Lincoln-Lancaster County Health Department
Environmental Public Health Division
3140 N Street • Lincoln NE 68510-1514
Phone: 402-441-8643

A

Permit Number HS001885

Onsite Wastewater Treatment System Permit Application

Include Form B and C. Submit correct fee with this Application

☐ Septic System ☐ Lagoon ☐ Other (Refer to Form C)

PLEASE PRINT OR TYPE

A. Onsite System Location

Address* 4300 N 176th St (no rural route) City Waverly, NE Zip 68527

Legal Description S12 T10 R8 Ershine 1
1/4 1/4 Section Township Range Subdivison Addition Block Lot

PID 23-12-101-001-000 *Approx. Address (If to be determined)

B. Owner

Name Kevin Ershine Signature

Address PO Box 22529 City/State/Zip Lincoln, NE 68542

Home Phone 402-416-6226 Work Phone

C. Certified Installer

Name: Marcus Hoekstra Signature

Address PO Box 142 City/State/Zip Eagle, NE 68347

Work Phone 402-750-7749

D. Engineer

☐ **Check and complete if engineer designed system** P.E. License Number:

Designer Name Firm Work Phone

E. This system will serve a

☐ Residential Dwelling Number of Bedrooms Whirlpool Bathtub? ☐ Yes ☐ No Total Acres 4.74
Garbage Grinder? ☐ Yes ☐ No

☑ Commercial Establishment/Other Facility Specify shop Design flow in gallons per day 100

Type of Wastewater ☐ Domestic ☐ Non-Domestic

DO NOT WRITE BELOW THIS LINE

Approval Process

1. Health Department
Site visits Date rec'd
Date frwd
Comments
ACTION ☐ Approved ☐ Disapproved
Signature

2. Supt. Bldg. Insp. or Village Clerk
Comments Date rec'd
Date frwd
ACTION ☐ Approved ☐ Disapproved
Signature

3. City or County Engineer
Comments Date rec'd
Date frwd
ACTION ☐ Approved ☐ Disapproved
Signature

Installation Final Written Approval
By
Date

Business Office Use Only
Date Received 9-06-19 Amount Paid $430.00
Received By SHO Cash/Check No. CC 1021

White - Health Department Yellow - Engineer Pink - Building & Safety

Form A Updated: 4/15

Lincoln-Lancaster County Health Department (LLCHD)
Environmental Public Health Division
3131 "O" Street • Lincoln, NE 68510-1514
Phone: 402-441-8643

B

Permit Number:

Onsite Wastewater Treatment System
Soil Evaluation Report

PLEASE PRINT OR TYPE

Onsite System Location

Address 4300 N 176th St. (no rural route) City Waverly NE, Zip 68527

Owner Travis Erskine Address PO Box 22529, Lincoln, NE 68542

Date of Tests 9-5-19 to 9-5-19 Weather: Precipitation 0 Temperature 89°F

Percolation Test Data Table

A.	B.	C. D. E. F. Saturation/Swelling Time				G. H. I. J. K. Water Level Drop Last 30 mins of 4 hr or last 10 mins of 1 hr					L. M. N. Results		
		Start		End		Start			End				
Hole No.	Hole Depth(in)	Date (Mo/Da)	Time (Hr/Min)	Date (Mo/Da)	Time (Hr/Min)	Date (Mo/Da)	Time (Hr/Min)	Initial Water Lev (in.)	Date (Mo/Da)	Time (Hr/Min)	Elapsed Time Interval	Water Level Drop(in)	Percolation Rates (Min/in = mpi)
1	40	9-5	8:00	9-5	12:00	9-5	3:30	6	9-5	4:00	30m	5/8	48
2	"	"	"	"	"	"	"	6	"	"	"	1/2	60
3	"	"	"	"	"	"	"	6	"	"	"	1/2	60
4	"	"	"	"	"	"	"	6	"	"	"	3/4	40
								6					
								6					
								6					
								6					

Person Conducting Percolation Test

Name: Marcus Hackbart
Phone: 402-730-7749
Address PO Box 142
Eagle, NE 68347

Sum of Percolation Rates: 208
Average of Rates: 52
Rate Used for Calculation: 52

Soil type (NRCS Maps/Other) Aksarben silty clay loam
Groundwater Depth 140

DO NOT WRITE BELOW THIS LINE

Reviewing Action

Comments (Soil type, groundwater, floodplain, etc.)

Signature of Reviewing Official Date

CONDUCTING A PERCOLATION TEST

READ THOROUGHLY

DIAGRAM OF PERCOLATION TEST PROCEDURE

Natural Ground Level

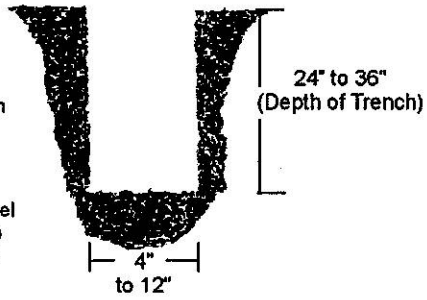
I. Number, Size and Location of Test Holes

A. Dig six or more holes spaced evenly over proposed drainfield.

B. Scratch smeared areas on the bottom 12" of hole.

C. Remove loose material from hole.

D. Add 2" layer of clean gravel in hole. Gravel (1/4"-3/4") may be placed in a nylon mesh bag so it can be used again.



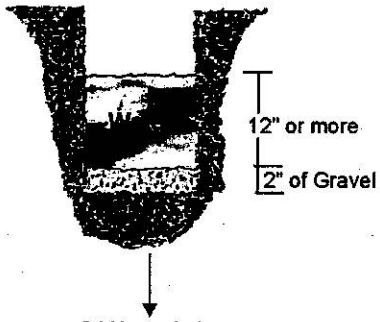
II. Saturation/Swelling of Soil

A. Fill hole with at least 12" of clear water.

B. **MAINTAIN THIS WATER LEVEL FOR 4 HOURS.**

C. Record on Form B, Columns A to F

D. **Must wait 24 hours before beginning Step III.**



24 Hours Later

III. Water Level Drop Measurement (Refer to instructions 4a, b or c)

A. Adjust water level to 6".

B. Measure from fixed reference point (nail) to water, or use a percometer.

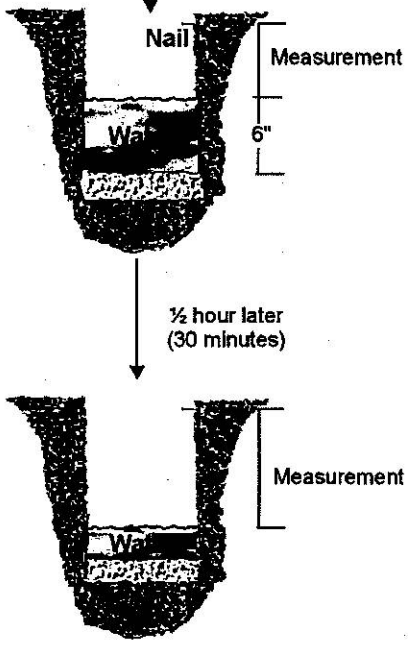
C. Record measurement and time on scratch paper.

D. 30 min. later re-measure and record time.

E. After each measurement, refill to 6" above gravel.

F. Continue for 4 hours taking readings evey 30 min. (Refer to 4b for exception)

G. Last 30 min. reading is used in filing out Form B. Record in Column G through M.



IV. The Department will calculate Percolation Rates.

Instructions

1. Percolation test holes. Percolation tests should be made in 6 or more separate holes spaced uniformly over proposed drainfield. Dig or bore holes 4 to 12" in diameter to the depth of the bottom of drainfield trench. (If sides of hole collapse, a slotted PVC plastic pipe and gravel pack may be needed to support the sides of the hole.) Do not dig holes in soil that is above the plastic limit or where frost is within 12" from the bottom of hole.
2. Preparation of test hole. Scratch any smeared areas on the bottom 12" of hole with nails driven into a 1x2" board to provide a natural soil interface for water to percolate. Remove all loose soil from bottom of hole. Add 2" of clean gravel to protect the bottom from scouring when water is put into hole.
3. Saturation and swelling of the soil. Fill holes with clear water to a depth fo 12" or more above gravel and maintain this water level at least 4 hours (add water as necessary). Do not remove water from holes. Holes should be covered with boards during the 20 hrs. wait before the test begins. Soils with slow permeability or containing greater than 30% clay will require several days saturation for thorough swelling in a dry season. The accuracy of the percolation test depends on thorough saturation and swelling of soil. Sandy soil containing no clay does not swell. The percolation test may proceed immediately if the 12" of water seeps away in 10 min. or less after filling holes twice. Proceed to Step 4c.
4. Measure percolation rate. Measurements must be made 24 hrs after starting saturation/swelling procedure described above. Record results on the front of this form and the Department will complete the calculations.

   a. If water remains in hole after the saturation/ swelling period, adjust depth to 6" above gravel. From a fixed point, measure the drop in water level over a 30 min. period to nearest 1/8". This drop is used to calculate percolation rate.

   b. If no water remains in hole after the saturation/ swelling period, add 6" of clear water above gravel. From a fixed point, measure the drop in water level to nearest 1/8" at 30 min. intervals for 4 hrs. Refill to the 6" level above gravel after each measurement. The drop that occurs during the last 30 min. of the 4 hrs. is used to calculate the percolation rate (when 3 consecutive percolation rates vary by no more than 10%, the test can stop before the end of 4 hr. period).

   c. In sandy soils, or other soils in which t he first 6" of water seeps away in less than 30 min., allow 10 min. between measurements and run the test for 1 hr. The drop that occurs during the last 10 min. of 1 hour is used to calculate the percolation rate. If 6" of water seeps away in less than 10 min., use a stopwatch.
5. Record test results on the front of this form. The average of the percolation rates calculated for all holes in 30 (10) min. will usually be the rate used to size the drainfield. Exceptions are the use of the slowest percolation rate when rates vary more than 20 mpi between holes or when other soil evaluation indicates a problem.

LLCHD reserves the right to witness or perform percolation tests and to required additional soil or groundwater information.

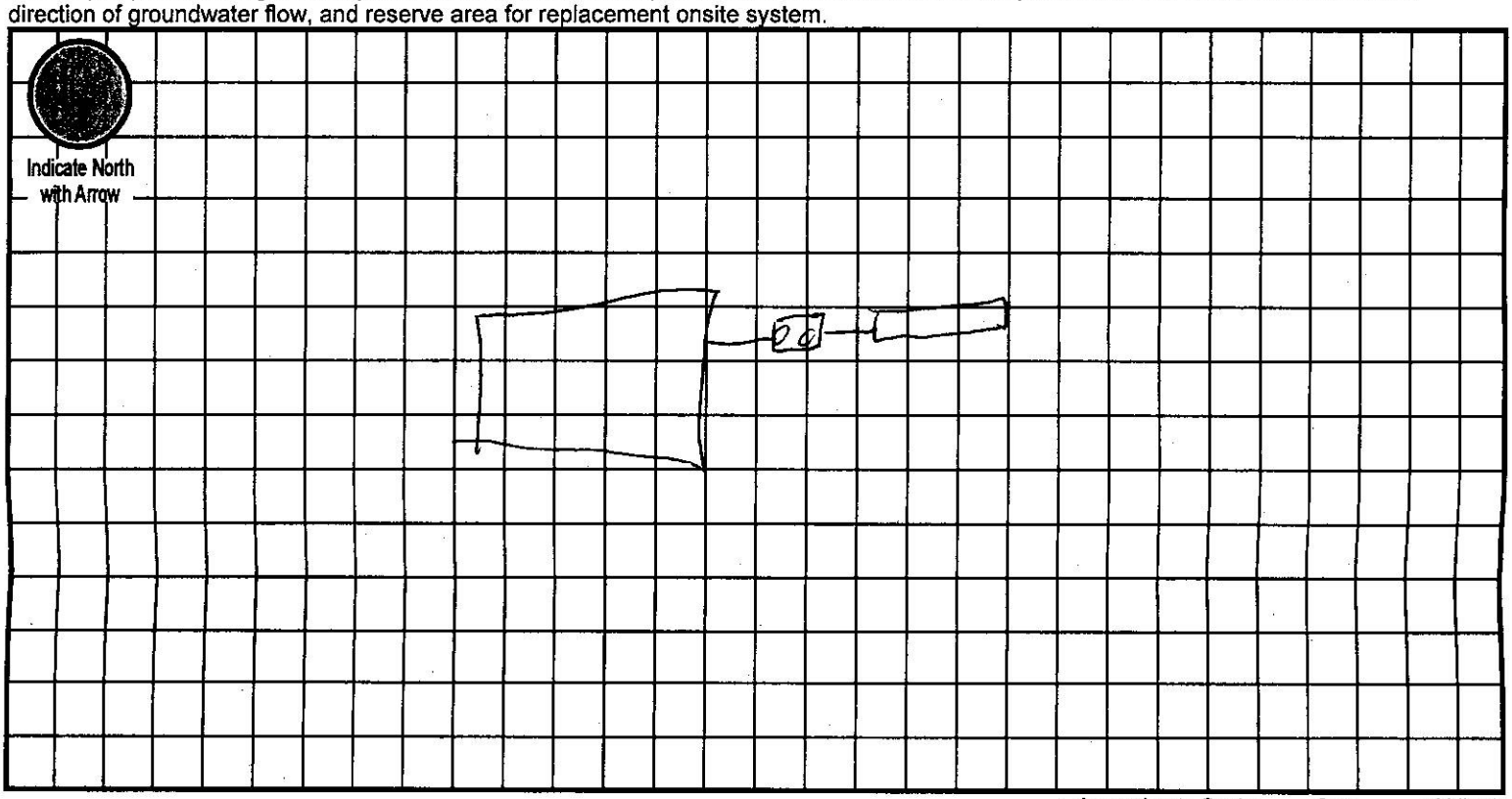
Lincoln-Lancaster County Health Department
Environmental Public Health Division
3131 O Street ♦ Lincoln NE 68510-1514
Phone: 402-441-8643

C

Permit Number

Onsite Wastewater Treatment System
Preliminary Plan Specification

Draw a plot plan showing onsite system sewer lines, tank, drop or distribution boxes, drainfields, percolation test holes, well, residence, direction of groundwater flow, and reserve area for replacement onsite system.



Approximate Scale:____ft. = ____grid line/s

A. Onsite System Location

Address (no rural route) 4300 N 176th St City Waverly NE, Zip 68527

B. Proposed Septic Tank/s

Septic Tank Cap. 1000 gals Tank Material: ☑ Concrete ☐ Plastic ☐ Other _____ ☐ Lagoon (Max. Seepage 1/8"/day)

C. Reserve Area for Replacement Onsite System

☑ Drainfield Absorption Area (percolation test required) ☐ Lagoon

D. Drainfield Absorption System

Percolation Rate 52 (min/inch = mpi) No. of Bedrooms_____ Soil Type Aksarben Silty clay loam Land Slope 0-1 %

☑ Trench ☐ Bed ☐ Non-standard (engineer-designed and NDEQ approved) Total square feet of drainfield 180 Sq. Ft.

Total length of laterals 40 Type of Distribution: ☐ Perforated Pipe ☐ Half-Round ☐ Chambers ☑ Other EZ Flow

No. of Absorption Trenches 1 Width 36 No. of Drop Boxes 0 Distribution Box 0

No. of Absorption Beds _____ Width _____ No. of Distribution Lines per Bed _____

Installer Marcus Hochstein Date: 9-5-19

Lincoln-Lancaster County Health Department
Environmental Public Health Division
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A

Permit Number HS001885

Onsite Wastewater Treatment System Permit Application

Include Form B and C. Submit correct fee with this Application

☐ Septic System ☐ Lagoon ☐ Other (Refer to Form C)

PLEASE PRINT OR TYPE

A. Onsite System Location

Address* 11300 N 176th St (no rural route) City Waverly, NE Zip 68527

Legal Description S12 T10 R8 Ershine 1
1/4 1/4 Section Township Range Subdivison Addition Block Lot

PID 23-12-101-001-000 *Approx. Address (If to be determined)

B. Owner

Name Kevin Ershine Signature

Address PO Box 22529 City/State/Zip Lincoln, NE 68542

Home Phone 402-416-6226 Work Phone

C. Certified Installer

Name: Marcus Hockett Signature

Address PO Box 142 City/State/Zip Eagle, NE 68347

Work Phone 402-750-7749

D. Engineer

☐ **Check and complete if engineer designed system** P.E. License Number:

Designer Name Firm Work Phone

E. This system will serve a

☐ Residential Dwelling Number of Bedrooms Whirlpool Bathtub? ☐ Yes ☐ No Total Acres 4.74
Garbage Grinder? ☐ Yes ☐ No

☑ Commercial Establishment/Other Facility Specify shop Design flow in gallons per day 100

Type of Wastewater ☐ Domestic ☐ Non-Domestic

DO NOT WRITE BELOW THIS LINE

Approval Process

1. Health Department
Site visits 9/23/19
Comments
Date rec'd 9/9/19
Date frwd 9/9/19
ACTION ☑ Approved ☐ Disapproved
Signature

2. Supt. Bldg. Insp. or Village Clerk
Comments
Date rec'd
Date frwd
ACTION ☐ Approved ☐ Disapproved
Signature

3. City or County Engineer
Comments
Date rec'd
Date frwd
ACTION ☐ Approved ☐ Disapproved
Signature

Installation Final Written Approval
By Doug Mrnak
Date 9/27/19

Business Office Use Only
Date Received 9-06-19 Amount Paid $430.00
Received By SHO Cash/Check No. CC 1021

White - Health Department Yellow - Engineer Pink - Building & Safety

Lancaster County Health Department
Environmental Public Health Division
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Phone: 402-441-8643

Exhibit 5

Permit Number: HS001885

Onsite Wastewater Treatment System

Inspection Sheet

Date 9/27/19 Legal Description Evkstnie Lot 1

¼ ¼ Section/Township/Range

Onsite System Location

Address (no rural route) 4300 N 176th City

Owner Address

Mark One: ☐ Dwelling ☒ Non-dwelling

☒ New System ☐ Alteration [☐ Tank Only ☐ Trench Only] ☐ Lateral Only

☐ Temporary modification (Describe problem causing discharge and reason for temporary modification):

Drainfield Absorption System: Shop only

☒ Lateral ☐ Bed ☐ Non-standard (engineer-designed and NDEQ approved) ☐ Holding Tank ☐ Trench

Total square feet of drainfield 180 Sq. Ft. Tank Size 1000 gals

Total length of laterals 40' Type of Distribution: ☐ Chamber ☐ Perforated Pipe ☐ Other (describe) E-Z Flow

No. of Absorption Laterals 1 Width 4.5 factor No. of Drop Boxes Distribution Box 1

Leveling Method Used Laser

Setbacks (Check the Boxes Below if the Required Setback has been Satisfied):

Distance From	Private Well	Public Well	Surface Water	Ground water	Pressure Water Lines	Property Lines
Tank (ft)	50 ☐	500 ☐	50 ☐	NA ☐	10 ☐	5 ☐
Field (ft)	100 ☐	500 ☐	50 ☐	4 ☐	25 ☐	5 ☐

Tank installed spring 2019. Lateral installed in fall

Geographical Coordinates to 6 Decimals:

Tank

Lateral #1 N/A Lateral #3

Lateral #2 Lateral #4

Comments:

Inspections prior to Final Approval

Initial DC Date 9/27/19

Follow-Up Date

Follow-Up Date

Installation Final Written Approval By Doug Arnold

Date 9/27/19

Field Note Drawing (See Reverse Side):

Updated 4/15