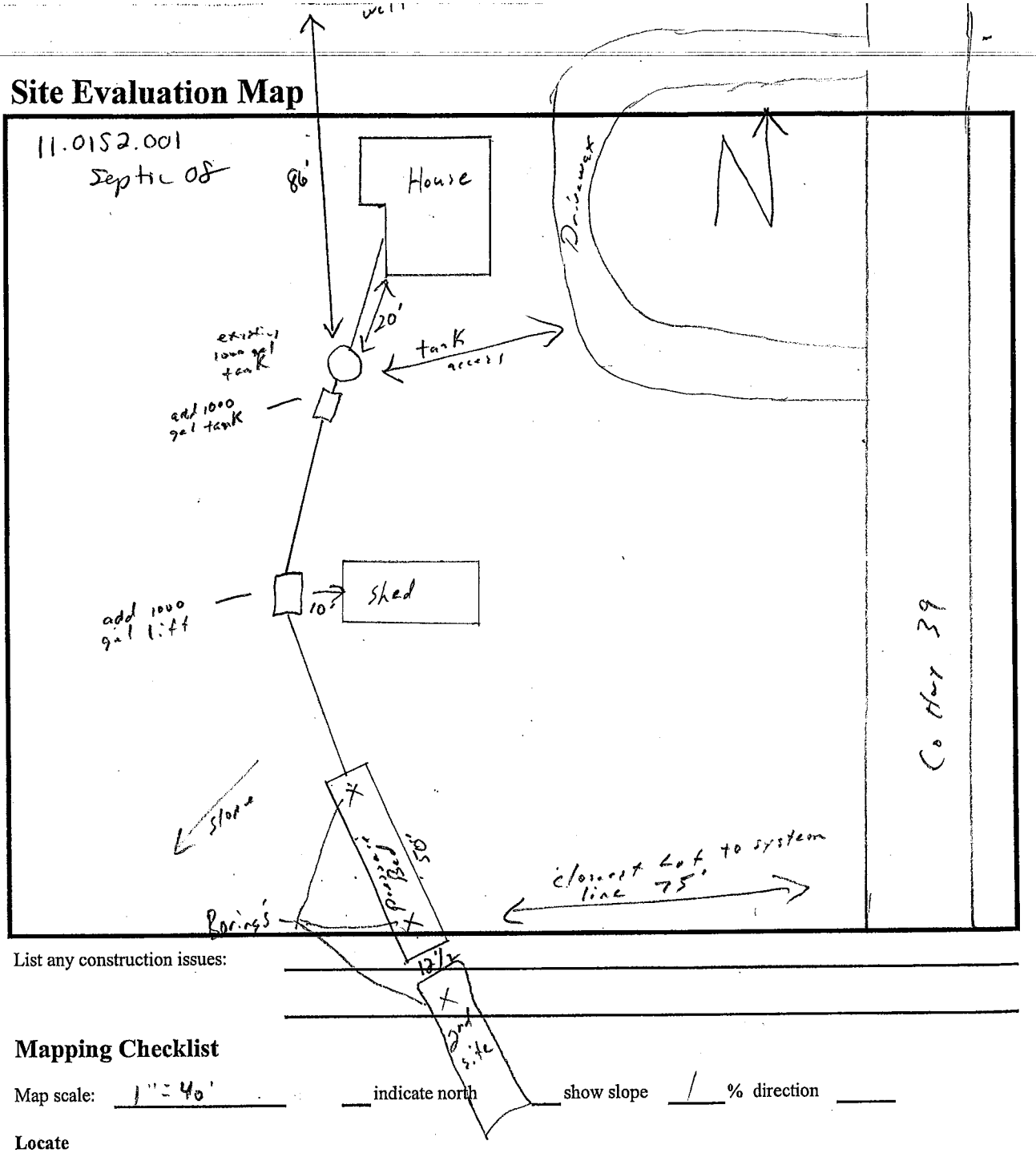
Boring 1 Elevation Location

Soil Horizons Depth (inches)	Texture	Color	Structure	Consistence
0-4"	Black topsoil			
4-41"	Sand	10YR 4/4		
41-100"	Sand	10YR 5/4		

Boring 2 Elevation Location

Soil Horizons Depth (inches)	Texture	Color	Structure	Consistence
0-6"	Black topsoil			
6"-47"	Sand	10YR 4/4		
47-60	Sand	10YR 5/4		

Site Evaluation Map



List any construction issues: _____

Mapping Checklist

Map scale: 1" = 40' ___ indicate north ___ show slope ___ % direction ___

Locate

- ___ lot dimensions/property lines
- ___ dwellings and other improvements
- ___ existing and/or proposed system(s)
- ___ replacement area
- ___ unsuitable area(s)
- ___ public water supply wells
- ___ pumping access
- ___ inner wellhead zone

Easements

- ___ phone
- ___ electric
- ___ gas

Elevations

- ___ borings
- ___ benchmark
- ___ perc tests
- ___ horiz&vert reference pts

Setbacks

- ___ building
- ___ all water wells within 100ft
- ___ pressure pipe
- ___ water suction pipe
- ___ streams, lakes, rivers
- ___ floodway and fringe

I hereby certify this work has been completed in accordance with all applicable ordinances, rules and laws.

Dan Wegdahl (signature) 8-8-08 (date)

166 (license #) 218-385-2701 (phone number)

cell 218-639-3731

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University of Minnesota Trench and Bed Worksheet

All boxed rectangles must be entered, the rest will be calculated.

ONSITE SEWAGE TREATMENT PROGRAM

1. **Flow**

A. Estimated Flow [750] gpd *(Fig. A-1)*

A-1 Estimated Sewage Flows in GPD				
Number of Bedrooms	Class I	II	III	IV
2	300	225	180	60% of the values in the Class I, II or II columns
3	450	300	218	
4	600	375	256	
5	750	450	294	
6	900	525	332	
7	1050	600	370	
8	1200	675	408	

2. **Minimum Septic Tank Capacity** 1500

B. Septic tank capacity *(Fig C-1)* [2000] gallons Number of tanks/compartments [2]

C. Effluent filter (yes/no) [no]

C-1 Minimum Septic Tank Capacity in Gallons			
Number of Bedrooms	Minimum Capacity	Capacity with GD*	Capacity with GD and pump in basement **
2 or less	750	1125	1500
3 or 4	1000	1500	2000
5 or 6	1500	2250	3000
7, 8 or 9	2000	3000	4000

* GD = garbage disposal, Must have multiple tanks or compartments

** Must have multiple tanks, compartments or effluent screen

Pump Tank Sizing
Minimum Capacity of 500 gallons or 100% Average Design Flow (A-1) or Dual alternating two-pumps system

3. **Pump Tank Specifications**

D. Pump tank needed (yes/no) [yes] Minimum size if needed 750 [1000] gallons

4. **SOILS** *(Site evaluation data)*

E. Depth to restricting layer = [5] ft

F. Maximum depth of system Item E - 3 ft = 5 - 3 = 2 ft

G. Texture [Sand] Percolation Rate *if available* [ ] mpi

H. SSF [.83] ft²/gpd (see figure D-15)

I. % Slope [1-2] %

D-15 Soil Characteristics & SSF			
		Soil Sizing Factors	
Perc Rate mpi	Soil Texture	Rock & Chamber ft²/gpd	Gravelless ft/gal/day
< 0.1 *	Coarse sand	0.83	--
0.1-5	Medium sand Loamy sand	0.83	0.28
0.1-5**	Fine sand	1.67	0.6
6 - 15	Sandy loam	1.27	0.42
16 - 30	Loam	1.67	0.56
31 - 45	Silt loam, silt	2.00	0.67
46 - 60	Clay loam, sandy clay or silty clay	2.20	0.74
61 - 120***	Clay, sandy or silty clay	4.20	--
>120****			

* No trench >25% of total system

** Soil with >50% fine sand particles

*** A mound must be used

**** An other or performance system

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5. **DISTRIBUTION** *(Check with a X all that apply)*

✓	Bed *(<6% slope)*		Drop Boxes	✓	Rock
	Trenches		Distribution Box *(<3% slope)*		Chamber
✓	Pressure		Gravity		Gravelless

6. **TRENCH OR BED BOTTOM AREA**
ROCK Media

J. For trenches with 6 inches of rock below the pipe:
A x H = 750 gpd x .83 ft/gpd = 623 ft²

K. For trenches with 12 inches of rock below the pipe:
A x H x 0.8= _____ gpd x _____ ft/gpd x 0.8 = _____ ft²

L. For trenches with 18 inches of rock below the pipe:
A x H x 0.66= _____ gpd x _____ ft/gpd x 0.66 = _____ ft²

M. For trenches with 24 inches of rock below the pipe:
A x H x 0.6= _____ gpd x _____ ft/gpd x 0.6 = _____ ft²

N. For gravity beds with 6 or 12 inches of rock below the pipe;
1.5 x A x H = 1.5 x _____ gpd x _____ ft/gpd = _____ ft²

O. For pressure beds with 6 or 12 inches of rock below the pipe;
A x H = 750 gpd x .83 ft/gpd = 623 ft²

P. If using 10" Gravelless Pipe, length = Flow (A) x H (Gravelless SSF (see figure D-15))
_____ gpd x _____ ft/gpd = _____ lineal feet

Q. If using a Chamber (J, K, L, M [based on height of chamber slats] divided by width of chamber in ft)
_____ ft² / _____ ft = _____ lineal feet

7. **Rock Sizing and Volume**
Trenches

R. Select width of trenches _____ ft
S. Depth of rock below pipe _____ ft
T. Divide bottom area by width: (J, K, L, M) divided by R = lineal feet
_____ ft² / _____ ft = _____ lineal feet

U. Rock depth below distribution pipe plus 0.5 foot times bottom area:
(Rock depth + 0.5 foot) x Area (J, K, L, M)
(_____ ft + 0.5 ft) x _____ ft² = _____ ft³
Volume in cubic yards = volume in cubic feet divided by 27
_____ / 27= _____ yd³
Weight of rock in tons = cubic yards times 1.4
_____ x 1.4= _____ tons
Add in 10% extra for constructability = 1.1 X _____ = _____ tons

Beds

V. Select width = _____ ft
W. Length = square footage from L or M / width = 0.0 / _____ = _____ ft
X. Depth of Rock = _____ ft
Y. Rock depth below distribution pipe plus 0.5 foot times bottom area:
(Rock depth + 0.5 foot) x Area (N or O)
(_____ ft + 0.5 ft) x = _____ ft³
Volume in cubic yards = volume in cubic feet divided by 27
625 / 27= 24 yd³
Weight of rock in tons = cubic yards times 1.4
_____ x 1.4= _____ tons
Add in 10% extra for constructability = 1.1 X _____ = _____ tons

8. **Layout**
Select an appropriate scale; one inch = 40 ft
Show pertinent property boundaries, rights-of-way, easements.
Show location of house, garage, driveway, and all other improvements, existing or proposed.
Show location and layout of sewage treatment system, well and dimensions of all elevations

I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.

Dan Wegscheid (signature) 166 (license #) 8-8-08 (date)

PERMIT MUST BE POSTED AT THE CONSTRUCTION SITE

Becker County Planning & Zoning
835 Lake Ave, P O Box 787
Detroit Lakes, MN 56502-0787
Phone (218)-846-7314; Fax (218)-846-7266

11.0152.001
site 00

Onsite Septic System Site Evaluation/Design Tax Parcel Number 11.0152.001 911 Address _____

Legal Description: S1100' of E400' of SE¼SE¼ Section 30 TWP 138 Range 38

Lake Name None Shore Lake Classification _____ Township Name EVERGREEN

Owner's Name Donald Ferguson Address 11100 Co Hwy 39

City Frazee MN State/Zip 56544 Phone Number 218-346-3007

Number of Bedrooms 2
Design Flow _____ GPD

Well Casing Depth _____
Depth of other Wells within 100 ft of system _____

Garbage Disposal (Yes) (No)
Grinder Pump/Lift Station In House (Yes) (No)

Type of Observation: Probe Pit (Boring)
Original Soil (Yes) (No) Compacted Soil (Yes) (No)
Depth to Restricting Layer _____
Maximum of Depth of System _____
Perc Rate _____ Soil Sizing Factor .83

Proposed Design
( ) Replace Septic Tank
(X) Septic Tank/Drainfield
( ) Drainfield Only
( ) Holding Tank
( ) Lift Station

Type of Drainfield
( ) Standard (gravelless/chamber)
(X) Standard (rock depth 9")
( ) Standard Bed
( ) Mound ( ) At Grade
( ) Pressurized Bed

SOIL BORING LOG

DEPTH (INCHES)	TEXTURE	COLOR & MUNSELL NO.	STRUCTURE
0-6	top Soil	Black 2/1 10YR	(BLOCKY) PLATY PRISMATIC NONE
6-72	SAND	Brown 6/6 10YR	BLOCKY PLATY PRISMATIC (NONE)
			(BLOCKY) PLATY PRISMATIC NONE
			BLOCKY PLATY PRISMATIC NONE

SOIL BORING LOG

DEPTH (INCHES)	TEXTURE	COLOR & MUNSELL NO.	STRUCTURE
0-6	top Soil	Black 2/1 10YR	(BLOCKY) PLATY PRISMATIC NONE
6-72	SAND	Brown 6/6 10YR	BLOCKY PLATY PRISMATIC (NONE)
			BLOCKY PLATY PRISMATIC NONE
			BLOCKY PLATY PRISMATIC NONE

Attach Perc Test Information If Required

Name and Address of Designer PETER ZOLKOWSKI BX312 Perham Phone 218-346-4688

MPCA Number 694 Date of Site Evaluation MAY-11-00 Signature of Designer Peter Zolkowski

Name of Installer (if different from Designer) _____ MPCA Number _____

FOR USE BY BECKER COUNTY ENVIRONMENTAL SERVICES DEPARTMENT ONLY

*** Any changes to the permit must first be approved by Becker County Planning & Zoning. No system shall be covered up without inspection by Becker County Planning & Zoning.

*** Inspections must be scheduled at least 24 hours prior to time requested.

Date Received 5/12/00 Application Fee 75.00 State Surcharge .50 Total 75.50

[ ] Application is hereby denied
[X] Application is hereby granted to D. Ferguson to install an individual septic system according to the specifications of the site evaluation and design submitted to the Becker County Environmental Services Office. By Order of:

Debi Mottge
Signature of Becker County Qualified Employee

5/12/00
Date Permit Issued

14659
Permit Number

This permit expires on 5/12/01

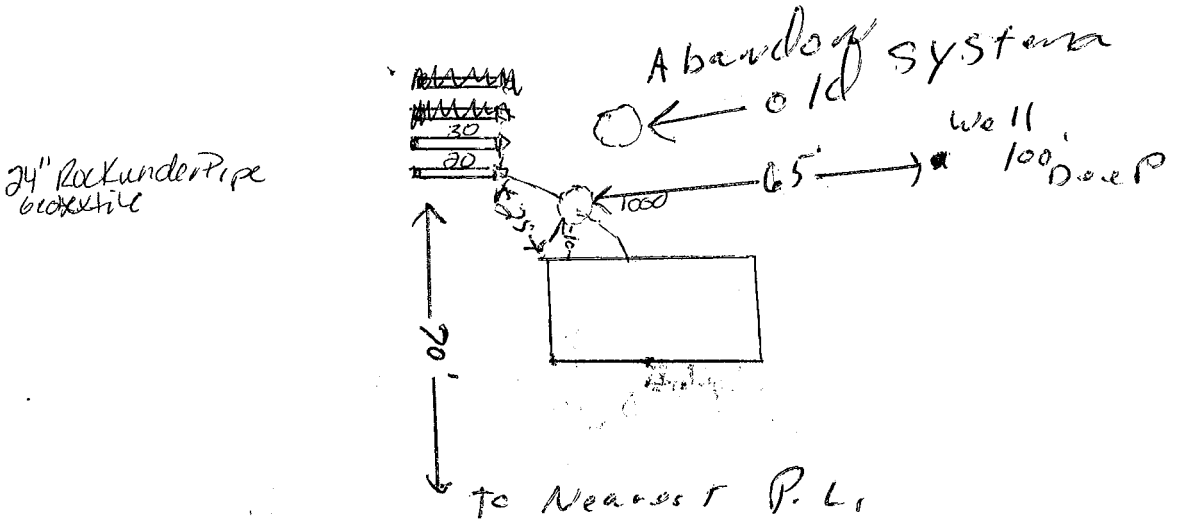
11.0152.001 Site 00

The site plan must be drawn to dimension or to scale:

*Dimensions of Lot
*Well & Water Line Locations within 100 ft of System
*Existing & Proposed Buildings
*Distance from Property Lines
*Distance from OHWM
*Easements & setbacks
*Tank Access Route
*Distance from buildings
*Scale - One inch = _____ ft
*Location of any Unsuitable Soil
*Soil Borings & Per Test Locations
*Alternate Drainfield Location

Two Feet of Rock 40% Reduction

Install 1,000 gal Tank
Drop BK System 4 Rock Trenches
13' long 2' Deep 3" wide = 260 sq feet of Drain Field



	Tank (estimated)	Tank (actual)	Drainfield (estimated)	Drainfield (actual)
Distances to Well		65		75
Distance to Building		10		25
Distance to Property Line		70+		70+
Distance to Pressure Line				
Distance to Ordinary High Water		N/A		N/A

Tank size 1000
Lift station size
Drainfield size 260 FT
Pump HP N/A
Date Installed 5-15-00

FOR USE BY BECKER COUNTY ENVIRONMENTAL SERVICES DEPARTMENT ONLY

CERTIFICATE OF COMPLIANCE

( ) Certificate Is Hereby Denied
(✓) Certificate is Hereby Granted Based upon the Application, addendum from, plans, specifications and all other supporting data. With property maintenance, this system can be expected to function satisfactory, however, this is not a guarantee.

Patricia John — Signature
Deputy S.A. — Title
5-16-00 — Date

(Certificate of Compliance is not valid unless signed by a Registered Qualified Employee)