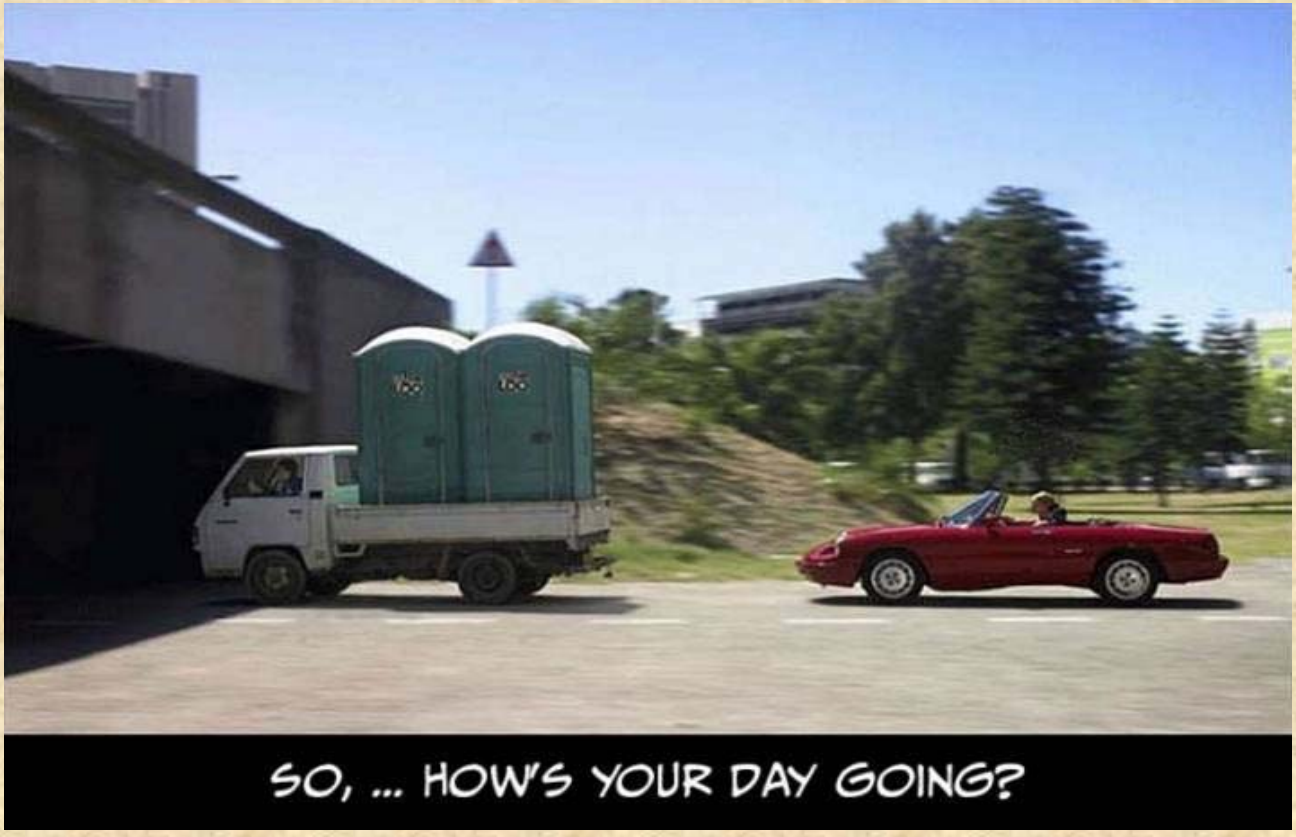
Welcome to the
Basic Subsurface Wastewater Disposal System Installation



Introduction

Voluntary Contractor Certification

All septic system installers are eligible for the program. Initial certification requires attendance at a basic installers training course and the submission to the Division of copies of the first pages of the designs for two systems installed.

To maintain certification a minimum of 6 hours continuing education course each five years thereafter will be required.

A listing of Certified installers shall be maintained by the Division of Environmental Health. Copies of the list are distributed to all Local Plumbing Inspectors and Site Evaluators and to anyone from the general public requesting it. The list is also posted on the Division of Environmental Health's web site.

SITE EVALUATION PROCESS

Maine Department of Health &
Human Services

SITE EVALUATION PROCESS

Section 800.3 Dig Safe Law

The "Dig Safe Law" 23 MRSA §3360-A(D) places certain notification requirements on any person doing excavations, including any operation in which earth, rock or other material on or below the ground is moved or otherwise displaced by means of power tools, power equipment or explosives, except tilling of the soil and gardening or agricultural purposes.

SITE EVALUATION PROCESS

Site Evaluation Process

The physical characteristics of a parcel of land must be fully evaluated in order to design a safe and effective disposal system. Each site has its own unique characteristics and limitations which must be observed and considered in the design.

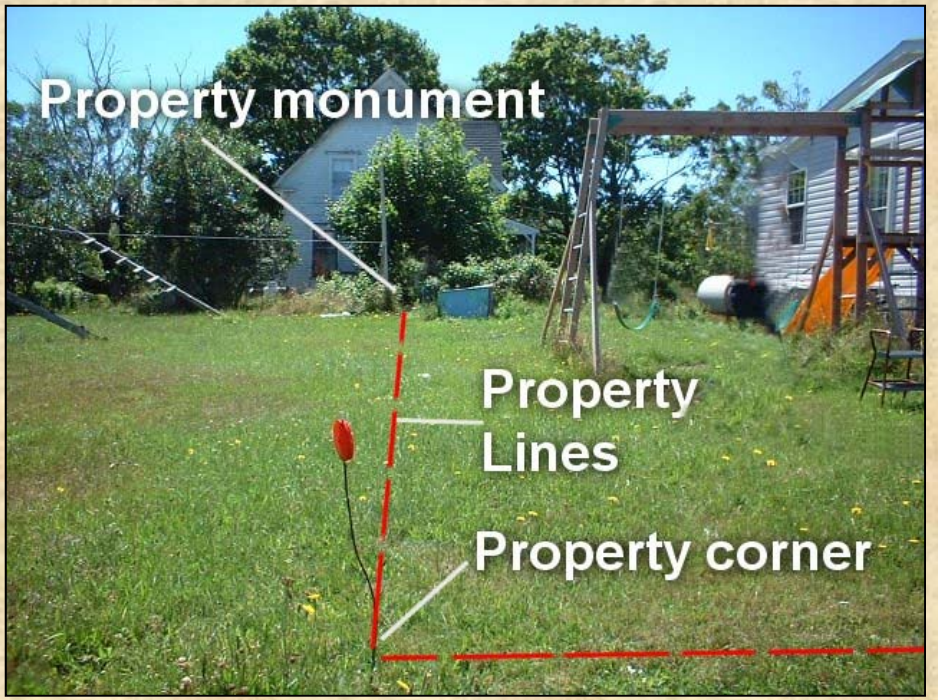
Observations of the surrounding land and development are just as important as viewing the particular parcel of land under consideration.

SITE EVALUATION PROCESS

Site Evaluation Process

Sometimes the applicant has a preference to where the system is to be placed if the soil conditions are accommodating. First considerations should be given to the desired locations if at all possible.

This site's potential locations for a replacement disposal area are limited by adjacent development and a small lot size.



SITE EVALUATION PROCESS

Site Evaluation Process

Existing ground slope beneath the disposal field shall not exceed 20 percent (20 feet in 100 feet). The disposal field is defined as the area under the stone bed or proprietary devices only.

SITE EVALUATION PROCESS

Setback Requirements

Waterbody setbacks

Major water body – 100 ft.

Minor water body - 50 ft.

Drainage ditch – 25 ft.

Toe of fill to wetlands - 25 ft.

SITE EVALUATION PROCESS

Setback Requirements

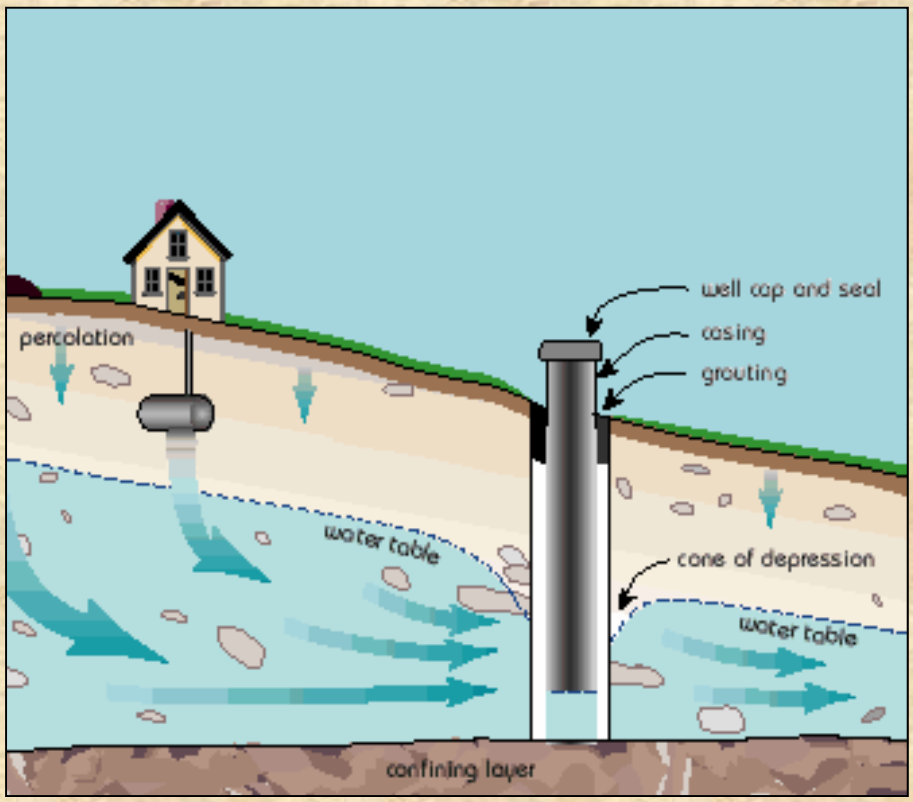
Well setbacks (without variances)

Owner's well – 100 ft.

Abutter's well – 100 ft.

Public supply well – 300 ft.

Water line (not main) – 10 ft.



Subsurface Wastewater Disposal Rules

Setback Requirements

Structures and property lines:

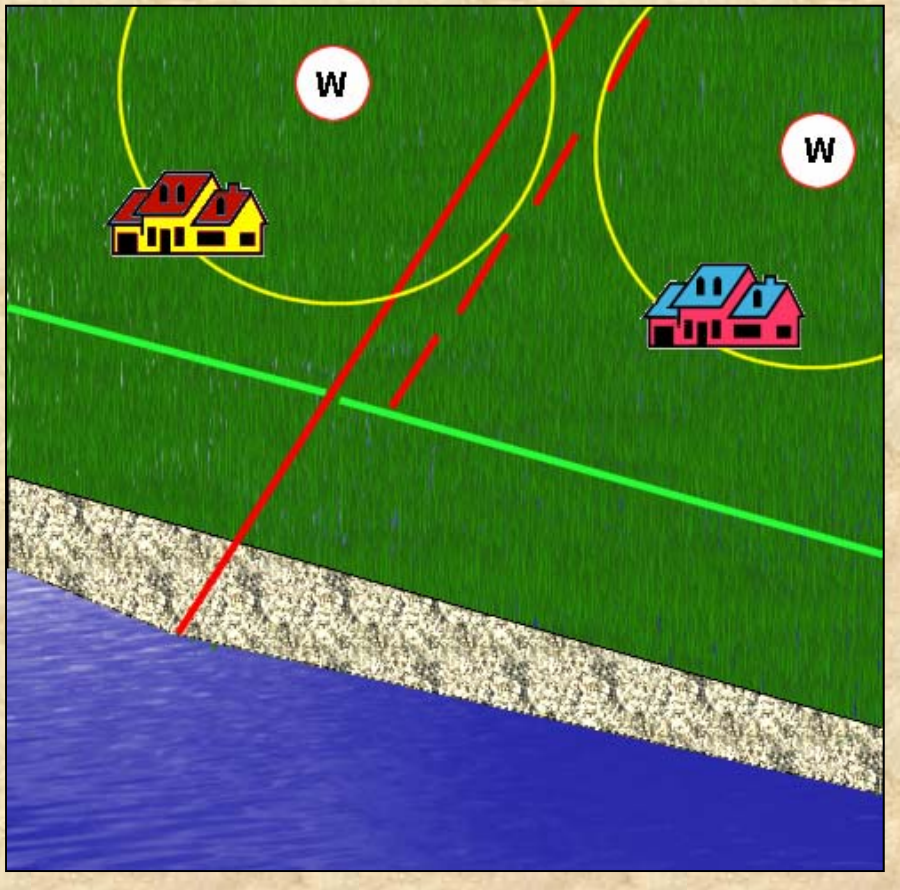
Property lines – 10 ft.

Slopes > 3:1 – 10 ft.

Slab, etc. foundation – 15 ft.

Full foundations – 20 ft.

Burial grounds – 25 ft. from toe of fill



Subsurface Wastewater Disposal Rules

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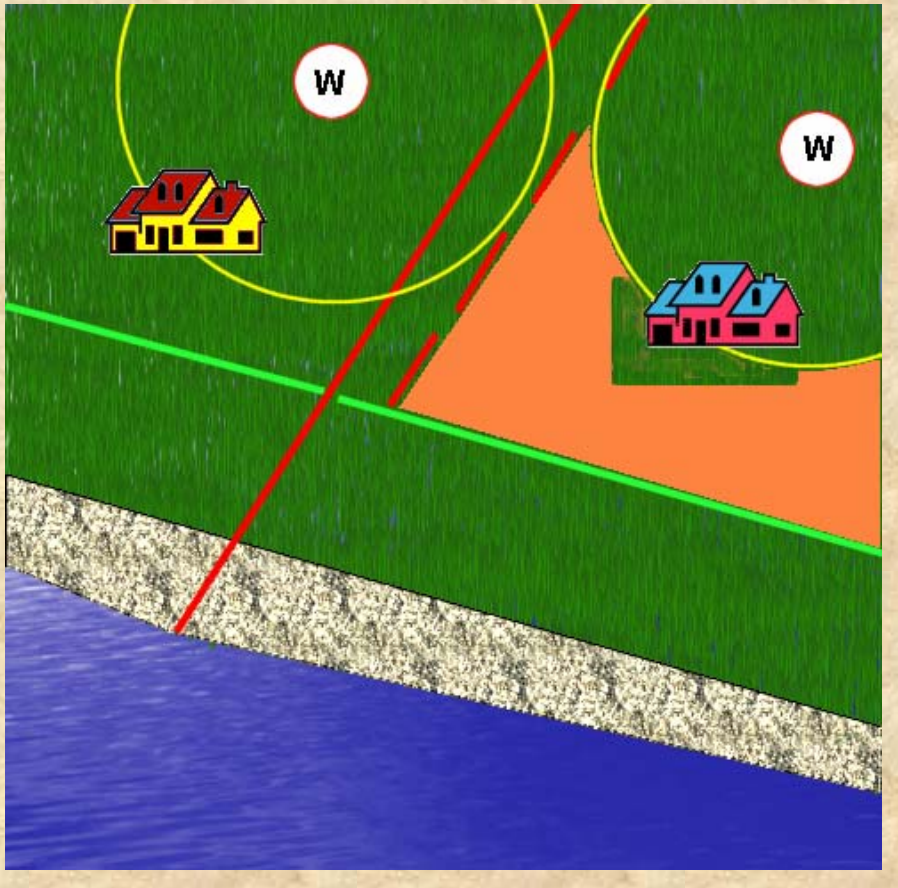


SITE EVALUATION PROCESS

Site Evaluation Process

Disposal of liquids into the soil from a disposal area is through soil pores, between soil aggregates and through root channels. Soil texture, soil structure, moisture content, and root penetration also affect the liquid movement through the soil.

SITE EVALUATION PROCESS

Site Evaluation Process

Site evaluation combines on-site soil evaluation with consideration of site conditions.

Licensed Site Evaluators are required to have the skill and ability to properly identify and accurately report soil textures and limiting factors so they can adequately classify soils, recognize site limitations and properly size disposal systems.

Limiting Factors

Redoximorphic Features (Drainage Mottles)

Restrictive Horizon

Bedrock

SITE EVALUATION PROCESS

Site Evaluation Process

However, if limited soils are available or there are setback conflicts, the Site Evaluator may have to prepare a variance request, for as best a fit as possible when considering existing development.

This property abuts the site in the prior slide. Note the location of a non-potable dug well, and the drilled well casing under the oil tank.

Subsurface Wastewater Disposal Application (HHE-200 Form)

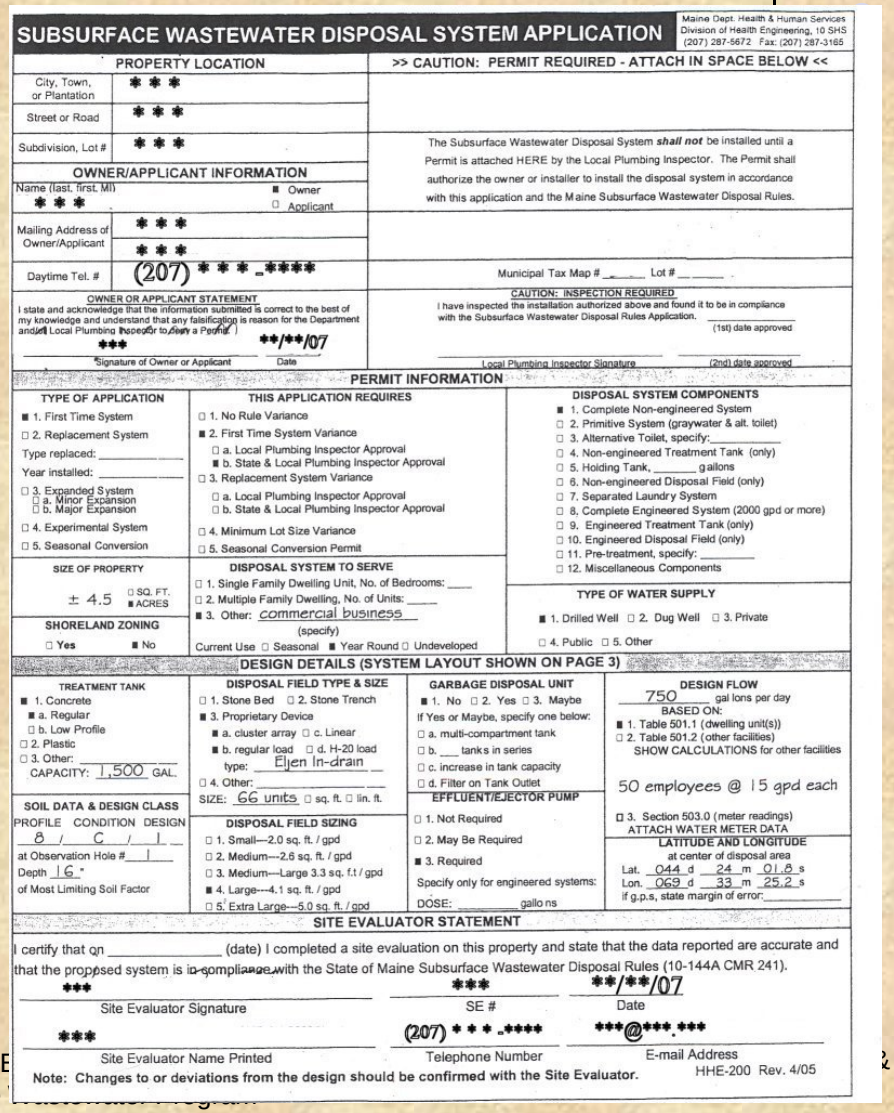
Maine Department of Health and Human Services
Division of Environmental Health
Subsurface Wastewater Program

HHE-200 Form

Page One

This example of Page One is clear, concise, and legible.

All of the appropriate boxes have been completed.



SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Dept. Health & Human Services
Division of Health Engineering, 10 SHS
(207) 287-5672 Fax: (207) 287-3165

PROPERTY LOCATION

City, Town, or Plantation: ***
Street or Road: ***
Subdivision, Lot #: ***

>> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<

The Subsurface Wastewater Disposal System ***shall not*** be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

OWNER/APPLICANT INFORMATION

Name (last, first, MI): *** ■ Owner □ Applicant
Mailing Address of Owner/Applicant: *** ***
Daytime Tel. #: (207) *** _****
Municipal Tax Map # _____ Lot # _____

OWNER OR APPLICANT STATEMENT

I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

*** **/**/07
*Signature of Owner or Applicant — Date

CAUTION: INSPECTION REQUIRED

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

_____ (1st) date approved
Local Plumbing Inspector Signature — _____ (2nd) date approved

PERMIT INFORMATION

TYPE OF APPLICATION

■ 1. First Time System
□ 2. Replacement System
Type replaced: _____
Year installed: _____
□ 3. Expanded System
□ a. Minor Expansion
□ b. Major Expansion
□ 4. Experimental System
□ 5. Seasonal Conversion

THIS APPLICATION REQUIRES

□ 1. No Rule Variance
■ 2. First Time System Variance
□ a. Local Plumbing Inspector Approval
■ b. State & Local Plumbing Inspector Approval
□ 3. Replacement System Variance
□ a. Local Plumbing Inspector Approval
□ b. State & Local Plumbing Inspector Approval
□ 4. Minimum Lot Size Variance
□ 5. Seasonal Conversion Permit

DISPOSAL SYSTEM COMPONENTS

■ 1. Complete Non-engineered System
□ 2. Primitive System (graywater & alt. toilet)
□ 3. Alternative Toilet, specify: _____
□ 4. Non-engineered Treatment Tank (only)
□ 5. Holding Tank, _____ gallons
□ 6. Non-engineered Disposal Field (only)
□ 7. Separated Laundry System
□ 8. Complete Engineered System (2000 gpd or more)
□ 9. Engineered Treatment Tank (only)
□ 10. Engineered Disposal Field (only)
□ 11. Pre-treatment, specify: _____
□ 12. Miscellaneous Components

SIZE OF PROPERTY

± 4.5 □ SQ. FT. ■ ACRES

SHORELAND ZONING

□ Yes ■ No

DISPOSAL SYSTEM TO SERVE

□ 1. Single Family Dwelling Unit, No. of Bedrooms: ___
□ 2. Multiple Family Dwelling, No. of Units: ___
■ 3. Other: commercial business (specify)
Current Use □ Seasonal ■ Year Round □ Undeveloped

TYPE OF WATER SUPPLY

■ 1. Drilled Well □ 2. Dug Well □ 3. Private
□ 4. Public □ 5. Other

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK

■ 1. Concrete
■ a. Regular
□ b. Low Profile
□ 2. Plastic
□ 3. Other: _____
CAPACITY: 1,500 GAL.

SOIL DATA & DESIGN CLASS

PROFILE CONDITION DESIGN
B / C / 1
at Observation Hole # 1
Depth 16"
of Most Limiting Soil Factor

DISPOSAL FIELD TYPE & SIZE

□ 1. Stone Bed □ 2. Stone Trench
■ 3. Proprietary Device
■ a. cluster array □ c. Linear
■ b. regular load □ d. H-20 load
type: Eljen In-drain
□ 4. Other: _____
SIZE: 66 units □ sq. ft. □ lin. ft.

DISPOSAL FIELD SIZING

□ 1. Small---2.0 sq. ft. / gpd
□ 2. Medium---2.6 sq. ft. / gpd
□ 3. Medium---Large 3.3 sq. f.t / gpd
■ 4. Large---4.1 sq. ft. / gpd
□ 5. Extra Large---5.0 sq. ft. / gpd

GARBAGE DISPOSAL UNIT

■ 1. No □ 2. Yes □ 3. Maybe
If Yes or Maybe, specify one below:
□ a. multi-compartment tank
□ b. ___ tanks in series
□ c. increase in tank capacity
□ d. Filter on Tank Outlet

EFFLUENT/EJECTOR PUMP

□ 1. Not Required
□ 2. May Be Required
■ 3. Required
Specify only for engineered systems:
DOSE: _____ gallons

DESIGN FLOW

750 gal lons per day
BASED ON:
■ 1. Table 501.1 (dwelling unit(s))
□ 2. Table 501.2 (other facilities)
SHOW CALCULATIONS for other facilities

50 employees @ 15 gpd each

□ 3. Section 503.0 (meter readings)
ATTACH WATER METER DATA

LATITUDE AND LONGITUDE
at center of disposal area
Lat. 044 d 24 m 01.8 s
Lon. 069 d 33 m 25.2 s
if g.p.s, state margin of error: _____

SITE EVALUATOR STATEMENT

I certify that on _____ (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).

*** — Site Evaluator Signature
*** — SE #
//07 — Date
*** — Site Evaluator Name Printed
(207) *** _**** — Telephone Number
@.*** — E-mail Address

Note: Changes to or deviations from the design should be confirmed with the Site Evaluator. HHE-200 Rev. 4/05

HHE-200 Form

Page One

OWNER - APPLICANT

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Dept. Health & Human Services
Division of Health Engineering, 10 SHS
(207) 287-5672 Fax: (207) 287-3165

PROPERTY LOCATION

City, Town, or Plantation	***
Street or Road	***
Subdivision, Lot #	***

OWNER/APPLICANT INFORMATION

Name (last, first, MI)	*** ■ Owner ☐ Applicant
Mailing Address of Owner/Applicant	***
	***
Daytime Tel. #	(207) *** _****

OWNER OR APPLICANT STATEMENT

I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

*** **/**/07

Signature of Owner or Applicant — Date

>> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<

The Subsurface Wastewater Disposal System ***shall not*** be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

Municipal Tax Map # _____ Lot # _____

CAUTION: INSPECTION REQUIRED

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

(1st) date approved

Local Plumbing Inspector Signature — (2nd) date approved

HHE-200 Form

Page One

PERMIT INFORMATION

TYPE OF APPLICATION

- ■ 1. First Time System
- □ 2. Replacement System
  - Type replaced: _____
  - Year installed: _____
- □ 3. Expanded System
  - □ a. Minor Expansion
  - □ b. Major Expansion
- □ 4. Experimental System
- □ 5. Seasonal Conversion

SIZE OF PROPERTY

± 4.5 □ SQ. FT. ■ ACRES

SHORELAND ZONING

□ Yes ■ No

THIS APPLICATION REQUIRES

- □ 1. No Rule Variance
- ■ 2. First Time System Variance
  - □ a. Local Plumbing Inspector Approval
  - ■ b. State & Local Plumbing Inspector Approval
- □ 3. Replacement System Variance
  - □ a. Local Plumbing Inspector Approval
  - □ b. State & Local Plumbing Inspector Approval
- □ 4. Minimum Lot Size Variance
- □ 5. Seasonal Conversion Permit

DISPOSAL SYSTEM TO SERVE

- □ 1. Single Family Dwelling Unit, No. of Bedrooms: ____
- □ 2. Multiple Family Dwelling, No. of Units: ____
- ■ 3. Other: commercial business (specify)

Current Use □ Seasonal ■ Year Round □ Undeveloped

DISPOSAL SYSTEM COMPONENTS

- ■ 1. Complete Non-engineered System
- □ 2. Primitive System (graywater & alt. toilet)
- □ 3. Alternative Toilet, specify: _____
- □ 4. Non-engineered Treatment Tank (only)
- □ 5. Holding Tank, _____ gallons
- □ 6. Non-engineered Disposal Field (only)
- □ 7. Separated Laundry System
- □ 8. Complete Engineered System (2000 gpd or more)
- □ 9. Engineered Treatment Tank (only)
- □ 10. Engineered Disposal Field (only)
- □ 11. Pre-treatment, specify: _____
- □ 12. Miscellaneous Components

TYPE OF WATER SUPPLY

■ 1. Drilled Well □ 2. Dug Well □ 3. Private

□ 4. Public □ 5. Other

HHE-200 Form

Page One

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK

- ■ 1. Concrete
  - ■ a. Regular
  - □ b. Low Profile
- □ 2. Plastic
- □ 3. Other: _____

CAPACITY: 1,500 GAL.

SOIL DATA & DESIGN CLASS

PROFILE / CONDITION / DESIGN

8 / C / 1

at Observation Hole # 1

Depth 16"

of Most Limiting Soil Factor

DISPOSAL FIELD TYPE & SIZE

- □ 1. Stone Bed □ 2. Stone Trench
- ■ 3. Proprietary Device
  - ■ a. cluster array □ c. Linear
  - ■ b. regular load □ d. H-20 load

type: Eljen In-drain

- □ 4. Other: _____

SIZE: 66 units □ sq. ft. □ lin. ft.

DISPOSAL FIELD SIZING

- □ 1. Small—2.0 sq. ft. / gpd
- □ 2. Medium—2.6 sq. ft. / gpd
- □ 3. Medium—Large 3.3 sq. f.t / gpd
- ■ 4. Large—4.1 sq. ft. / gpd
- □ 5. Extra Large—5.0 sq. ft. / gpd

GARBAGE DISPOSAL UNIT

- ■ 1. No □ 2. Yes □ 3. Maybe

If Yes or Maybe, specify one below:

- □ a. multi-compartment tank
- □ b. ___ tanks in series
- □ c. increase in tank capacity
- □ d. Filter on Tank Outlet

EFFLUENT/EJECTOR PUMP

- □ 1. Not Required
- □ 2. May Be Required
- ■ 3. Required

Specify only for engineered systems:

DOSE: _____ gallons

DESIGN FLOW

750 gallons per day

BASED ON:

- ■ 1. Table 501.1 (dwelling unit(s))
- □ 2. Table 501.2 (other facilities)

SHOW CALCULATIONS for other facilities

50 employees @ 15 gpd each

- □ 3. Section 503.0 (meter readings)

ATTACH WATER METER DATA

LATITUDE AND LONGITUDE

at center of disposal area

Lat. 044 d 24 m 01.8 s

Lon. 069 d 33 m 25.2 s

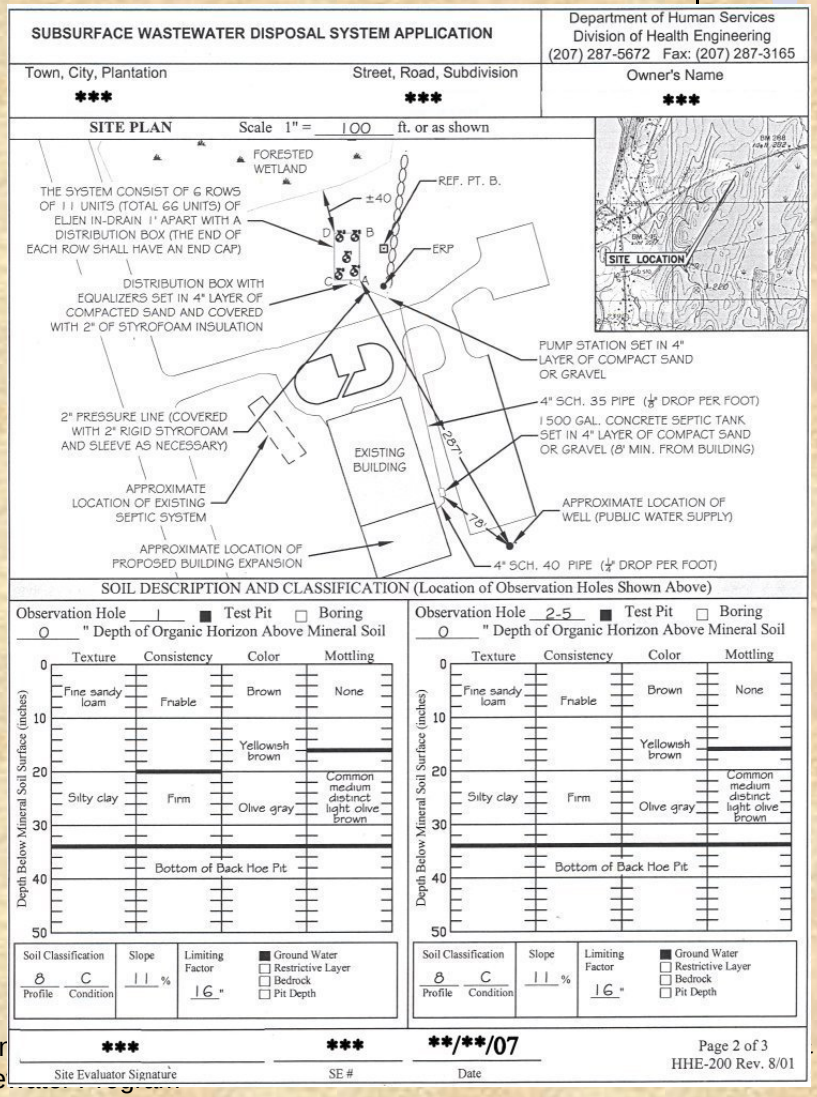
if g.p.s, state margin of error: _____

HHE-200 Form

Page Two

This site plan shows all the prominent features in the vicinity of the proposed system.

Test pit logs are clear, complete, and accurate.



SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering
(207) 287-5672 Fax: (207) 287-3165

Town, City, Plantation: ***
Street, Road, Subdivision: ***
Owner's Name: ***

SITE PLAN Scale 1" = 100 ft. or as shown

FORESTED WETLAND
THE SYSTEM CONSIST OF 6 ROWS OF 11 UNITS (TOTAL 66 UNITS) OF ELJEN IN-DRAIN 1' APART WITH A DISTRIBUTION BOX (THE END OF EACH ROW SHALL HAVE AN END CAP)
±40
REF. PT. B.
ERP
DISTRIBUTION BOX WITH EQUALIZERS SET IN 4" LAYER OF COMPACTED SAND AND COVERED WITH 2" OF STYROFOAM INSULATION
SITE LOCATION
PUMP STATION SET IN 4" LAYER OF COMPACT SAND OR GRAVEL
4" SCH. 35 PIPE (¼" DROP PER FOOT)
1500 GAL. CONCRETE SEPTIC TANK SET IN 4" LAYER OF COMPACT SAND OR GRAVEL (8' MIN. FROM BUILDING)
2" PRESSURE LINE (COVERED WITH 2" RIGID STYROFOAM AND SLEEVE AS NECESSARY)
EXISTING BUILDING
267'
78'
APPROXIMATE LOCATION OF EXISTING SEPTIC SYSTEM
APPROXIMATE LOCATION OF WELL (PUBLIC WATER SUPPLY)
APPROXIMATE LOCATION OF PROPOSED BUILDING EXPANSION
4" SCH. 40 PIPE (¼" DROP PER FOOT)

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole 1 ■ Test Pit □ Boring
0 " Depth of Organic Horizon Above Mineral Soil

Depth Below Mineral Soil Surface (inches)	Texture	Consistency	Color	Mottling
0–10	Fine sandy loam	Friable	Brown	None
10–20			Yellowish brown	
20–30	Silty clay	Firm	Olive gray	Common medium distinct light olive brown
30–40	Bottom of Back Hoe Pit			
40–50				

Soil Classification: Profile 8, Condition C
Slope: 11 %
Limiting Factor: 16 "
■ Ground Water □ Restrictive Layer □ Bedrock □ Pit Depth

Observation Hole 2-5 ■ Test Pit □ Boring
0 " Depth of Organic Horizon Above Mineral Soil

Depth Below Mineral Soil Surface (inches)	Texture	Consistency	Color	Mottling
0–10	Fine sandy loam	Friable	Brown	None
10–20			Yellowish brown	
20–30	Silty clay	Firm	Olive gray	Common medium distinct light olive brown
30–40	Bottom of Back Hoe Pit			
40–50				

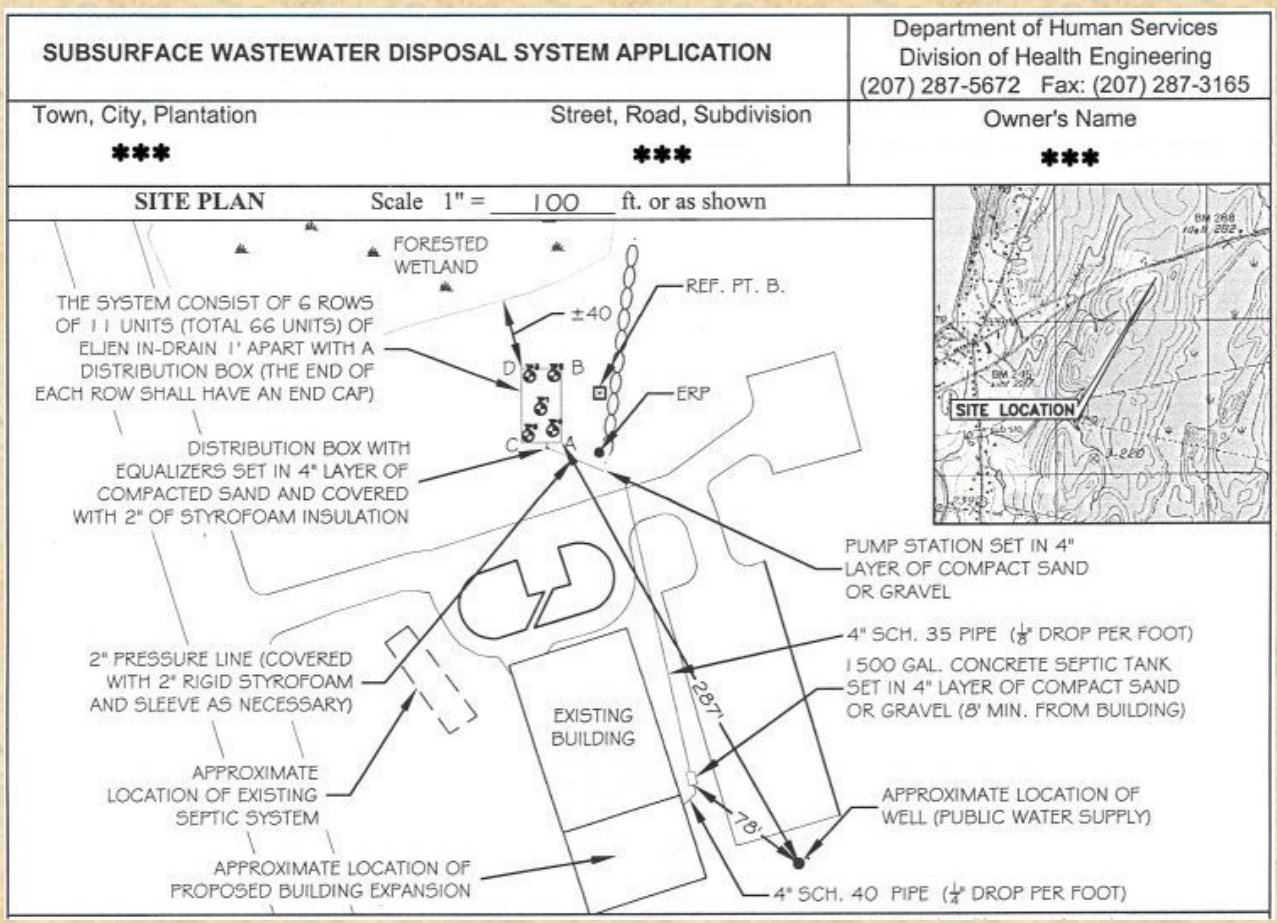
Soil Classification: Profile 8, Condition C
Slope: 11 %
Limiting Factor: 16 "
■ Ground Water □ Restrictive Layer □ Bedrock □ Pit Depth

*** (Site Evaluator Signature) *** (SE #) **/**/07 (Date)

Page 2 of 3
HHE-200 Rev. 8/01

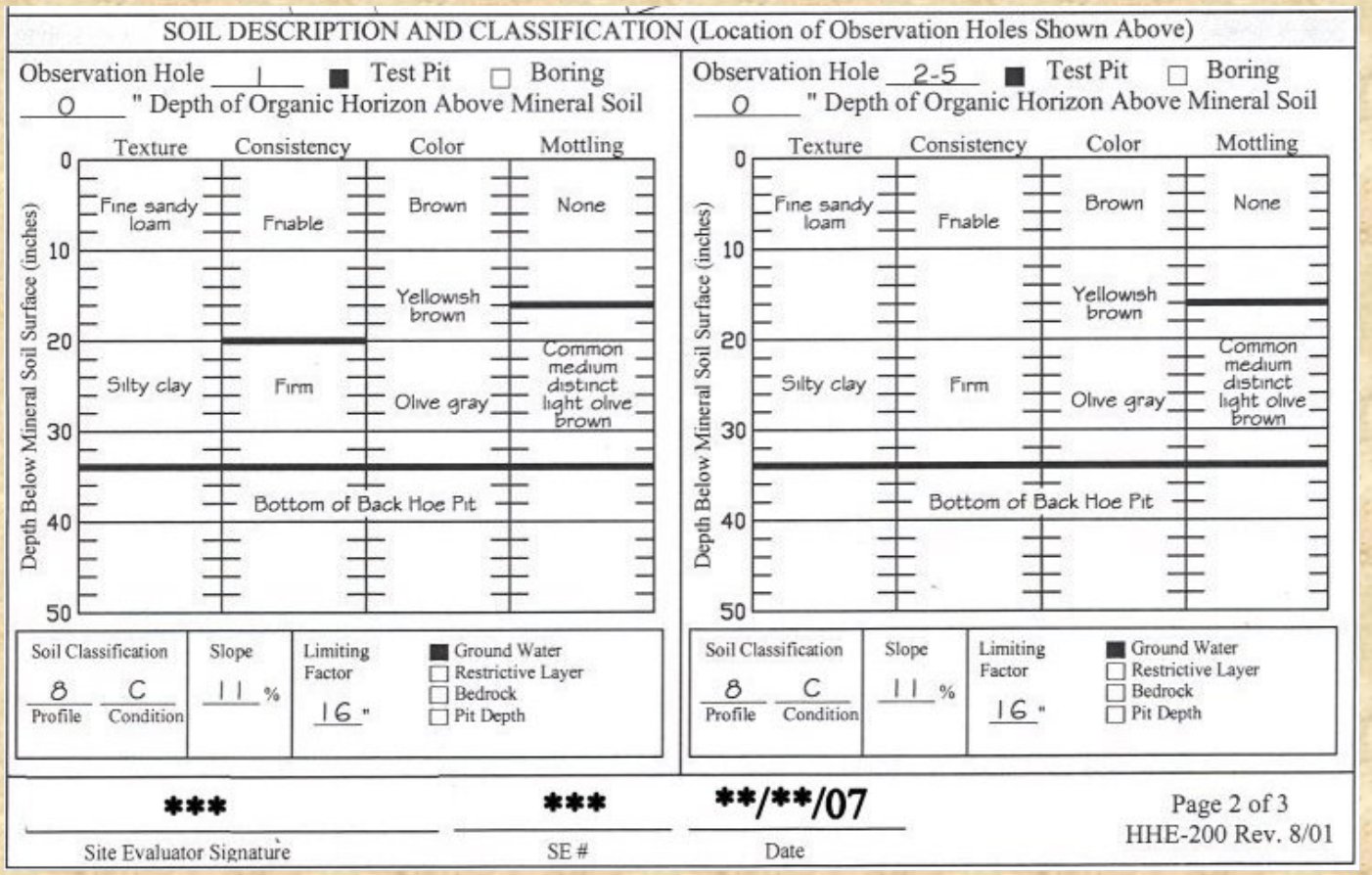
HHE-200 Form

Page Two



HHE-200 Form

Page Two



SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole 1 ■ Test Pit ☐ Boring

0 " Depth of Organic Horizon Above Mineral Soil

Depth Below Mineral Soil Surface (inches)	Texture	Consistency	Color	Mottling
0–10	Fine sandy loam	Friable	Brown	None
10–20			Yellowish brown	
20–40	Silty clay	Firm	Olive gray	Common medium distinct light olive brown
40–50	Bottom of Back Hoe Pit			

Soil Classification	Slope	Limiting Factor	
8 Profile / C Condition	11 %	16 "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

Observation Hole 2-5 ■ Test Pit ☐ Boring

0 " Depth of Organic Horizon Above Mineral Soil

Depth Below Mineral Soil Surface (inches)	Texture	Consistency	Color	Mottling
0–10	Fine sandy loam	Friable	Brown	None
10–20			Yellowish brown	
20–40	Silty clay	Firm	Olive gray	Common medium distinct light olive brown
40–50	Bottom of Back Hoe Pit			

Soil Classification	Slope	Limiting Factor	
8 Profile / C Condition	11 %	16 "	■ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

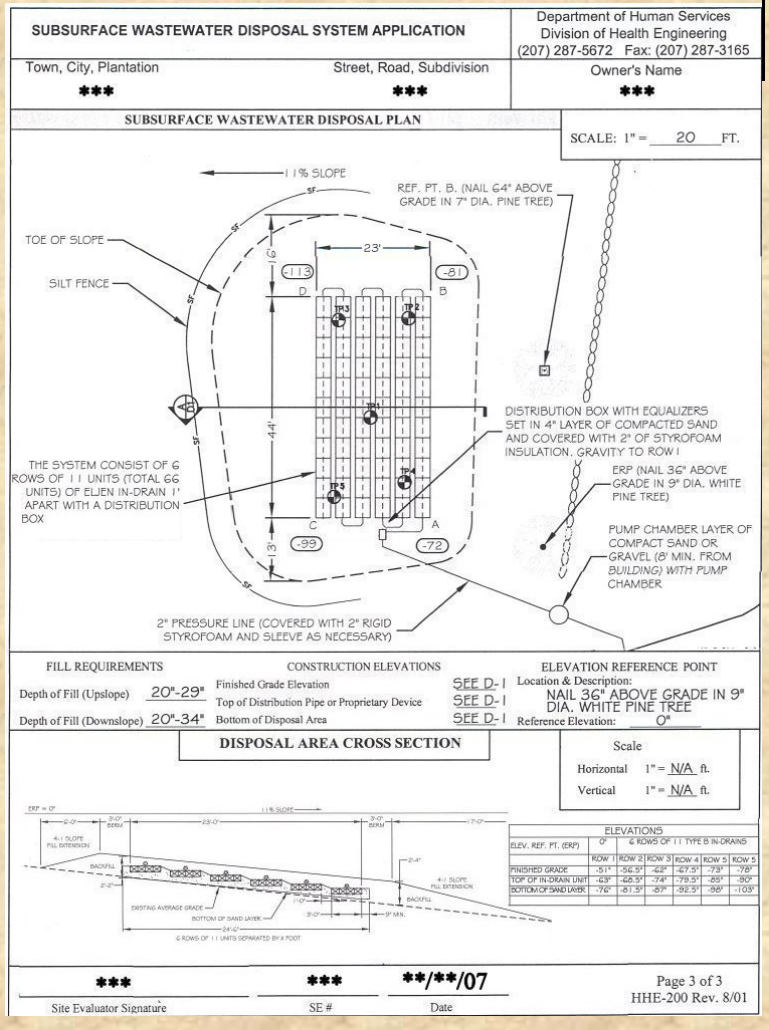
*** (Site Evaluator Signature) *** (SE #) **/**/07 (Date)

Page 2 of 3
HHE-200 Rev. 8/01

HHE-200 Form

Page Three

Page three of this example contains all the necessary construction data for installation of the disposal area.



SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering
(207) 287-5672 Fax: (207) 287-3165

Town, City, Plantation: ***
Street, Road, Subdivision: ***
Owner's Name: ***

SUBSURFACE WASTEWATER DISPOSAL PLAN

SCALE: 1" = 20 FT.

1% SLOPE
REF. PT. B. (NAIL 64" ABOVE GRADE IN 7" DIA. PINE TREE)
TOE OF SLOPE
SILT FENCE
5'
23'
6'
13'
44'
-113
-81
-99
-72
D
B
C
A
TP1
TP2
TP3
TP4
TP5
DISTRIBUTION BOX WITH EQUALIZERS SET IN 4" LAYER OF COMPACTED SAND AND COVERED WITH 2" OF STYROFOAM INSULATION. GRAVITY TO ROW 1
THE SYSTEM CONSIST OF 6 ROWS OF 11 UNITS (TOTAL 66 UNITS) OF ELJEN IN-DRAIN 1' APART WITH A DISTRIBUTION BOX
ERP (NAIL 36" ABOVE GRADE IN 9" DIA. WHITE PINE TREE)
PUMP CHAMBER LAYER OF COMPACT SAND OR GRAVEL (8' MIN. FROM BUILDING) WITH PUMP CHAMBER
2" PRESSURE LINE (COVERED WITH 2" RIGID STYROFOAM AND SLEEVE AS NECESSARY)

FILL REQUIREMENTS
Depth of Fill (Upslope): 20"-29"
Depth of Fill (Downslope): 20"-34"

CONSTRUCTION ELEVATIONS
Finished Grade Elevation: SEE D-1
Top of Distribution Pipe or Proprietary Device: SEE D-1
Bottom of Disposal Area: SEE D-1

ELEVATION REFERENCE POINT
Location & Description: NAIL 36" ABOVE GRADE IN 9" DIA. WHITE PINE TREE
Reference Elevation: 0"

DISPOSAL AREA CROSS SECTION

Scale
Horizontal 1" = N/A ft.
Vertical 1" = N/A ft.

ELEVATIONS

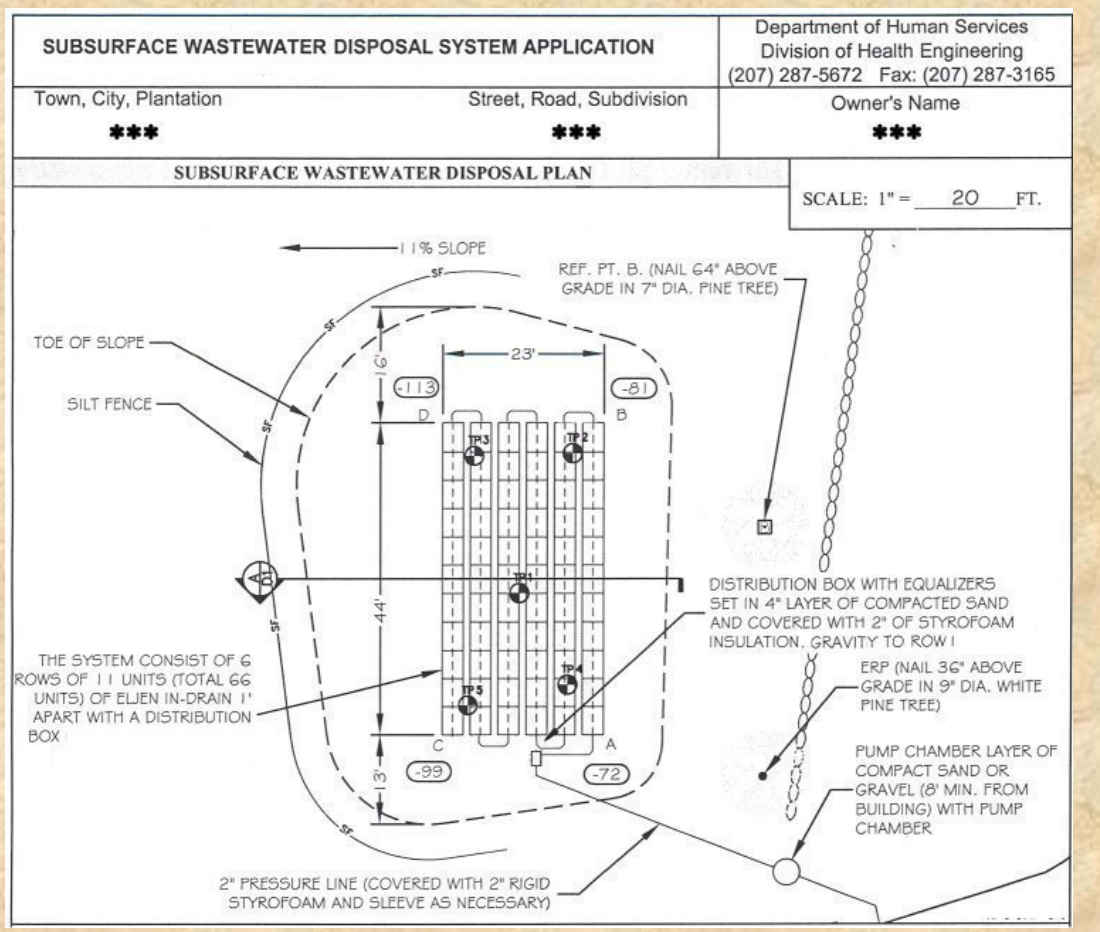
ELEV. REF. PT. (ERP)	0"	6 ROWS OF 11 TYPE B IN-DRAINS				
	ROW 1	ROW 2	ROW 3	ROW 4	ROW 5	ROW 6
FINISHED GRADE	-51"	-56.5"	-62"	-67.5"	-73"	-78"
TOP OF IN-DRAIN UNIT	-63"	-68.5"	-74"	-79.5"	-85"	-90"
BOTTOM OF SAND LAYER	-76"	-81.5"	-87"	-92.5"	-98"	-103"

*** Site Evaluator Signature
*** SE #
//07 Date

Page 3 of 3
HHE-200 Rev. 8/01

HHE-200 Form

Page Three



HHE-200 Form

Page Three

FILL REQUIREMENTS

Depth of Fill (Upslope) 20"-29"

Depth of Fill (Downslope) 20"-34"

CONSTRUCTION ELEVATIONS

Finished Grade Elevation SEE D-1

Top of Distribution Pipe or Proprietary Device SEE D-1

Bottom of Disposal Area SEE D-1

ELEVATION REFERENCE POINT

Location & Description: NAIL 36" ABOVE GRADE IN 9" DIA. WHITE PINE TREE

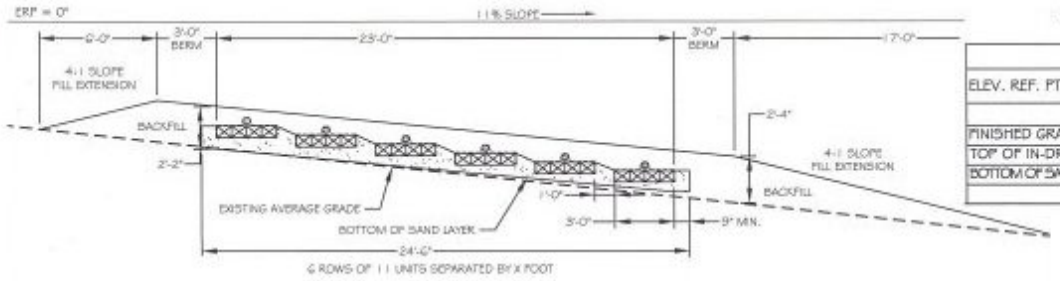
Reference Elevation: 0"

DISPOSAL AREA CROSS SECTION

Scale

Horizontal 1" = N/A ft.

Vertical 1" = N/A ft.



ELEVATIONS

ELEV. REF. PT. (ERP)	0"	6 ROWS OF 11 TYPE B IN-DRAINS				
	ROW 1	ROW 2	ROW 3	ROW 4	ROW 5	ROW 5
FINISHED GRADE	-51"	-56.5"	-62"	-67.5"	-73"	-78"
TOP OF IN-DRAIN UNIT	-63"	-68.5"	-74"	-79.5"	-85"	-90"
BOTTOM OF SAND LAYER	-76"	-81.5"	-87"	-92.5"	-98"	-103"

***	***	**/**/07
Site Evaluator Signature	SE #	Date

Page 3 of 3
HHE-200 Rev. 8/01

SYSTEM TYPES

Subsurface Wastewater Disposal Rules

SYSTEM TYPES

<u>Cesspools, Clay Agricultural Drainage Tiles and Vee-Notched Plank trenches</u> – still legal to operate as long as they are not Malfunctioning.

<u>Primitive systems</u> --consist of an alternate toilet such as a pit privy and a small greywater disposal area to accommodate a hand carried or hand pumped water supply

<u>A Combined System</u> -- typically comprised of a septic tank and/or an advanced Treatment unit, and a disposal area sized to accommodate a pressurized water supply with full plumbing fixture loads.

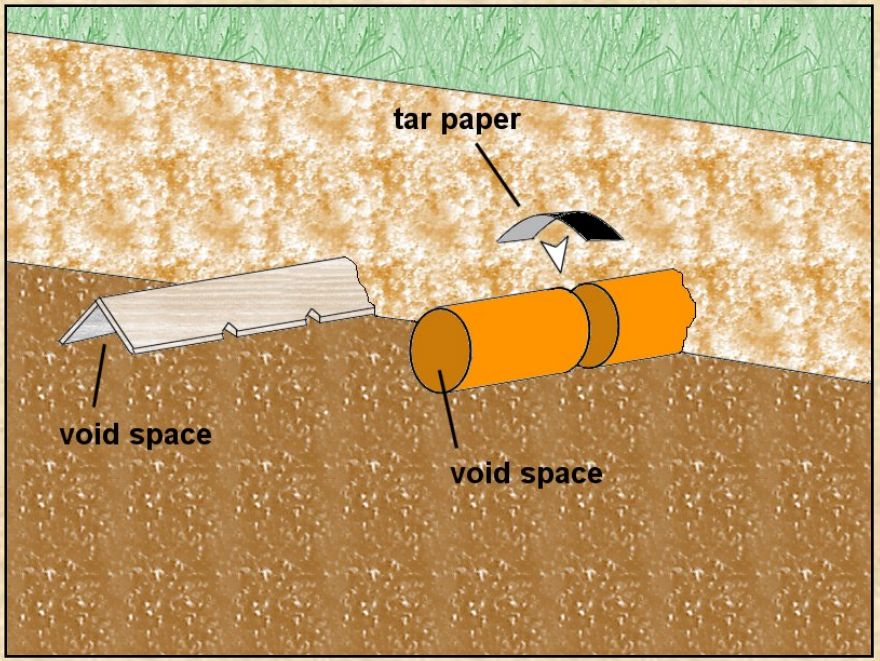
Not a Primitive System

Subsurface Wastewater Disposal Rules

Disposal Areas

By the late 1940's clay agricultural drainage tiles and vee-notched plank trenches were in common use.

These systems provided a void space in the soils into which effluent could be introduced, and then absorbed by the soil. These were the forebears of most modern proprietary disposal devices.



Subsurface Wastewater Disposal Rules

System Types: Primitive

To install a primitive system, a completed HHE-200 Form is required which includes a test pit for both the pit privy (if used) and the gray wastewater disposal area.

The primitive gray water disposal area would be sized at 25 gpd supplied by hand carried or pumped wastewater.

Limited Systems (1000 gallon storage tank) require 50 gpd and portable pump.

A maximum of 3 fixtures allowed.

Any type of disposal area can be used for the gray wastewater disposal area.

Maine Department of Health & Human Services

Subsurface Wastewater Disposal Rules

System Types: Primitive

The greywater disposal area would be sized at 25 gpd, with a maximum of 3 fixtures allowed.

Any type of disposal area can be used for the greywater disposal area.

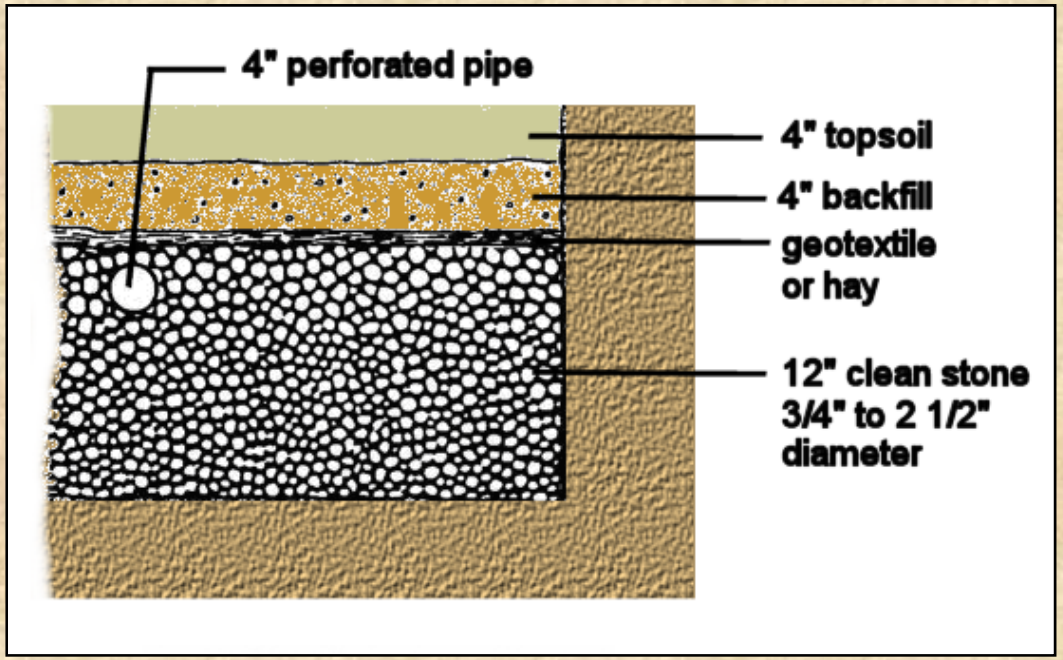
No septic tank is required for a primitive system.

Subsurface Wastewater Disposal Rules

System Types: Combined

A disposal bed acts as an underground retention area. Stone (3/4 or 1 1/2 inches in diameter) is used in the construction of a bed to provide void space for the storage of effluent and to allow it to drain slowly through the soil.

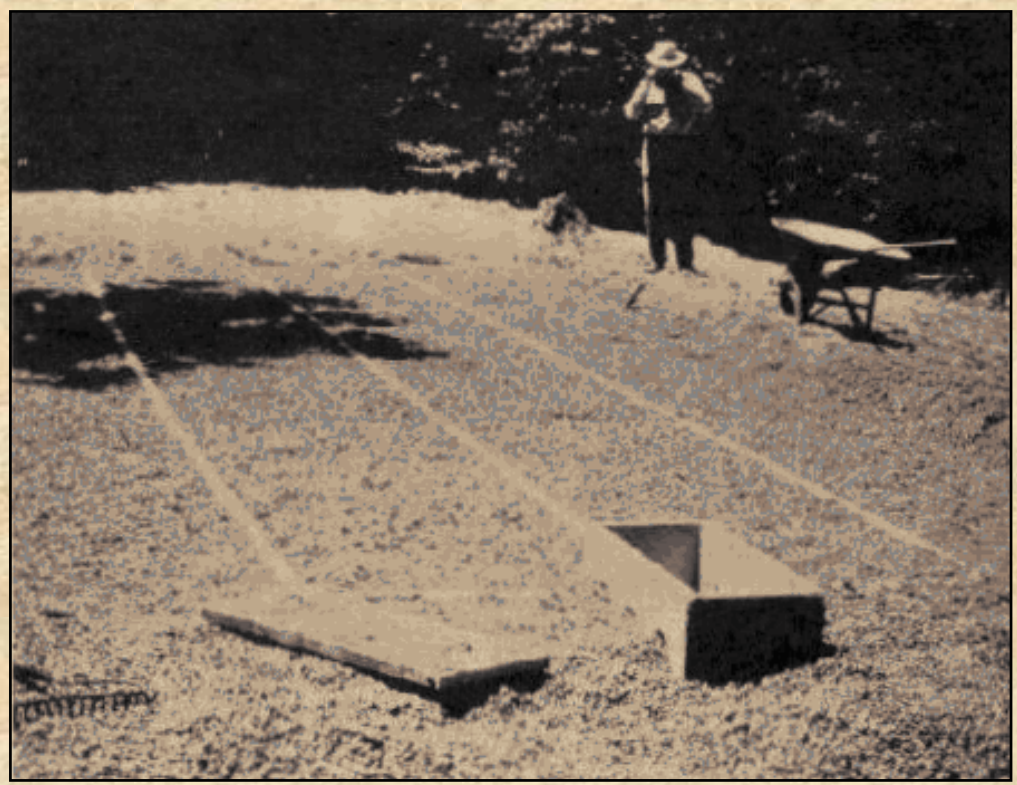
The disposal bed size is calculated by multiplying the expected volume of wastewater by the size rating of the original soil.



Subsurface Wastewater Disposal Rules

System Types: Combined

Bed widths usually vary from 3 feet to 20 feet. Narrow beds are more advantageous than wide beds because they increase the sidewall area relative to the bottom area which promotes longevity of the disposal area. The advantages of wide beds are that they are more easily installed with mechanical equipment and require less over-all area for installation than narrow beds.



Subsurface Wastewater Disposal Rules

Disposal Areas

Concrete chambers are available in H-20 load ratings, and in 4’ x 8’ and 8’ x 8’ sizes.

Chambers are sized upon their footprints in cluster configurations.

Sidewall allowances are included for chamber sizing, when installed in trench configuration with one foot of stone along the long sides.

Subsurface Wastewater Disposal Rules

Disposal Areas

Plastic chambers are sized upon their footprints in cluster configurations and are available in a variety of heights and widths.

Sidewall allowances are included for sizing when installed in trench configuration.

Some designers include stone along the sides and beneath plastic chambers. In such cases, separations are measured from the stone, not the chambers.

Subsurface Wastewater Disposal Rules

Disposal Areas

Fabric wrapped tubes consist of perforated corrugated plastic pipe, wrapped in non-woven filter fabric. The fabric is separated from the pipe by a layer of random weave plastic fibers or a layer of expanded plastic mesh.

Subsurface Wastewater Disposal Rules

Disposal Areas

Fabric wrapped tubes are sized at the equivalent of 5 square feet per linear foot, due to their increased surface area and unobstructed void space.

Fabric wrapped tubes are most often installed in serial distribution for non-engineered systems (e.g., they zigzag along the slope of the site).

Maine Department of Health & Human Services

Subsurface Wastewater Disposal Rules

Disposal Areas

Cuspated plate systems are presently available only in the form of the Eljen GSF (formerly, In-Drain) and the Eljen Mini-Max.

The devices consist of egg crate shaped plastic plates through which non-woven filter fabric is interwoven, resulting in increased surface area for biological growth.

Subsurface Wastewater Disposal Rules

Disposal Areas

The Eljen GSF system requires a specific grade of coarse sand to function properly, specifically meeting ASTM C-33 standards.

Flow for flow, the Eljen GSF system would have the smallest footprint of any device disposing of septic tank effluent, due to the high ratio of surface area to footprint.

Subsurface Wastewater Disposal Rules

Disposal Areas

Geo-synthetic aggregate pipe systems consist of a perforated pipe, surrounded by textured polystyrene cubes, within a netting tube.

They are available with and without surrounding nonwoven geotextile fabric.

They can be installed in either trench or cluster configuration.

Subsurface Wastewater Disposal Rules

Disposal Areas

Drip irrigation systems have been used in Maine for several years. The major differences between conventional systems and drip irrigation systems are uniform distribution of effluent and shallow placement of trenches.

Drip irrigation systems must be preceded by pretreatment to avoid or minimize clogging of the disposal lines.

Subsurface Wastewater Disposal Rules

Disposal Areas

The drip emitter system uses small diameter piping with integral drip emitters, installed in a grid. A series of valves are used to regulate flow and flush the system for prevention of solids accumulation.

Subsurface Wastewater Disposal Rules

Disposal Areas

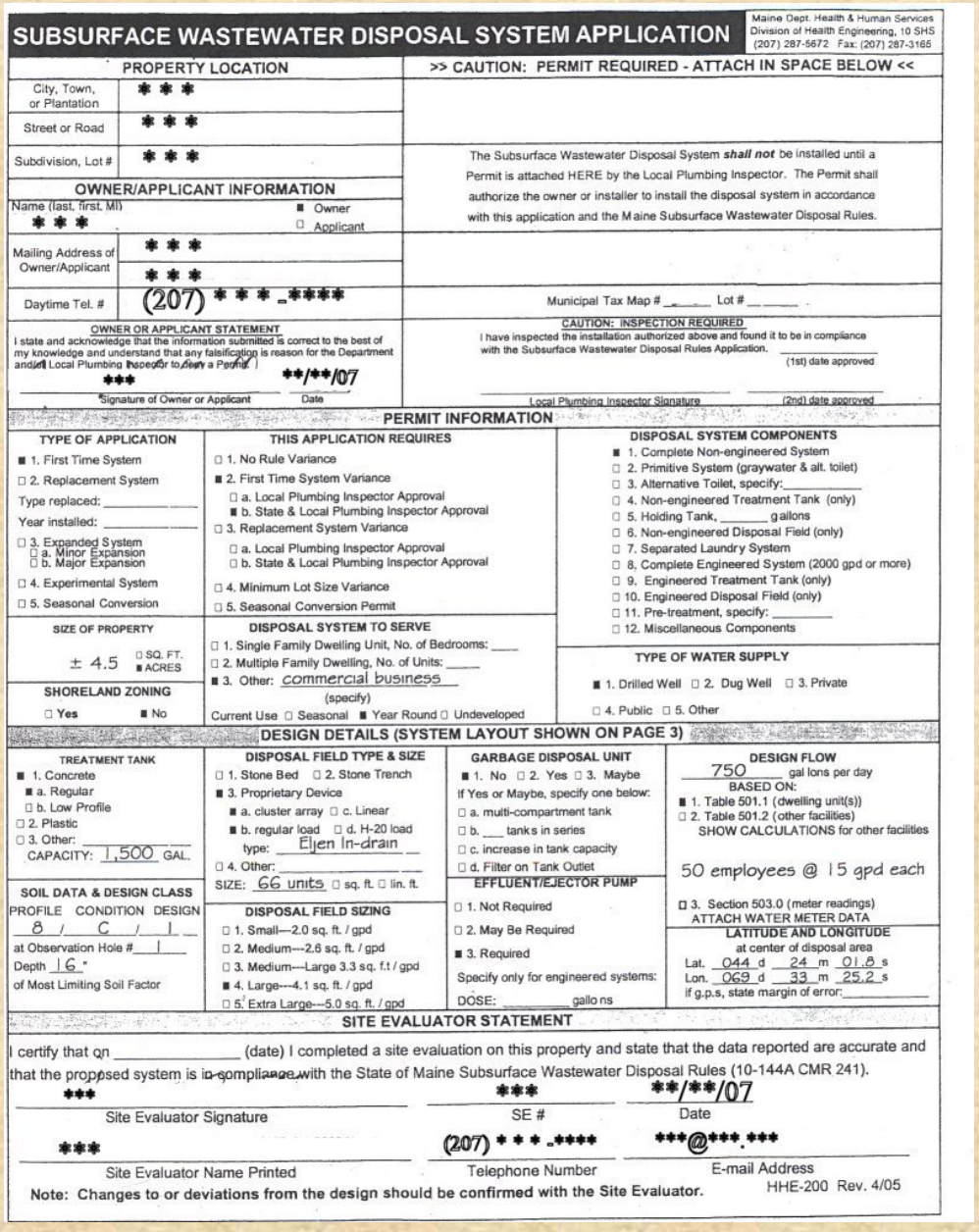
Installation of porous hose drip irrigation is minimally invasive, and can include covering at-grade installations with bark mulch, as is about to take place in this picture. This is best suited for seasonal use due to lack of frost protection.

Receiving the HHE-200 Form

- IS IT PERMITTED?
- ESTABLISH THE ERP
- SITE LOCATION

107.1 PERMIT REQUIRED

- WORK MUST NOT BE STARTED UNTIL THE PLUMBING INSPECTOR HAS ISSUED A DISPOSAL SYSTEM PERMIT FOR THE WORK



SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Dept. Health & Human Services
Division of Health Engineering, 10 SHS
(207) 287-5672 Fax: (207) 287-3165

PROPERTY LOCATION

>> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<

City, Town, or Plantation: ***

Street or Road: ***

Subdivision, Lot #: ***

The Subsurface Wastewater Disposal System ***shall not*** be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

OWNER/APPLICANT INFORMATION

Name (last, first, MI): *** ■ Owner ☐ Applicant

Mailing Address of Owner/Applicant: *** ***

Daytime Tel. #: (207) *** -****

Municipal Tax Map # _____ Lot # _____

OWNER OR APPLICANT STATEMENT

I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

*** **/**/07
Signature of Owner or Applicant — Date

CAUTION: INSPECTION REQUIRED

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

_____ (1st) date approved

_____ Local Plumbing Inspector Signature — _____ (2nd) date approved

PERMIT INFORMATION

TYPE OF APPLICATION

■ 1. First Time System
☐ 2. Replacement System
Type replaced: _____
Year installed: _____
☐ 3. Expanded System
☐ a. Minor Expansion
☐ b. Major Expansion
☐ 4. Experimental System
☐ 5. Seasonal Conversion

THIS APPLICATION REQUIRES

☐ 1. No Rule Variance
■ 2. First Time System Variance
☐ a. Local Plumbing Inspector Approval
■ b. State & Local Plumbing Inspector Approval
☐ 3. Replacement System Variance
☐ a. Local Plumbing Inspector Approval
☐ b. State & Local Plumbing Inspector Approval
☐ 4. Minimum Lot Size Variance
☐ 5. Seasonal Conversion Permit

DISPOSAL SYSTEM COMPONENTS

■ 1. Complete Non-engineered System
☐ 2. Primitive System (graywater & alt. toilet)
☐ 3. Alternative Toilet, specify: _____
☐ 4. Non-engineered Treatment Tank (only)
☐ 5. Holding Tank, _____ gallons
☐ 6. Non-engineered Disposal Field (only)
☐ 7. Separated Laundry System
☐ 8. Complete Engineered System (2000 gpd or more)
☐ 9. Engineered Treatment Tank (only)
☐ 10. Engineered Disposal Field (only)
☐ 11. Pre-treatment, specify: _____
☐ 12. Miscellaneous Components

SIZE OF PROPERTY

± 4.5 ☐ SQ. FT. ■ ACRES

SHORELAND ZONING

☐ Yes ■ No

DISPOSAL SYSTEM TO SERVE

☐ 1. Single Family Dwelling Unit, No. of Bedrooms: ____
☐ 2. Multiple Family Dwelling, No. of Units: ____
■ 3. Other: commercial business (specify)
Current Use ☐ Seasonal ■ Year Round ☐ Undeveloped

TYPE OF WATER SUPPLY

■ 1. Drilled Well ☐ 2. Dug Well ☐ 3. Private
☐ 4. Public ☐ 5. Other

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK

■ 1. Concrete
■ a. Regular
☐ b. Low Profile
☐ 2. Plastic
☐ 3. Other: _____
CAPACITY: 1,500 GAL.

SOIL DATA & DESIGN CLASS

PROFILE CONDITION DESIGN
8 / C / 1
at Observation Hole # 1
Depth 16"
of Most Limiting Soil Factor

DISPOSAL FIELD TYPE & SIZE

☐ 1. Stone Bed ☐ 2. Stone Trench
■ 3. Proprietary Device
■ a. cluster array ☐ c. Linear
■ b. regular load ☐ d. H-20 load
type: Eljen In-drain
☐ 4. Other: _____
SIZE: 66 units ☐ sq. ft. ☐ lin. ft.

DISPOSAL FIELD SIZING

☐ 1. Small---2.0 sq. ft. / gpd
☐ 2. Medium---2.6 sq. ft. / gpd
☐ 3. Medium---Large 3.3 sq. ft / gpd
■ 4. Large---4.1 sq. ft. / gpd
☐ 5. Extra Large---5.0 sq. ft. / gpd

GARBAGE DISPOSAL UNIT

■ 1. No ☐ 2. Yes ☐ 3. Maybe
If Yes or Maybe, specify one below:
☐ a. multi-compartment tank
☐ b. ___ tanks in series
☐ c. increase in tank capacity
☐ d. Filter on Tank Outlet

EFFLUENT/EJECTOR PUMP

☐ 1. Not Required
☐ 2. May Be Required
■ 3. Required
Specify only for engineered systems:
DOSE: _____ gallons

DESIGN FLOW

750 gallons per day
BASED ON:
■ 1. Table 501.1 (dwelling unit(s))
☐ 2. Table 501.2 (other facilities)
SHOW CALCULATIONS for other facilities

50 employees @ 15 gpd each

☐ 3. Section 503.0 (meter readings)
ATTACH WATER METER DATA

LATITUDE AND LONGITUDE
at center of disposal area
Lat. 044 d 24 m 01.8 s
Lon. 069 d 33 m 25.2 s
if g.p.s, state margin of error: _____

SITE EVALUATOR STATEMENT

I certify that on _____ (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).

*** — Site Evaluator Signature
*** — SE #
//07 — Date
*** — Site Evaluator Name Printed
(207) *** -**** — Telephone Number
@.*** — E-mail Address

Note: Changes to or deviations from the design should be confirmed with the Site Evaluator.

HHE-200 Rev. 4/05

Maine Department of Health & Human Services

DIVISION OF ENVIRONMENTAL HEALTH

SUBSURFACE WASTEWATER PROGRAM

AFFIDAVIT OF SITE PREPARATION

This affidavit is to be completed by a certified system installer and submitted to the Local Plumbing Inspector to document compliance with **Section 111.5.1** of the Maine Subsurface Wastewater Disposal Rules, **144 CMR 241.** ***Permission to utilize this document in lieu of a site preparation inspection by the Local Plumbing Inspector must be verified when the permit is issued.*** This affidavit is ***not*** to be utilized in place of the system inspection described in **Section 111.5.2** of the Rules.

INSTALLER NAME: _____
(Please Print)

CERTIFICATION NUMBER: _____

SSWD PERMIT NUMBER: _____

PERMIT ISSUE DATE: _____

PROPERTY OWNER NAME: _____

PROPERTY ADDRESS: _____

MUNICIPALITY: _____

By signing and submitting this document to the Local Plumbing Inspector, I certify that all construction activities noted in **Section 111.5.1** including removal of all vegetation from the disposal field area and fill extensions as specified in **Section 801.3**; roughening of the ground surface as specified in **Section 801.4**; establishment of a transitional horizon as specified in **Section 801.5**; and placement of erosion control devices as specified in **Section 801.2** have been completed in full compliance with the Maine Subsurface Wastewater Disposal Rules, **144 CMR 241** for the referenced SSWD permit.

INSTALLER SIGNATURE: _____

DATE SUBMITTED: _____

By signing and accepting this document from the Certified Installer, I acknowledge that a site preparation inspection was not conducted for the referenced SSWD permit.

LPI SIGNATURE: _____

ACCEPTANCE DATE: _____

HHE-238-B (Revision 01/2008)

THIS FORM ONLY TO BE USED AFTER THE LPI'S APPROVAL

Maine Department of Health & Human Services

Subsurface Wastewater Disposal Rules

Maine Department of Health and Human Services
Division of Environmental Health
Subsurface Wastewater Program

Construction Related Rules

Section 800.3 Dig Safe Law

The "Dig Safe Law" 23 MRSA §3360-A(D) places certain notification requirements on any person doing excavations, including any operation in which earth, rock or other material on or below the ground is moved or otherwise displaced by means of power tools, power equipment or explosives, except tilling of the soil and gardening or agricultural purposes.

803.1 CONSTRUCTION

THE INSTALLER OF THE SYSTEM SHALL MAKE CERTAIN THAT THE SYSTEM AND ALL ITS COMPONANT PARTS ARE INSTALLED IN CONFORMANCE WITH THE REQUIREMENTS OF THIS CODE, THE HHE-200 FORM AND ANY OTHER SPECIAL ENGINEERING REQUIREMENTS.

803.2
SOIL AND BACKFILL MATERIAL

THE INSTALLER OF THE SYSTEM SHALL MAKE CERTAIN THAT THE CONSTRUCTION AND INSTALLATION ARE PERFORMED WITHOUT EFFECTING THE SOIL AND BACKFILL MATERIAL.

CONSTRUCTION TECHNIQUES

SOIL EROSION & SEDIMENT CONTROL

CLEARING OF THE SITE

SCARIFICATION

TRANSITION HORIZON

Site Preparation

- 801.2 Soil Erosion And Sediment Control

  IN AREAS ADJACENT TO A WATER BODY OR WETLANDS, PREVENTATIVE EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE EMPLOYED CONSISTANT WITH SECTION 1504.0.

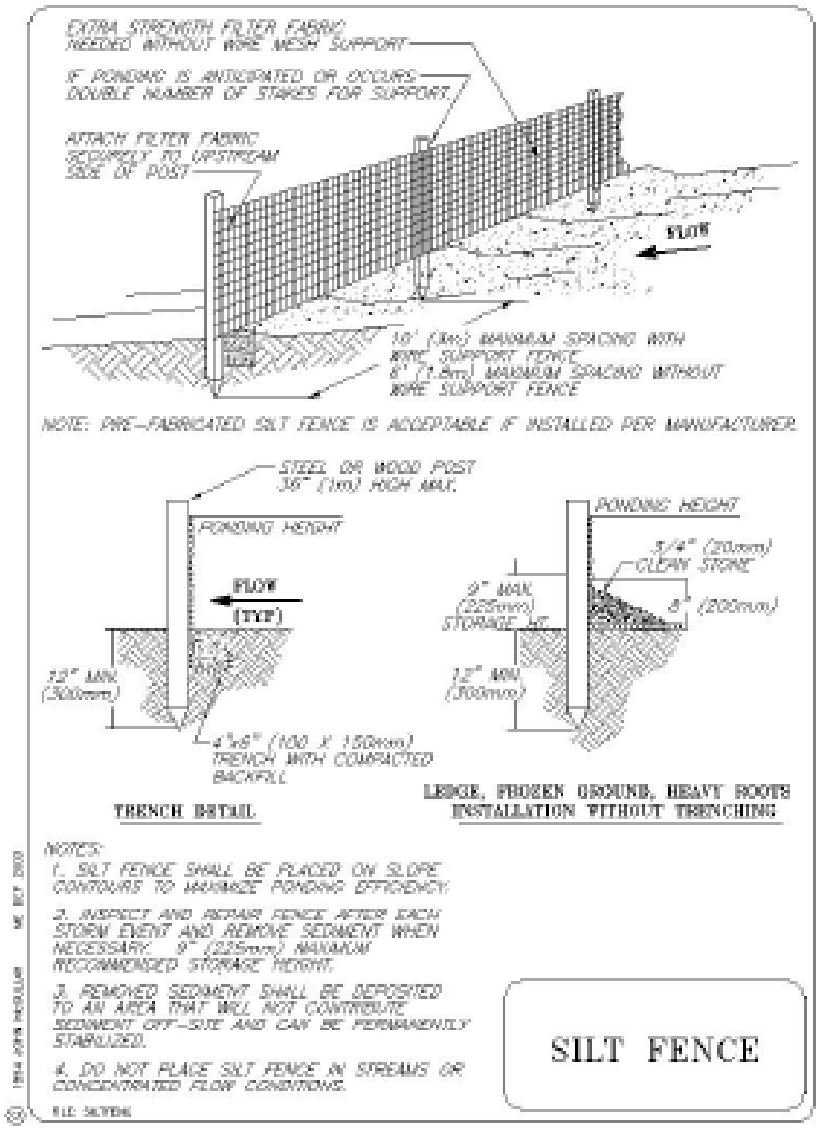
WORK ADJACENT TO SPECIAL WETLANDS AND WATER BODIES

1504.1 RUNNOFF PREVENTION

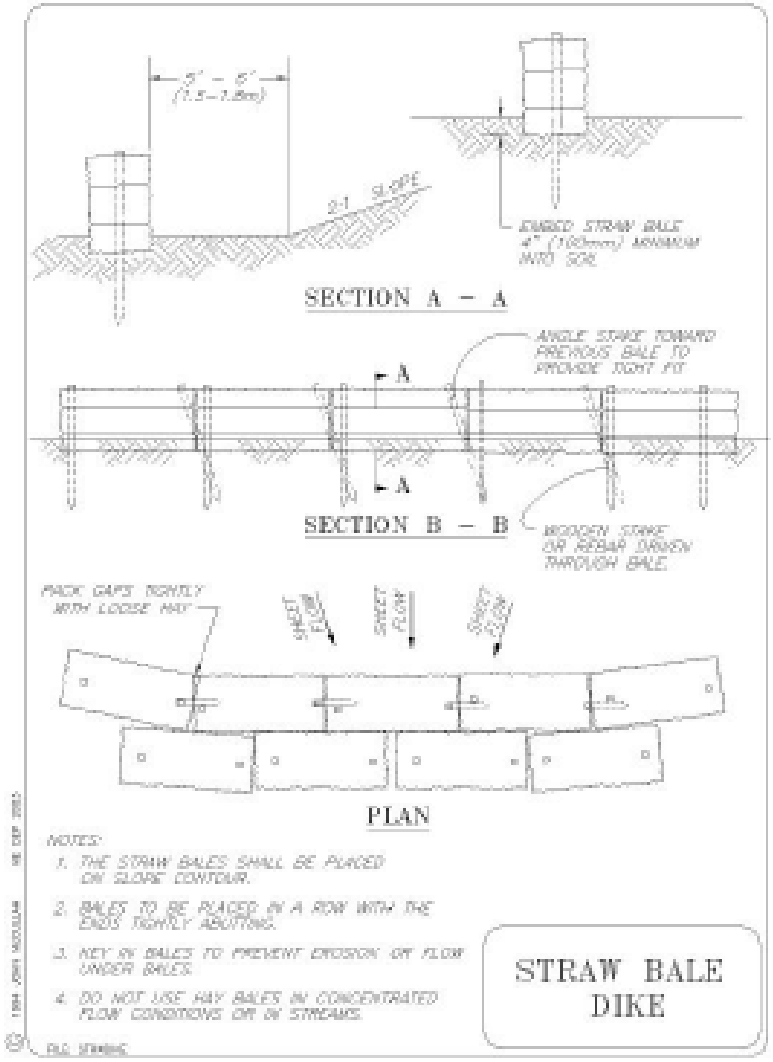
1504.2 PERMITS REQUIRED

1) SITES WITH SLOPES OF LESS THEN 20% =25', MORE THEN 20%=100' FROM ANY SOIL DISTURBANCE

2) RUNNOFF DIVERTED



e Department of Health & Human Services

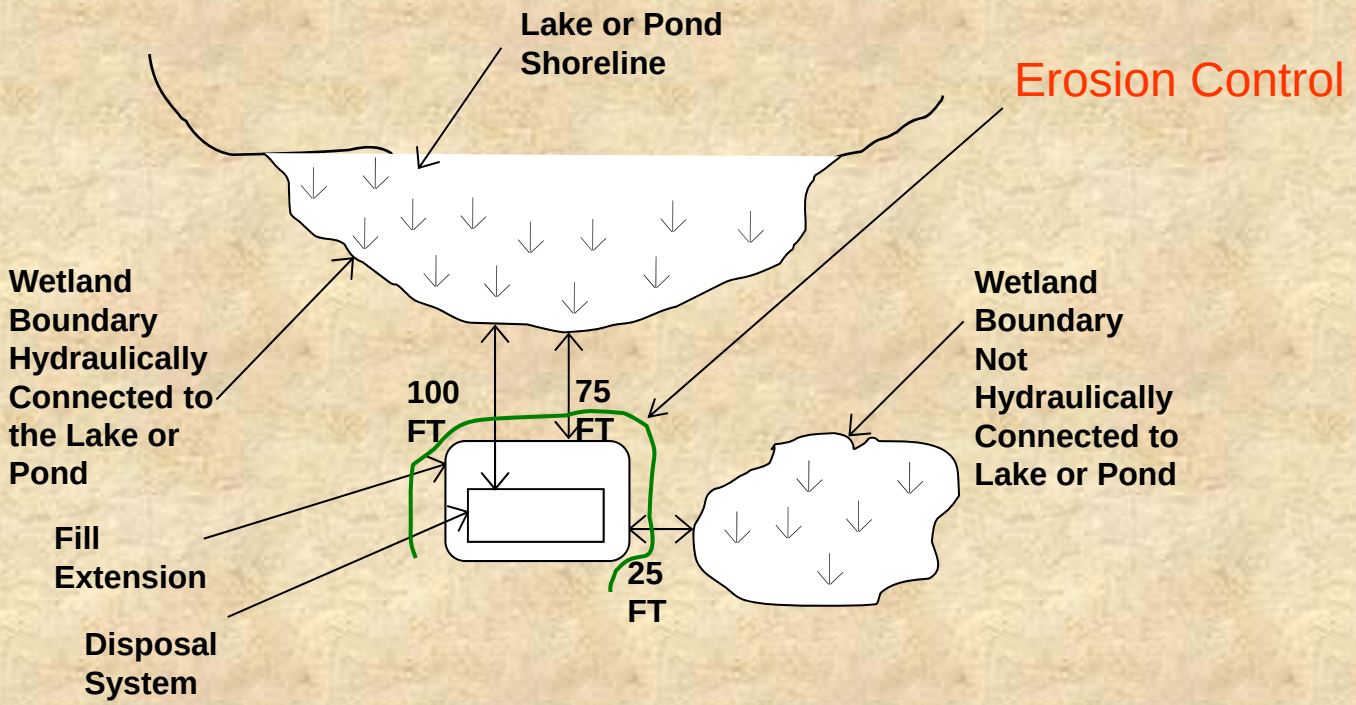


e Department of Health &
Human Services

Site Preparation

Chapter 8 - Disposal Field Construction Techniques

Section 801.2 & 1504.2.7 Placement of Erosion Control Devices



801.3 CLEARING OF THE SITE

VEGETATION MUST BE CUT AND REMOVED FROM THE AREA WHERE BACKFILL IS PLACED

DOES THIS INCLUDE THE FILL EXTENSIONS?

SCARIFICATION

801.4 SCARIFY THE SITE:

WHERE POSSIBLE, THE AREA UNDER THE DISPOSAL FIELD AND BACKFILL EXTENSIONS MUST BE PLOWED OR DISKED TO PRODUCE A THOROUGHLY ROUGHENED SURFACE. PLOWING MUST BE DONE PARALLEL TO THE TOPOGRAPHIC CONTOUR IN SUCH A DIRECTION THAT EACH PLOW FURROW WILL BE THROWN UPSLOPE.

THE SOIL SHOULD BE BROKEN UP TO A DEPTH OF 6-8 INCHES.

ALTERNATIVELY, A ROTO-TILLER OR THE TEETH OF A BACKHOE MAY BE USED.

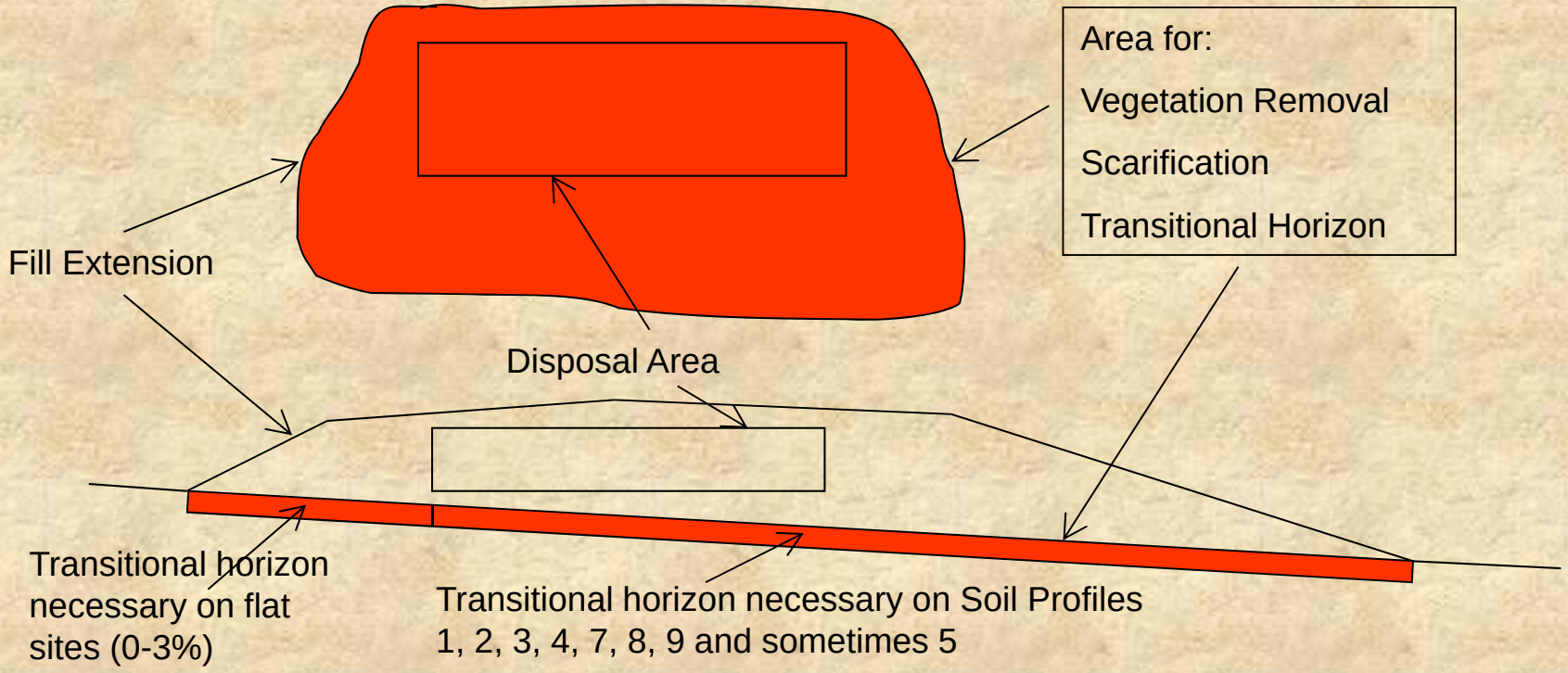
801.5 TRANSITIONAL HORIZON

ON SITES WHERE THE BACKFILL MATERIAL IS COARSER THAN THE ORIGINAL SOIL, A MINIMUM OF 4 INCHES OF BACKFILL MATERIALS MUST BE MIXED (BY PLOWING, DISCING OR ROTO-TILLING) INTO THE ORIGINAL SOIL TO FORM A TRANSITIONAL HORIZON BENEATH THE DISPOSAL AREA FOOTPRINT AND ALL SIDE AND DOWNHILL FILL EXTENSIONS.

Site Preparation

Chapter 8 - Disposal Field Construction Techniques

Section 801.3 Clearing Section 801.4 Scarify the site Section 801.5 Transitional horizon



DEEP SCARIFICATION MAYBE REQUIRED BY A FROST TOOTH OR OTHER ATTACHMENT

Human Services

Maine Department of Health &
Human Services

Maine Department of Health &
Human Services

Human Services

Maine Department of Health &
Human Services

Human Services

801.6 FILL LARGE HOLES

- LEFT AS A RESULT OF STUMP AND STONE REMOVAL, MUST BE FILLED WITH BACKFILL MATERIAL THAT MEETS THE REQUIREMENTS OF 803.2

801.7 SURFACE WATER DIVERSION

SURFACE WATER MUST BE DIVERTED AWAY FROM THE DISPOAL FIELD SITE

Maine Department of Health &
Human Services

EXCAVATION

802.2
BOTTOM OF DISPOSAL FIELD

- THIS SERVES AS THE FINAL STAGE OF THE DISTRIBUTION NETWORK
- MUST BE INSTALLED AT THE ELEVATION SPECIFIED ON THE PERMIT.
- MUST MAINTAIN A LEVEL GRADE.
  (2” WITHIN 100’)

802.3
AVOID UNNECESSARY COMPACTION

- RUBBER TIRED VEHICLES SHOULD NOT BE DRIVEN OVER THE EXPOSED BOTTOM OF THE DISPOSAL FIELD

- SHOULD BE CARRIED OUT BY A BACKHOE OPERATING OUTSIDE THE PERIMETER OF THE DISPOSAL AREA

Which looks like…….

And if not corrected could look like…..

Which would result in……

Maine Department of Health &
Human Services

802.3 REOPEN SMEARED OR COMPACTED BOTTOM OR SIDEWALL SURFACES

- THIS PORTION MUST BE SCARIFIED TO RE-OPEN SOIL PORES.
- ROTO-TILLING MAY BE NECESSARY TO REACH THE LIMIT OF COMPACTED SOIL DEPTH.

802.5 WEATHER CONDITIONS

WORK SHOULD BE SCHEDULED SO THAT EXCAVATED AREAS ARE NOT EXPOSED TO RAINFALL OR WIND BLOWN SILT

DEBRIS MUST BE REMOVED BEFORE BACKFILLING

DISPOSAL FIELDS SHOULD NOT BE INSTALLED IN FROZEN GROUND OR WHEN THE AMBIANT AIR TEMP. IS BELOW FREEZING

111.0 INSPECTIONS

111.1 REQUIRED:

IT SHALL BE THE DUTY OF THE PLUMBING INSPECTOR TO ENFORCE THE PROVISIONS OF THIS CODE AND TO MAKE SUCH INSPECTIONS AS MAY BE REQUIRED BY THIS CODE

111.5 INSPECTION REQUIRED :

THE LPI SHALL MAKE TWO INSPECTIONS, FIRST INSPECTION AT THIS TIME.

AFTER SITE PREPERATION:

TO MAKE SURE VEGITATION HAS BEEN CUT & REMOVED IN THE DISPOSAL FIELD AREA.

TO MAKE SURE THE AREA HAS BEEN SCARIFIED.

TO MAKE SURE A TRANSITIONAL HORIZON HAS BEEN ESTABLISHED

TO MAKE SURE EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED

BACKFILL

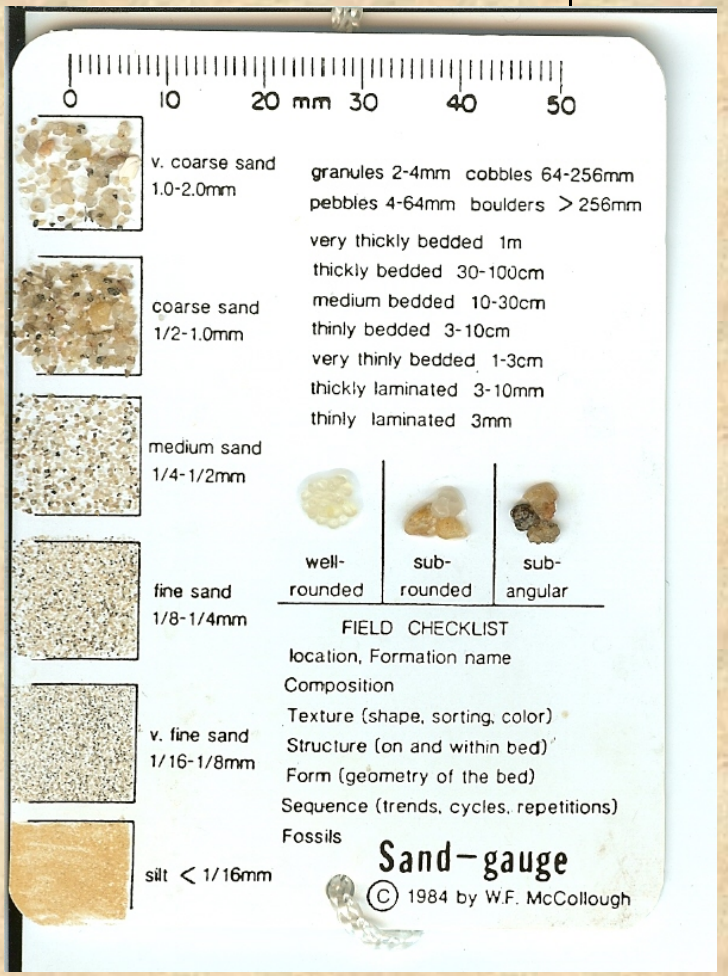
STANDARDS

804.2 Backfill standards: The backfill material must be gravelly coarse sand which meets the following requirements:

Table 800.1 – Backfill Textural Gradation

Sieve Size	Percent Passing by Weight
3”	100
1.5”	95-100
0.75”	90-100
#4	75-100
#10	55-85
#20	30-65
#40	15-45
#60	10-25
#100	5-15
#200	2-8
Clay Fraction	0-2

Construction Related Rules
How to Check Sand Spec:



Construction Related Rules

Table 1. Soil Separates

Name of Separate	Diameter (range) mm.
Very coarse sand	2.00 - 1.00
Coarse sand	1.00 - 0.50
Medium sand	0.50 - 0.25
Fine sand	0.25 - 0.10
Very fine sand	0.10 - 0.05
Silt	0.05 - 0.002
Clay	less than 0.002

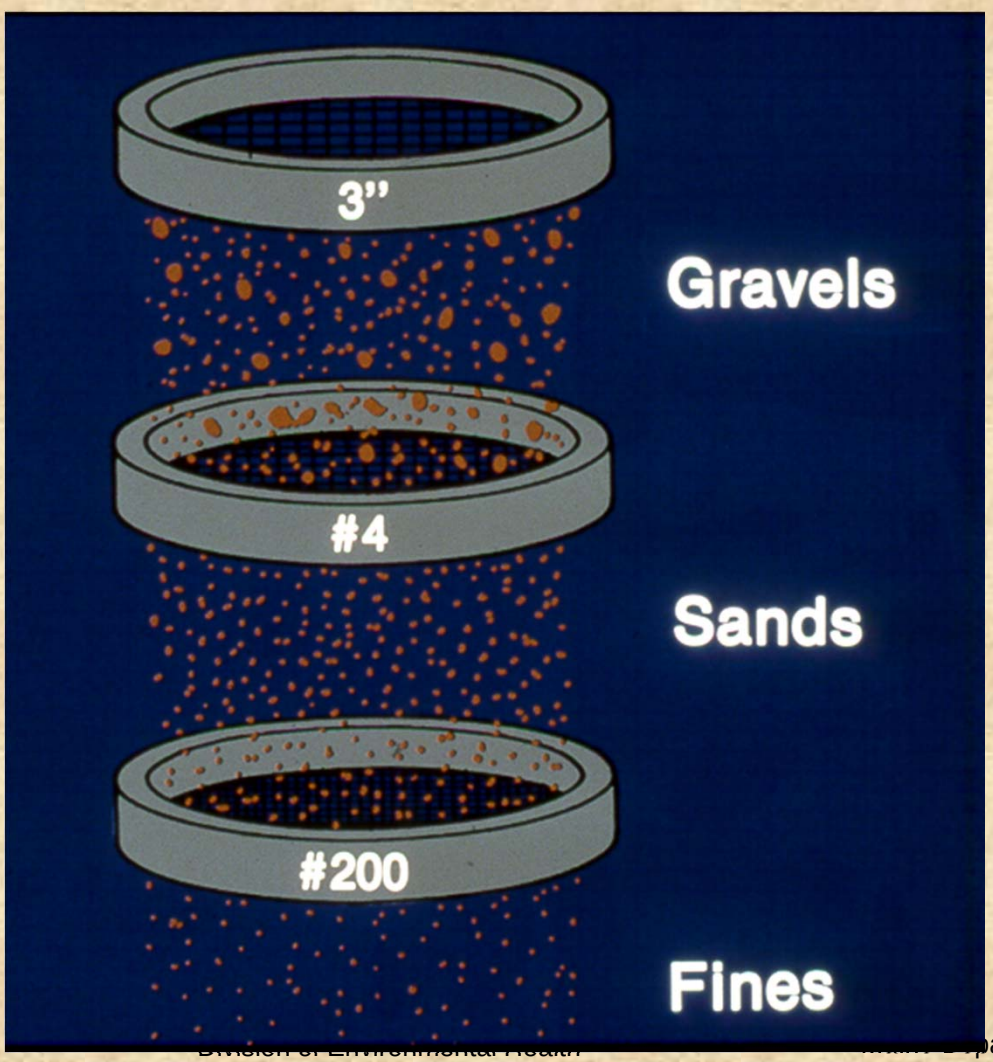
Gravel / Sand / Fines

- Gravels are between # 4 sieve and 3”
- Sands are between # 200 sieve and # 4 sieve
- Fines are smaller than # 200 sieve

- Particle Sizes
  - Gradation or Mechanical Analyses
  - Sieves for larger particles
  - Hydrometer for fine particles

Sieve Analyses

Sieve Analyses



Sieve Designation - Large

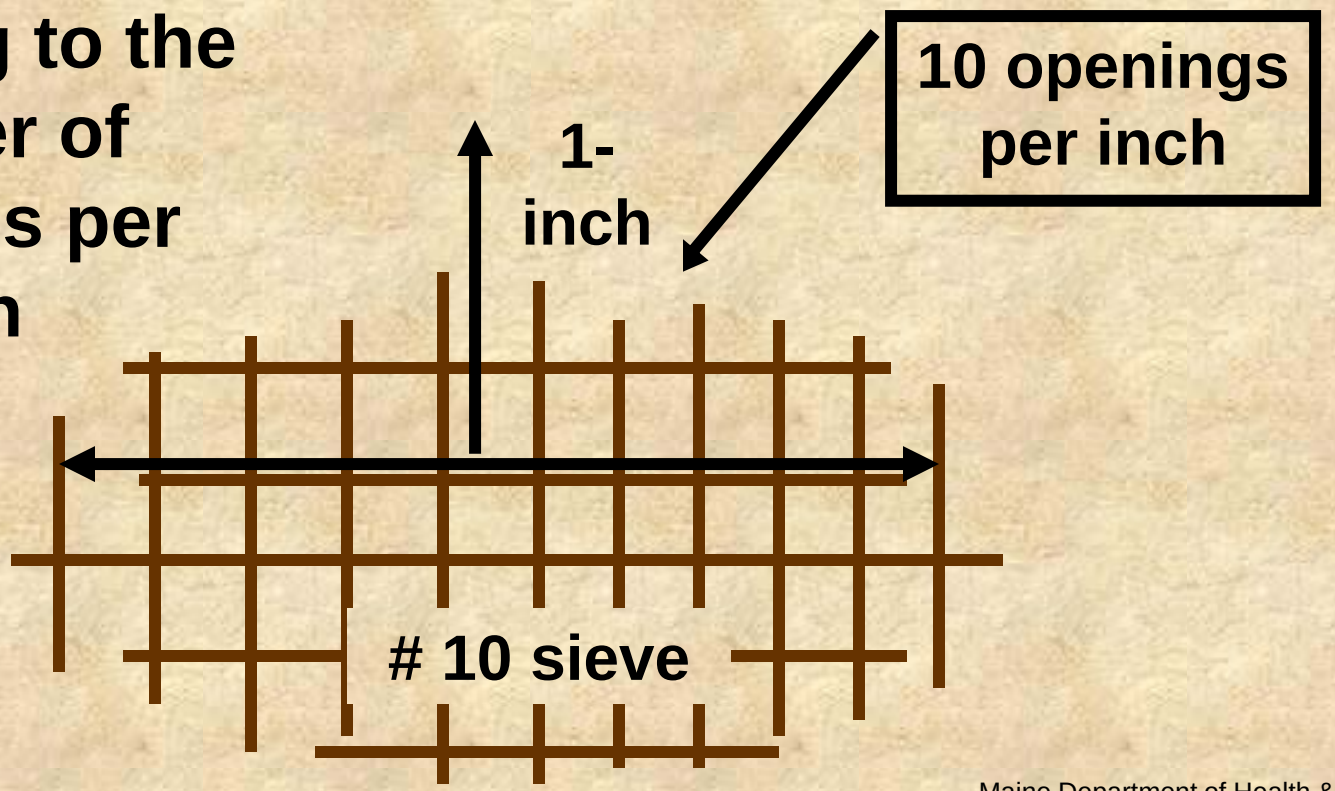
Sieves larger than the #4 sieve are designated by the size of the openings in the sieve

Review Activity 2

- Commonly used larger size sieves
  - 3 inch
  - 2 inch
  - 1-1/2 inch
  - 1 inch
  - 3/4 inch
  - 1/2 inch
  - 3/8 inch

Sieve Designation - Smaller

Smaller sieves are numbered according to the number of openings per inch



Review Activity 3

- Commonly used smaller size sieves
  - # 4
  - # 10
  - # 20
  - # 40
  - # 60
  - # 140
  - # 200

Construction Related Rules

S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

t Name TUPPER PIT TESTING

Client CONSTRUCTION CONSULTANTS

Material Type IN DRAIN SAND

Material Source

Project Number 04-0426

Lab ID 1664G

Date Received 5/6/2004

Date Completed 5/7/2004

Tested By CRAIG TURCOTTE

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	SPECIFICATIONS (%)
150 mm	6"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	100	
38.1 mm	1-1/2"	100	
25.0 mm	1"	100	
19.0 mm	3/4"	100	
12.5 mm	1/2"	100	
9.5 mm	3/8"	94	100
4.75 mm	No. 4	89	95 - 100
2.36 mm	No. 8	82	80 - 100
1.18 mm	No. 16	71	50 - 85
600 um	No. 30	51	25 - 60
300 um	No. 50	26	5 - 30
150 um	No. 100	10	0 - 10
75 um	No. 200	3.9	

Construction Related Rules

Washed concrete sand meeting the ASTM C-33 specification.

Sieve Designation		Percentage by Weight Passing Square Mesh Sieves
Metric	English	
9.5 mm	3/8 inch	100
4.75 mm	No. 4	95-100
2.36 mm	No. 8	80-100
1.18 mm	No. 16	50-85
600 µm	No. 30	25-60
300 µm	No. 50	10-30
150 µm	No. 100	2-10
75 µm	No. 200	0-5.0 maximum

COARSE SAND

MEDIUM SAND

WET SITES on 9 INCH SOILS

Maine Department of Health &
Human Services

PLASTIC LIMIT

800.2 General: On sites with fine soil textures, excavations that expose the bottom and sidewall area of the disposal field must not be carried out when the soil moisture content is above the plastic limit except when correcting a nuisance, there is no practical alternative, the plumbing inspector agrees and special construction techniques are used. The absolute plastic limit can be estimated by rolling the soil with the fingers. If the soil forms a wire or rod 1/8th of an inch in diameter and does not crumble when handled, the soil moisture content is too high to proceed with the excavation.

PLASTIC LIMIT

The soil must be dry and friable when site prep is started.
Smearing and compaction due to construction in a wet soil decrease the soil's ability to absorb wastewater. If a sample of the soil at the trench bottom depth forms a ribbon (e.g. 1/8-inch diameter) when rolled between the palms of the hands, the soil is too wet to excavate. If the soil crumbles into its natural structure, excavation may proceed. This pre-scarification examination is essential to help ensure proper operation of the system.

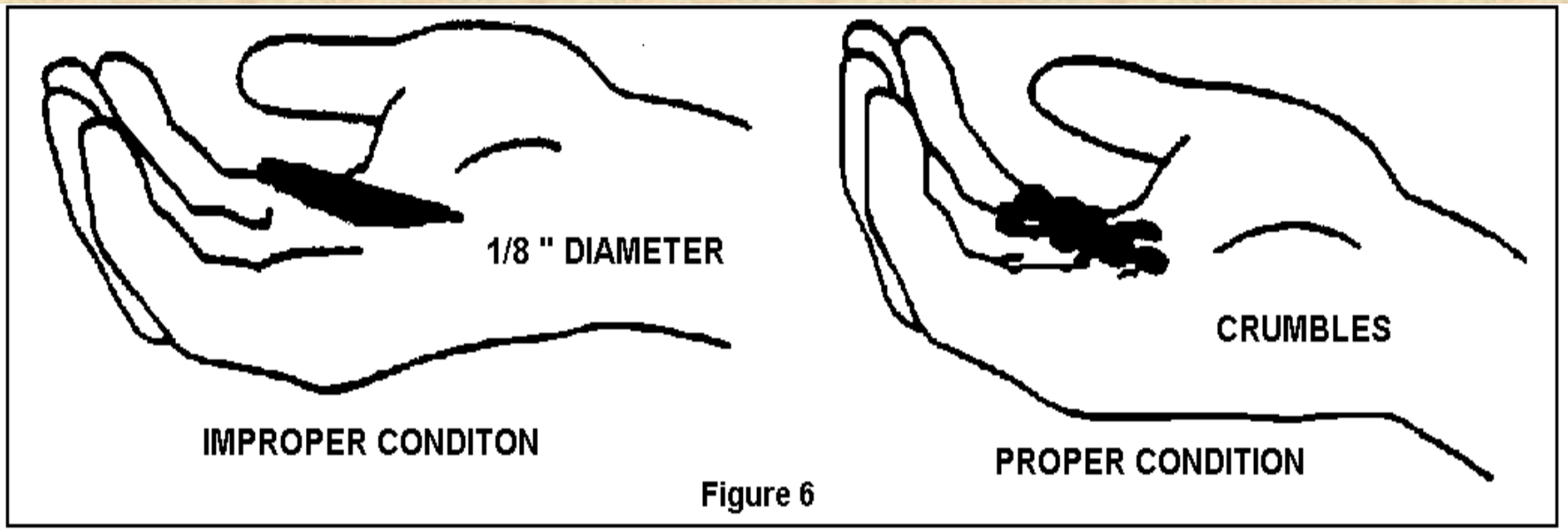


Figure 6

INSTALLATIONS

TANK INSTALLATIONS

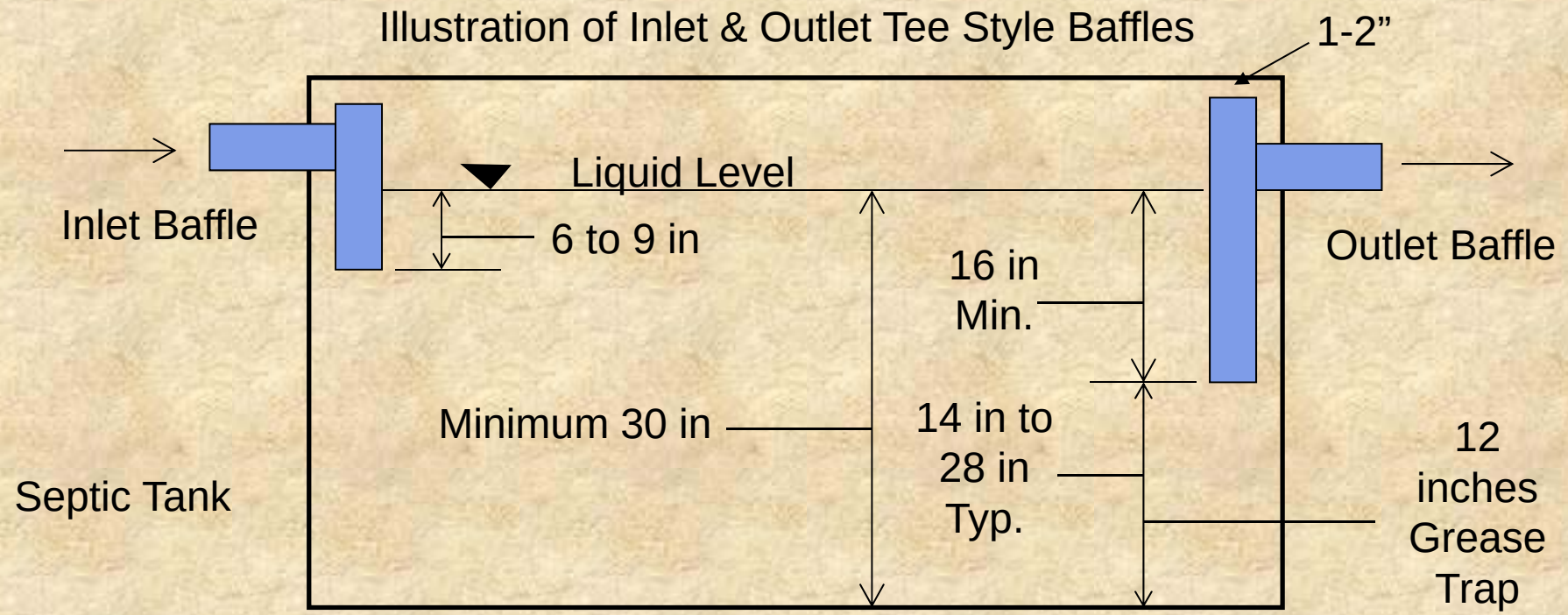
FILL MUST BE FREE OF LARGE STONES, ROOTS OR FOREIGN OBJECTS

MUST BE PLACED IN LAYERS AND EXTEND 4 INCHES BEYOND THE BASE AND FULLY TAMPERED

LEVEL

Construction Related Rules

Chapter 9 – Septic Tanks, Dosing Tanks & Grease Interceptors



Construction Related Rules

Chapter 9 – Septic Tanks, Dosing Tanks & Grease Interceptors

Section 904.0 Inlet & Outlet Connections
Sets the following requirements for the septic tank baffles:

Inlet Baffle: 4” if PVC
Extends 6” to 9” below liquid level
Watertight seal with tank wall

Outlet Baffle: 4” if PVC
Extends 16” below liquid level
Extends to within 1-2” of tank top
Watertight seal with tank wall

Construction Related Rules

Chapter 9 – Septic Tanks, Dosing Tanks & Grease Interceptors

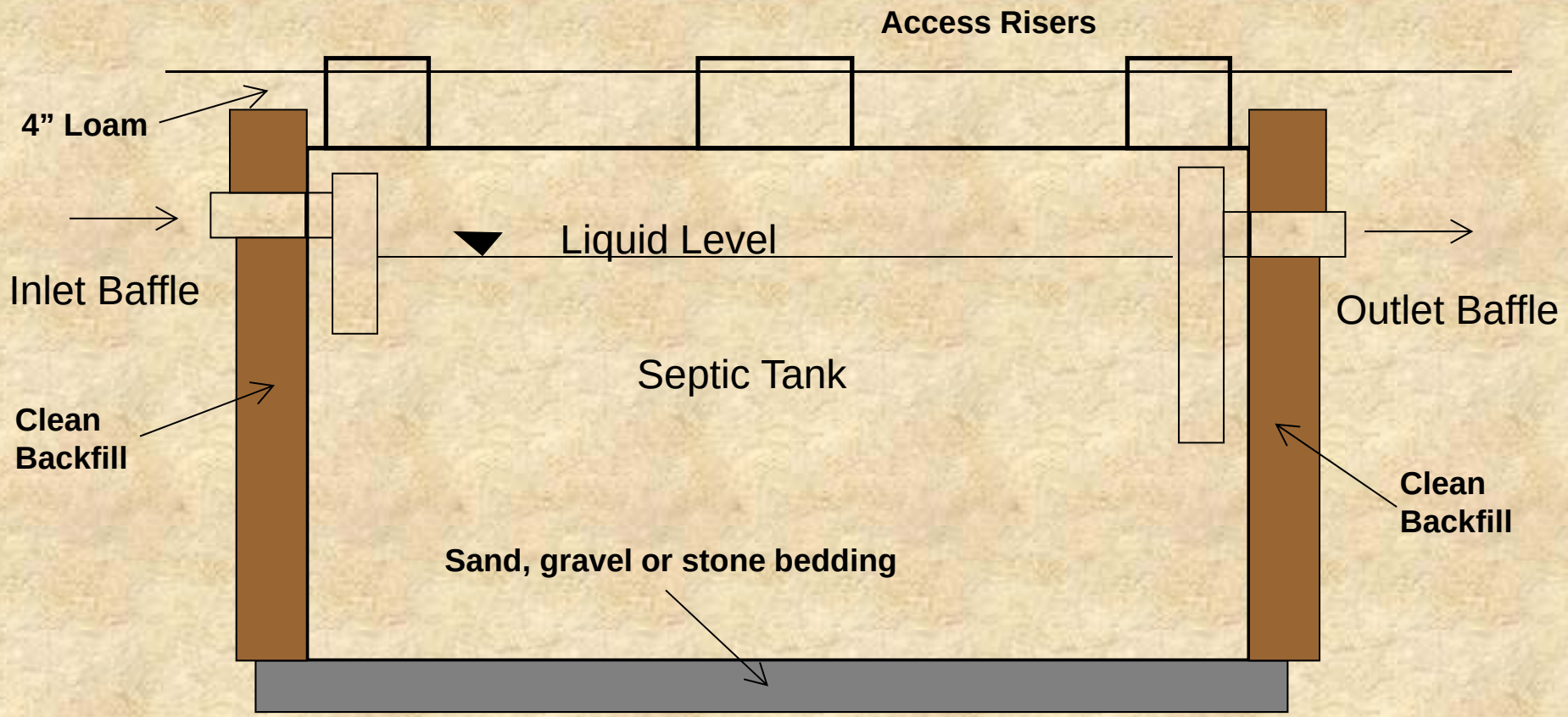


Illustration of Tank Installation

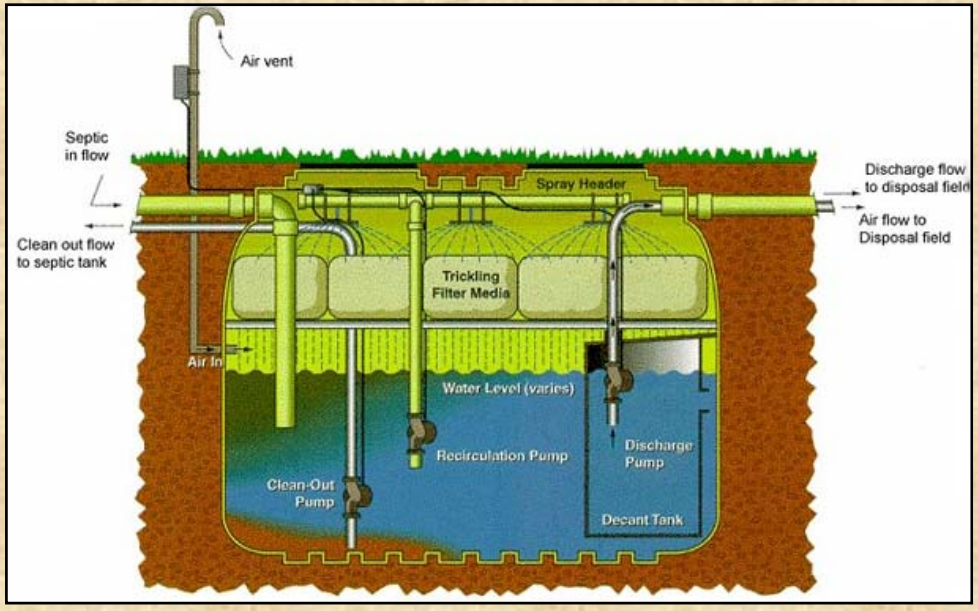
Subsurface Wastewater Disposal Rules

Advanced Treatment

The bacteria in aerobic treatment tanks, although more active, are also more fragile and sensitive to fluctuating conditions than anaerobic bacteria in septic tanks.

Aerobic treatment tanks are relatively more expensive, require maintenance, and need an energy source.

At right is a recirculating extended treatment tank.



RISERS, RESIDENTIAL

IF BURIED, WATER TIGHT RISERS TO WITHIN 6” OF ORIGINAL GRADE ARE REQUIRED.

RISER OPENING MUST BE 18” IN DIAMETER OVER THE TANK COVER

IF THERE IS A PUMP STATION WITHIN THE TANK, THE RISER DIAMETER MUST BE 24” TO THE GROUND SURFACE

OUTLET BAFFLES THAT UTILIZE AN EFFLUENT FILTER MUST HAVE A RISER OF AT LEAST 18” IN DIAMETER AND TO THE GROUND SURFACE

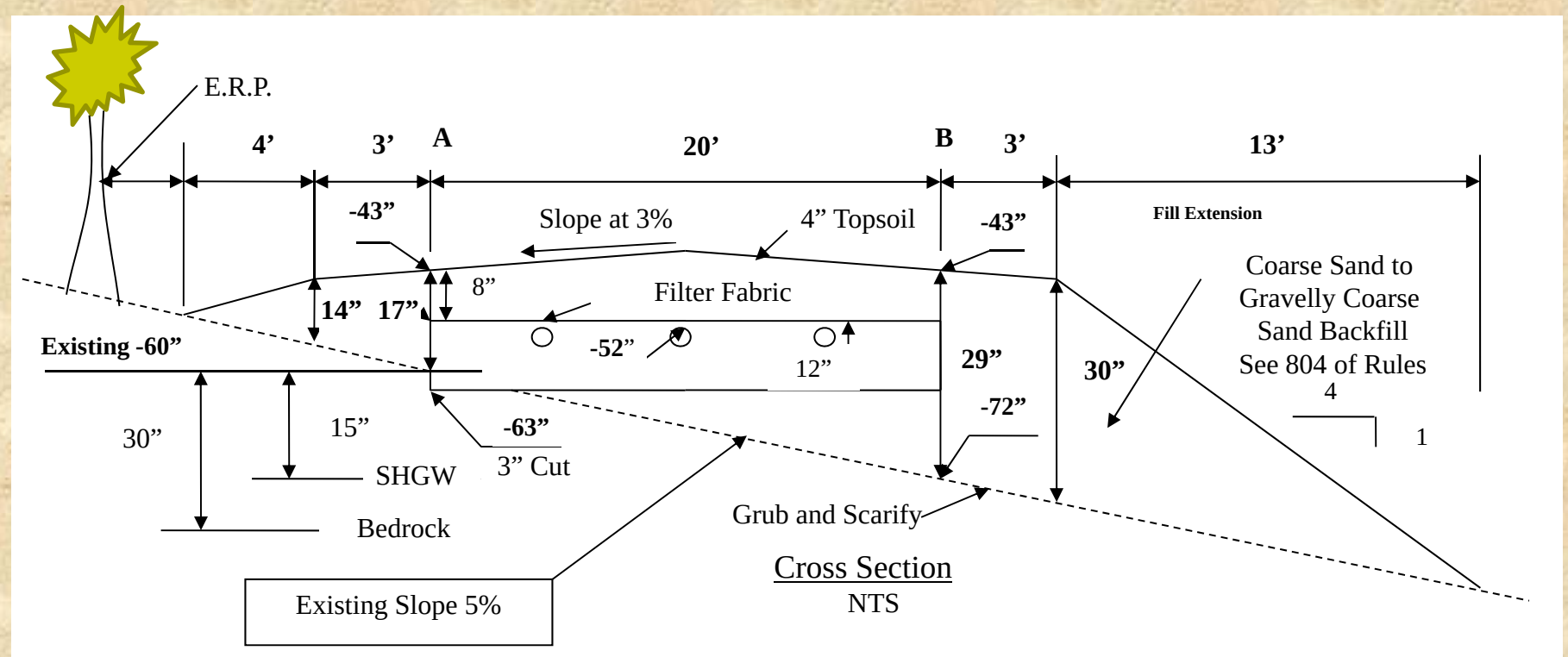
RISERS, OTHER FACILITIES

ALL RISERS MUST BE LOCATED AT GRADE. GRADE MUST SLOPE AWAY FROM THE OPENINGS

Not a legal pump station

Maine Department of Health & Human Services

Elevations


E.R.P.
4’
3’
A
20’
B
3’
13’
-43”
Slope at 3%
4” Topsoil
-43”
Fill Extension
Coarse Sand to Gravelly Coarse Sand Backfill See 804 of Rules
8”
Filter Fabric
14”
17”
Existing -60”
-52”
12”
29”
30”
4
1
-72”
30”
15”
-63”
3” Cut
SHGW
Bedrock
Grub and Scarify
Existing Slope 5%
Cross Section
NTS

Length of Fill Extensions
Quick Field Review - Up Slope

Upslope thickness of fill in feet at edge of disposal field
12 inches / 12 = (1.00')
1.00
Divide By ---------- = 2.5 feet
0.40
(Proposed finish grade slope in feet per foot + existing ground grade in feet per foot)
(4 to 1 = 25 % = 0.25 feet per foot) + (rise over run, difference in elevation / distance)
0.25 feet per foot (25%) + 4 feet / 20 feet (15%)
0.25 + 0.15
(0.40)

Note: When existing ground up slope is three (3) percent or less the existing ground slope should be calculated to be level.

Length of Fill Extensions
Quick Field Review Up Slope

Up Slope Shoulder Reductions

Level Disposal Field Shoulder Slope = 3' x.03 (3%) = 0.09 Feet

5 % Existing ground slope = 3' x0.05 = 0.15 – 0.09 = 0.06/(0.25 + 0.05) = 0.20 feet less

10% Existing ground slope = 3' x0.10 = 0.30 – 0.09 = 0.21/(0.25 + 0.10) = 0.60 feet less

15% Existing ground slope = 3' x0.15 = 0.45 – 0.09 = 0.36/(0.25 + 0.15) = 0.90 feet less

20% Existing ground slope = 3' x0.20 = 0.60 – 0.09 = 0.51/(0.25 + 0.20) = 1.13 feet less

Example = 2.5 feet required – 0.90 feet at 15% = Round to 2 feet Total Fill Extension

Total Distance From Disposal Field Corner to Edge of Fill Extension Including 3 Foot shoulder = 5 Feet

Length of Fill Extensions
Quick Field Review – Down Slope

Down slope thickness of fill in feet at edge of disposal field

48 inches / 12 = (4.00')

4.00

Divide By ---------- = 40 feet

0.10

(Proposed finish grade slope in feet per foot - existing ground grade in feet per foot)

(4 to 1 = 25 % = 0.25 feet per foot)-(rise over run, difference in elevation / distance)

0.25 feet per foot (25%) – 4 feet / 20 feet (15%)

0.25 – 0.15

(0.10)

Length of Fill Extensions
Quick Field Review – Down Slope

Down Slope Shoulder Additions

Level Disposal Field Shoulder Slope = 3' x.03 (3%) = 0.09 feet

5 % Existing ground slope = 3' x0.05 = 0.15 – 0.09 = 0.06/(0.25 – 0.05) = 0.3 feet more

10% Existing ground slope = 3' x0.10 = 0.30 – 0.09 = 0.21/(0.25 - 0.10) = 1.4 feet more

15% Existing ground slope = 3' x0.15 = 0.45 – 0.09 = 0.36/(0.25 – 0.15) = 3.6 feet more

20% Existing ground slope = 3' x0.20 = 0.60 – 0.09 = 0.51/(0.25 - .20) = 10.2 feet more

Example = 40 feet required + 3.6 feet at 15% = Round to 44 feet Total Fill Extension

Total Distance From Disposal Field Corner to Edge of Fill Extension Including 3 Foot shoulder = 47 Feet

Construction Related Rules

TABLE 800.2
Maximum Percent passing by weight

		Nominal Stone Size	
		1 ½”	¾”
Sieve Size	2”	100	100
	1 ½’”	95 - 100	100
	3/4”	0 - 40	90 - 100
	1/2”	0 - 20	0 - 55
	3/8”	0 - 8	0 - 25
	#4	0 - 5	0 - 10
	#200	0 - 2	0 - 2

Construction Related Rules

Chapter 8 - Disposal Field Construction Techniques

Section 805.2.4 Placement

Stone may be placed in the disposal field site using a back-hoe, front-end loader, or dump truck, from the sides of the disposal field rather than by driving onto the prepared area of the disposal field.

In the case of large disposal fields, tracked equipment may be operated within the disposal field.

Inspections

Second Inspection

A common installation error is use of poor quality or poorly sized stone, which results in reduced void space and occasional sealing off by very fine particles.

Stone must be ¾" OR 1 ½" in size, clean, and evenly sized to provide sufficient void space.

Some installers wrongly interpret the size range as allowing a mix of sizes.

PIPING BETWEEN COMPONANTS

1402.1 SIZING

1402.1.1 GRAVITY FLOW – NO LESS THEN 3” IN DIAMETER, PRIMITIVE 1.5” IN DIAMETER

1402.1.2 PUMP DISCHARGE-NO LESS THAN MANUFACTURER SPEC.

1402.3 JOINTS-MADE WATERTIGHT

1402.4 LAID IN A FIRM FOUNDATION AND PROTECTED FROM FREEZING

1402.6.1 BUILDING SEWER PITCH – PIPES UNDER 4” = 1/4 “ PER FOOT, PIPES 4” & LARGER = 1/8” PER FOOT MAY BE AUTHORIZED BY THE LPI

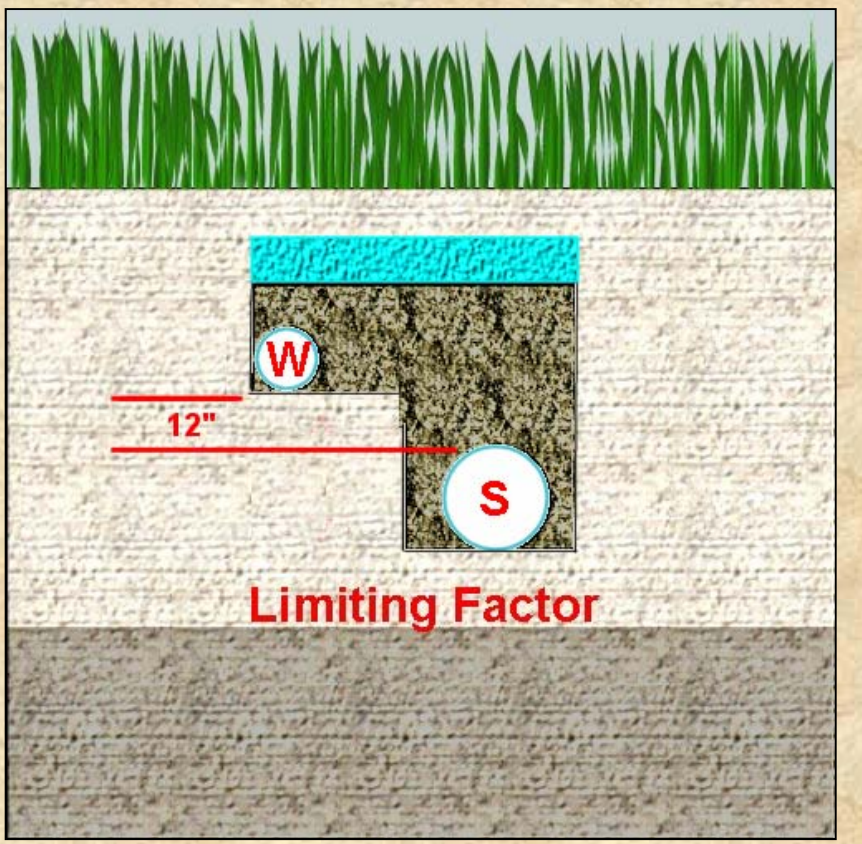
1402.6.2 EFFLUENT LINE PITCH – 1/8” PER FOOT

Construction Related Rules

Section 1402.8 Water Service & Building Sewer

A structure's water service pipe and the building sewer shall be separated by undisturbed or compacted earth when possible.

The water service pipe may only be placed in the same trench as the building drain and building sewer when the bottom of the water service pipe at all points shall be a minimum of 12 inches above the top of the sewer at its highest point, and the water service pipe shall be placed on a solid shelf excavated at one side of the common trench.



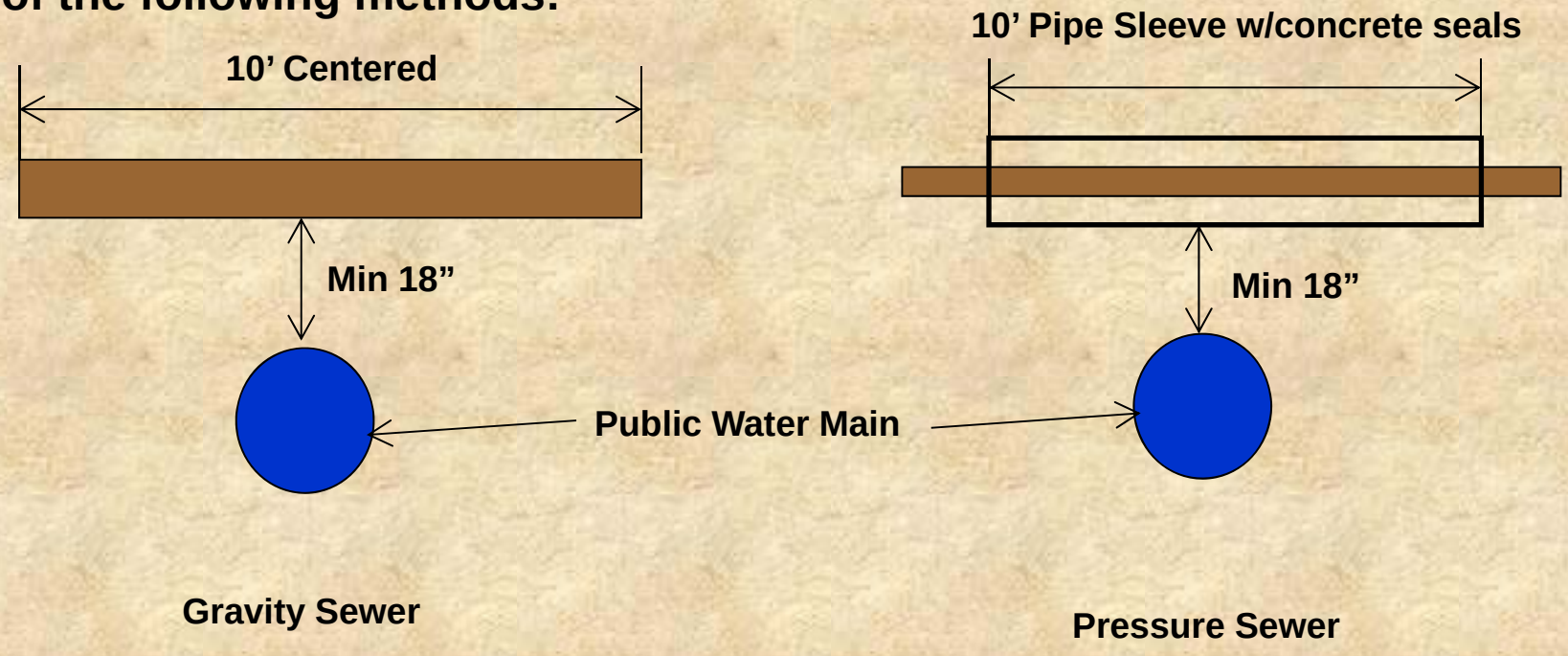
The disposal field stone shall be covered with a layer of non-woven fabric or two (2) inches of compressed hay.

Non-woven fabric may be used, provided the edges of adjacent sheets of fabric overlap by a minimum of 6 inches; and the for the fabric shall be 4.0 ounces/square yard (per ASTM D-3776).

Construction Related Rules

Section 1402.10 Public Water Main & Building Sewer Crossing

A building sewer crossing above a public water main shall utilize one of the following methods:



SECOND INSPECTION
ELEVATIONS, BACKFILL, SLOPE, PITCH…

PRIOR TO COVERING THE SYSTEM

SYSTEM COMPONENTS

STONE, PIPES OR PROPRIETARY DEVICES

TANKS, HAY, FILTER FABRIC

FILL BENEATH AND BESIDE THE DISPOSAL FIELD INCLUDING FILL EXTENSIONS

CURTAIN DRAINS, DIVERSION DITCHES, BERMS

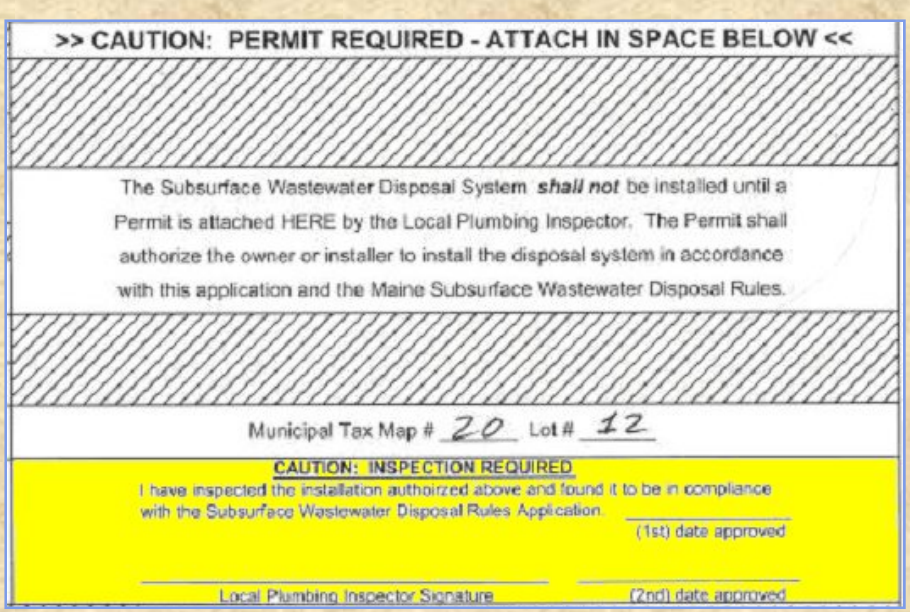
SHOULDER, FILL EXTENSIONS

Permitting

Certificates of Approval

The LPI must sign the inspection block on the HHE-200 Form or Plumbing Application, just below the permit label area, which comprises a Certificate of Approval.

The LPI should simultaneously sign the permittee's copy and the Town's copy. This will provide the Town and the permitee with a permanent record that the inspection took place.


>> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<

The Subsurface Wastewater Disposal System ***shall not*** be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

Municipal Tax Map # 20 Lot # 12

CAUTION: INSPECTION REQUIRED

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

(1st) date approved

Local Plumbing Inspector Signature

(2nd) date approved

804.2 (3)
FILL MATERIAL PLACEMENT ABOVE DISPOSAL FIELD

IMMEDIATLEY ABOVE THE FILTER FABRIC OR HAY, FILL IS REQUIRED AS SPECIFIED ON THE PLANS, (TABLE 800.1)

A MINIMUM OF 8 INCHES INCLUDING COVER MATERIAL

COVER MATERIAL

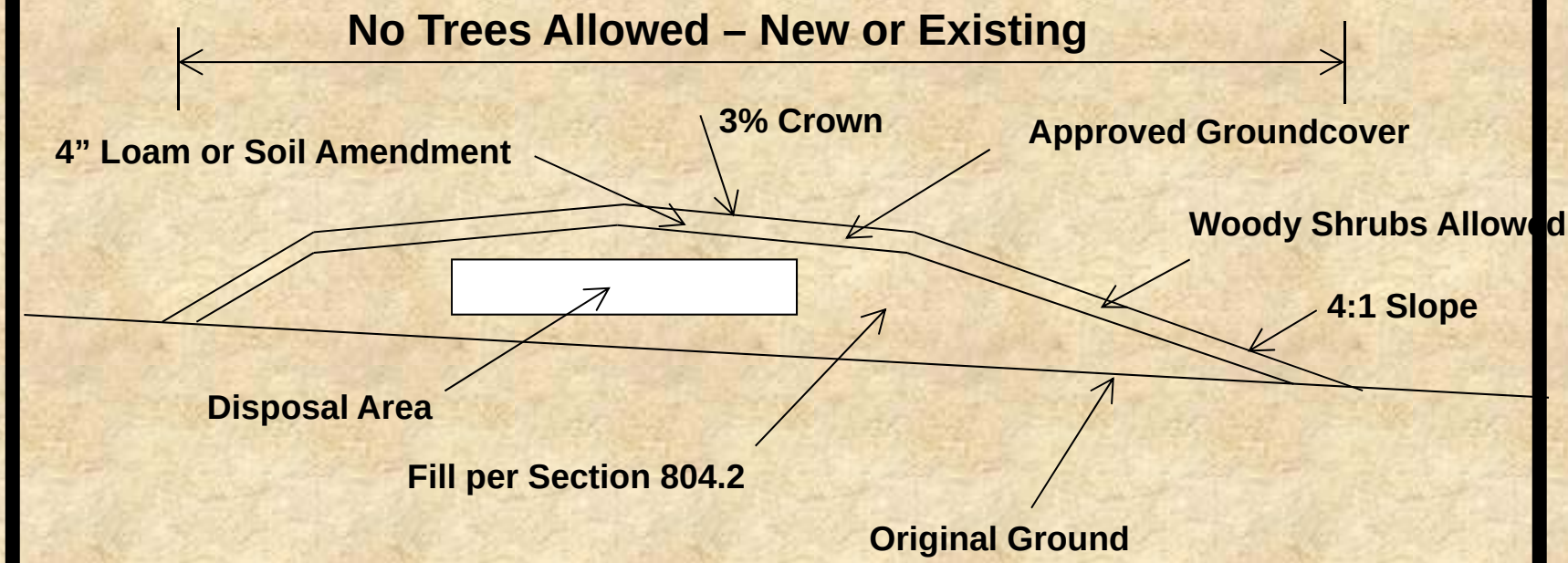
804.2 (4) COVER MATERIAL

IMMEDIATLEY ABOVE THE BACKFILL OR FILL MATERIAL, A MINIMUM OF 4” OF SOIL OR SOIL AMENDMENT MIX, SUITIBLE FOR ESTABLISHMENT OF A GOOD VEGETATIVE COVER MUST BE PLACED OVER THE ENTIRE DISTURBED SOIL AREA, INCLUDING FILL EXTENSIONS

3% CROWN, 3’ SHOULDER AND 4:1 FILL EXTENSIONS

Construction Related Rules

Chapter 8 - Disposal Field Construction Techniques



806.4 EROSION CONTROL

VEGITATIVE COVERS

GRASS, CLOVER, TREFOIL, VETCH, WILD FLOWERS, ETC..

OTHER COVERS
BARK CHIPS, WOOD CHIPS

WOODY SHRUBS AND TREES ARE UNACCEPTABLE

Spring 2009

Division of Environmental Health
Subsurface Wastewater Program

Maine Department of Health &
Human Services

107.1 PERMIT REQUIRED-WORK MUST NOT BE STARTED UNTIL THE LPI HAS ISSUED A PERMIT

108.6 TIME LIMIT- COMPLETED IN 2 YEARS OF PERMITTING (Work has not commenced within two years.)

108.7 DEPARTURES FROM DESIGN- MUST BE APPROVED BY THE SITE EVALUATOR

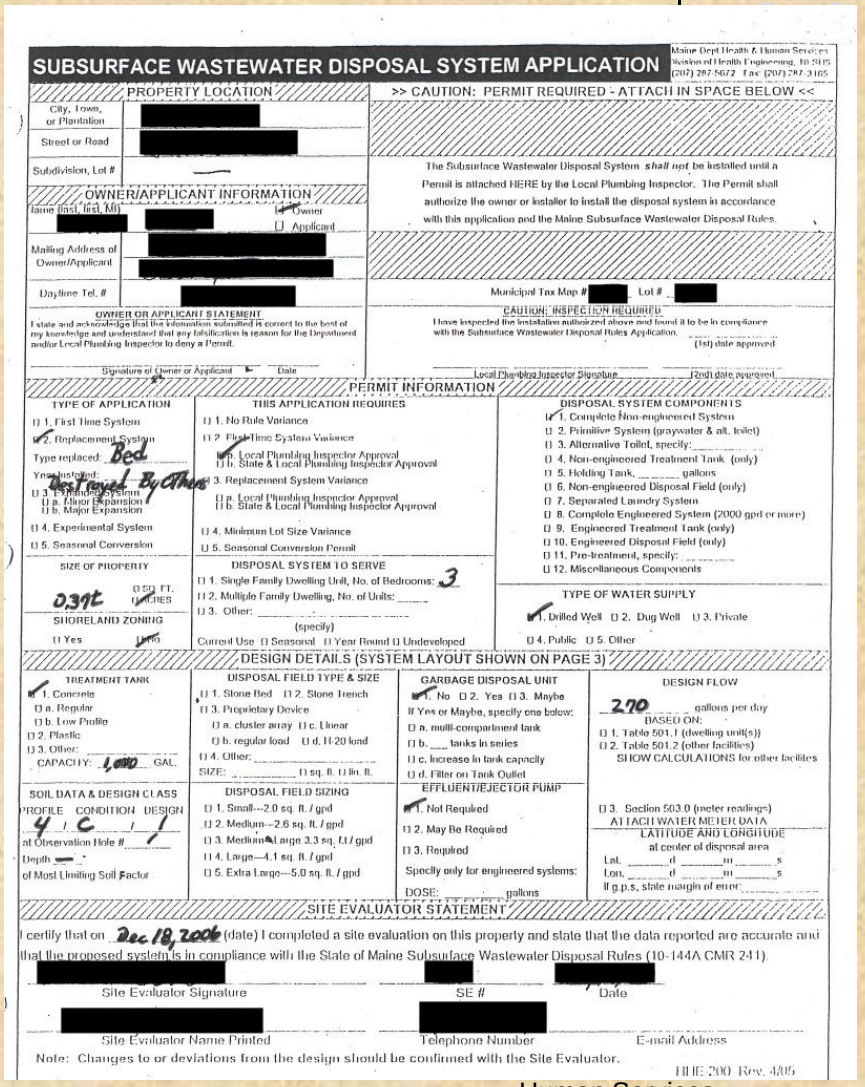
111.6 NOTIFICATION REQUIRED- THE LPI SHALL BE NOTIFIED 24 HOURS BEFORE THE SYSTEM IS READY FOR INSPECTION

HHE-200 Form

Page One

Page one of the HHE-200 Form must be signed by both the owner/applicant and the Site Evaluator before a permit can be issued.

It is important to check that each block on the form is properly completed. If any information is lacking, the LPI should not issue the permit.



SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Dept Health & Human Services
Division of Health Engineering, 10 SHS
(207) 287-5672 Fax: (207) 287-3165

PROPERTY LOCATION

>> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<

City, Town, or Plantation: [redacted]
Street or Road: [redacted]
Subdivision, Lot #: —

The Subsurface Wastewater Disposal System *shall not* be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

OWNER/APPLICANT INFORMATION

Name (last, first, MI): [redacted] ☑ Owner ☐ Applicant
Mailing Address of Owner/Applicant: [redacted]
Daytime Tel. #: [redacted]

Municipal Tax Map # [redacted] Lot # [redacted]

OWNER OR APPLICANT STATEMENT

I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

Signature of Owner or Applicant — Date

CAUTION: INSPECTION REQUIRED

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

(1st) date approved

Local Plumbing Inspector Signature — (2nd) date approved

PERMIT INFORMATION

TYPE OF APPLICATION
☐ 1. First Time System
☑ 2. Replacement System
Type replaced: Bed
Year installed: Don't Know By Others
☐ 3. Expansion of System
☐ a. Minor Expansion
☐ b. Major Expansion
☐ 4. Experimental System
☐ 5. Seasonal Conversion

THIS APPLICATION REQUIRES
☐ 1. No Rule Variance
☐ 2. First Time System Variance
☐ a. Local Plumbing Inspector Approval
☐ b. State & Local Plumbing Inspector Approval
☐ 3. Replacement System Variance
☐ a. Local Plumbing Inspector Approval
☐ b. State & Local Plumbing Inspector Approval
☐ 4. Minimum Lot Size Variance
☐ 5. Seasonal Conversion Permit

DISPOSAL SYSTEM COMPONENTS
☑ 1. Complete Non-engineered System
☐ 2. Primitive System (graywater & alt. toilet)
☐ 3. Alternative Toilet, specify: ____
☐ 4. Non-engineered Treatment Tank (only)
☐ 5. Holding Tank, _____ gallons
☐ 6. Non-engineered Disposal Field (only)
☐ 7. Separated Laundry System
☐ 8. Complete Engineered System (2000 gpd or more)
☐ 9. Engineered Treatment Tank (only)
☐ 10. Engineered Disposal Field (only)
☐ 11. Pre-treatment, specify: ____
☐ 12. Miscellaneous Components

SIZE OF PROPERTY
0.39± ☐ SQ. FT. ☑ ACRES

SHORELAND ZONING
☐ Yes ☑ No

DISPOSAL SYSTEM TO SERVE
☐ 1. Single Family Dwelling Unit, No. of Bedrooms: 3
☐ 2. Multiple Family Dwelling, No. of Units: ____
☐ 3. Other: ____ (specify)
Current Use ☐ Seasonal ☐ Year Round ☐ Undeveloped

TYPE OF WATER SUPPLY
☑ 1. Drilled Well ☐ 2. Dug Well ☐ 3. Private
☐ 4. Public ☐ 5. Other

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK
☑ 1. Concrete
☐ a. Regular
☐ b. Low Profile
☐ 2. Plastic
☐ 3. Other: ____
CAPACITY: 1,000 GAL.

DISPOSAL FIELD TYPE & SIZE
☐ 1. Stone Bed ☐ 2. Stone Trench
☐ 3. Proprietary Device
☐ a. cluster array ☐ c. Linear
☐ b. regular load ☐ d. H-20 load
☐ 4. Other: ____
SIZE: ____ ☐ sq. ft. ☐ lin. ft.

GARBAGE DISPOSAL UNIT
☑ 1. No ☐ 2. Yes ☐ 3. Maybe
If Yes or Maybe, specify one below:
☐ a. multi-compartment tank
☐ b. ____ tanks in series
☐ c. Increase in tank capacity
☐ d. Filter on Tank Outlet

DESIGN FLOW
270 gallons per day
BASED ON:
☐ 1. Table 501.1 (dwelling unit(s))
☐ 2. Table 501.2 (other facilities)
SHOW CALCULATIONS for other facilities
☐ 3. Section 503.0 (meter readings)
ATTACH WATER METER DATA

SOIL DATA & DESIGN CLASS
PROFILE CONDITION DESIGN
4 / C / 1
at Observation Hole # 1
Depth — "
of Most Limiting Soil Factor

DISPOSAL FIELD SIZING
☐ 1. Small—2.0 sq. ft. / gpd
☐ 2. Medium—2.6 sq. ft. / gpd
☐ 3. Medium/Large 3.3 sq. ft / gpd
☐ 4. Large—4.1 sq. ft. / gpd
☐ 5. Extra Large—5.0 sq. ft. / gpd

EFFLUENT/EJECTOR PUMP
☑ 1. Not Required
☐ 2. May Be Required
☐ 3. Required
Specify only for engineered systems:
DOSE: ____ gallons

LATITUDE AND LONGITUDE
at center of disposal area
Lat. ____ d ____ m ____ s
Lon. ____ d ____ m ____ s
If g.p.s., state margin of error: ____

SITE EVALUATOR STATEMENT

I certify that on Dec 18, 2006 (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).

[redacted] — Site Evaluator Signature
[redacted] — SE #
[redacted] — Date
[redacted] — Site Evaluator Name Printed
[redacted] — Telephone Number
E-mail Address

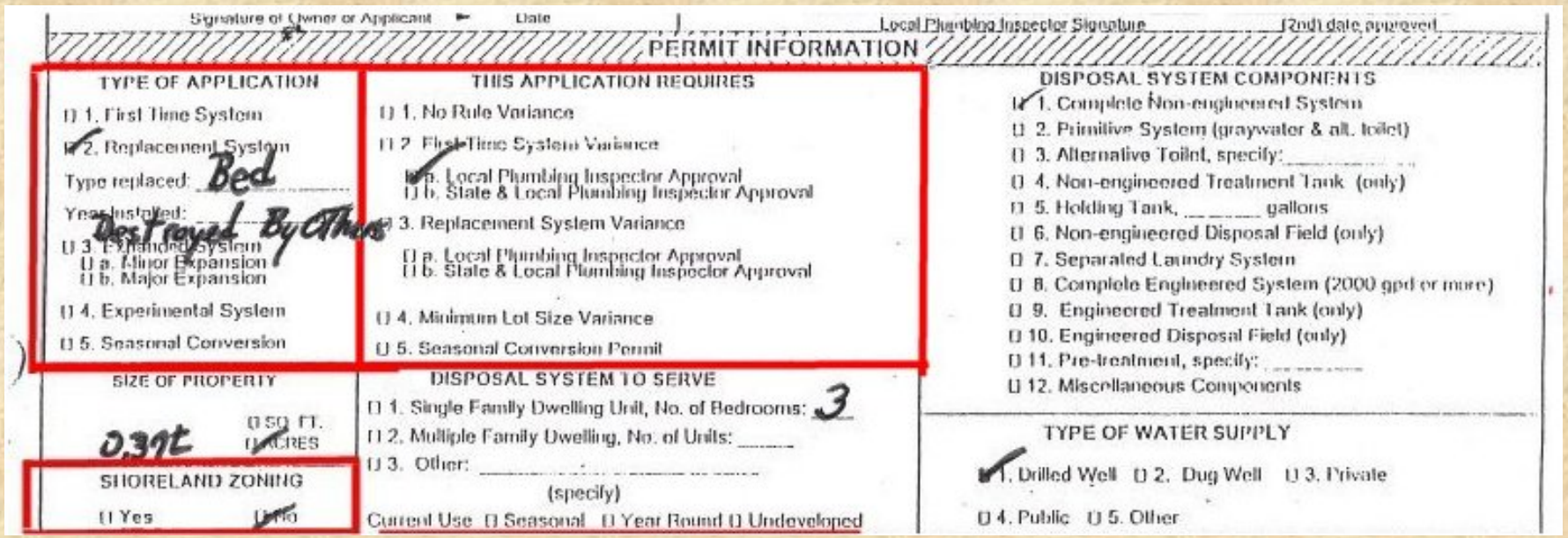
Note: Changes to or deviations from the design should be confirmed with the Site Evaluator.

HHE-200 Rev. 4/05

Human Services

HHE-200 Form

Page One



Signature of Owner or Applicant — Date — Local Plumbing Inspector Signature — (2nd) date approved

PERMIT INFORMATION

TYPE OF APPLICATION

- ☐ 1. First Time System
- ☑ 2. Replacement System
  - Type replaced: Bed
  - Year Installed: Destroyed By Other
- ☐ 3. Expanded System
  - ☐ a. Minor Expansion
  - ☐ b. Major Expansion
- ☐ 4. Experimental System
- ☐ 5. Seasonal Conversion

THIS APPLICATION REQUIRES

- ☐ 1. No Rule Variance
- ☐ 2. First Time System Variance
  - ☑ a. Local Plumbing Inspector Approval
  - ☐ b. State & Local Plumbing Inspector Approval
- ☐ 3. Replacement System Variance
  - ☐ a. Local Plumbing Inspector Approval
  - ☐ b. State & Local Plumbing Inspector Approval
- ☐ 4. Minimum Lot Size Variance
- ☐ 5. Seasonal Conversion Permit

DISPOSAL SYSTEM COMPONENTS

- ☑ 1. Complete Non-engineered System
- ☐ 2. Primitive System (graywater & alt. toilet)
- ☐ 3. Alternative Toilet, specify: _____
- ☐ 4. Non-engineered Treatment Tank (only)
- ☐ 5. Holding Tank, _____ gallons
- ☐ 6. Non-engineered Disposal Field (only)
- ☐ 7. Separated Laundry System
- ☐ 8. Complete Engineered System (2000 gpd or more)
- ☐ 9. Engineered Treatment Tank (only)
- ☐ 10. Engineered Disposal Field (only)
- ☐ 11. Pre-treatment, specify: _____
- ☐ 12. Miscellaneous Components

SIZE OF PROPERTY

0.39± ☐ SQ. FT. ☑ ACRES

SHORELAND ZONING

☐ Yes ☑ No

DISPOSAL SYSTEM TO SERVE

- ☐ 1. Single Family Dwelling Unit, No. of Bedrooms: 3
- ☐ 2. Multiple Family Dwelling, No. of Units: _____
- ☐ 3. Other: _____ (specify)

Current Use ☐ Seasonal ☐ Year Round ☐ Undeveloped

TYPE OF WATER SUPPLY

☑ 1. Drilled Well ☐ 2. Dug Well ☐ 3. Private

☐ 4. Public ☐ 5. Other

HHE-200 Form

Page One

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK
- ✓ 1. Concrete
  - ☐ a. Regular
  - ☐ b. Low Profile
- ☐ 2. Plastic
- ☐ 3. Other: _____

CAPACITY: 1,000 GAL.

DISPOSAL FIELD TYPE & SIZE
- ☐ 1. Stone Bed ☐ 2. Stone Trench
- ☐ 3. Proprietary Device
  - ☐ a. cluster array ☐ c. Linear
  - ☐ b. regular load ☐ d. H-20 load
- ☐ 4. Other: _____

SIZE: _____ ☐ sq. ft. ☐ lin. ft.

GARBAGE DISPOSAL UNIT
- ✓ 1. No ☐ 2. Yes ☐ 3. Maybe

If Yes or Maybe, specify one below:
- ☐ a. multi-compartment tank
- ☐ b. ___ tanks in series
- ☐ c. Increase in tank capacity
- ☐ d. Filter on Tank Outlet

DESIGN FLOW

270 gallons per day

BASED ON:
- ☐ 1. Table 501.1 (dwelling unit(s))
- ☐ 2. Table 501.2 (other facilities)

SHOW CALCULATIONS for other facilities

SOIL DATA & DESIGN CLASS

PROFILE CONDITION DESIGN

4 / C / 1

at Observation Hole # 1

Depth — "

of Most Limiting Soil Factor

DISPOSAL FIELD SIZING
- ☐ 1. Small---2.0 sq. ft. / gpd
- ☐ 2. Medium---2.6 sq. ft. / gpd
- ☐ 3. Medium-Large 3.3 sq. ft. / gpd
- ☐ 4. Large---4.1 sq. ft. / gpd
- ☐ 5. Extra Large---5.0 sq. ft. / gpd

EFFLUENT/EJECTOR PUMP
- ✓ 1. Not Required
- ☐ 2. May Be Required
- ☐ 3. Required

Specify only for engineered systems:

DOSE: _____ gallons

☐ 3. Section 503.0 (meter readings)

ATTACH WATER METER DATA

LATITUDE AND LONGITUDE
at center of disposal area

Lat. _____ d _____ m _____ s

Lon. _____ d _____ m _____ s

If g.p.s, state margin of error: _____

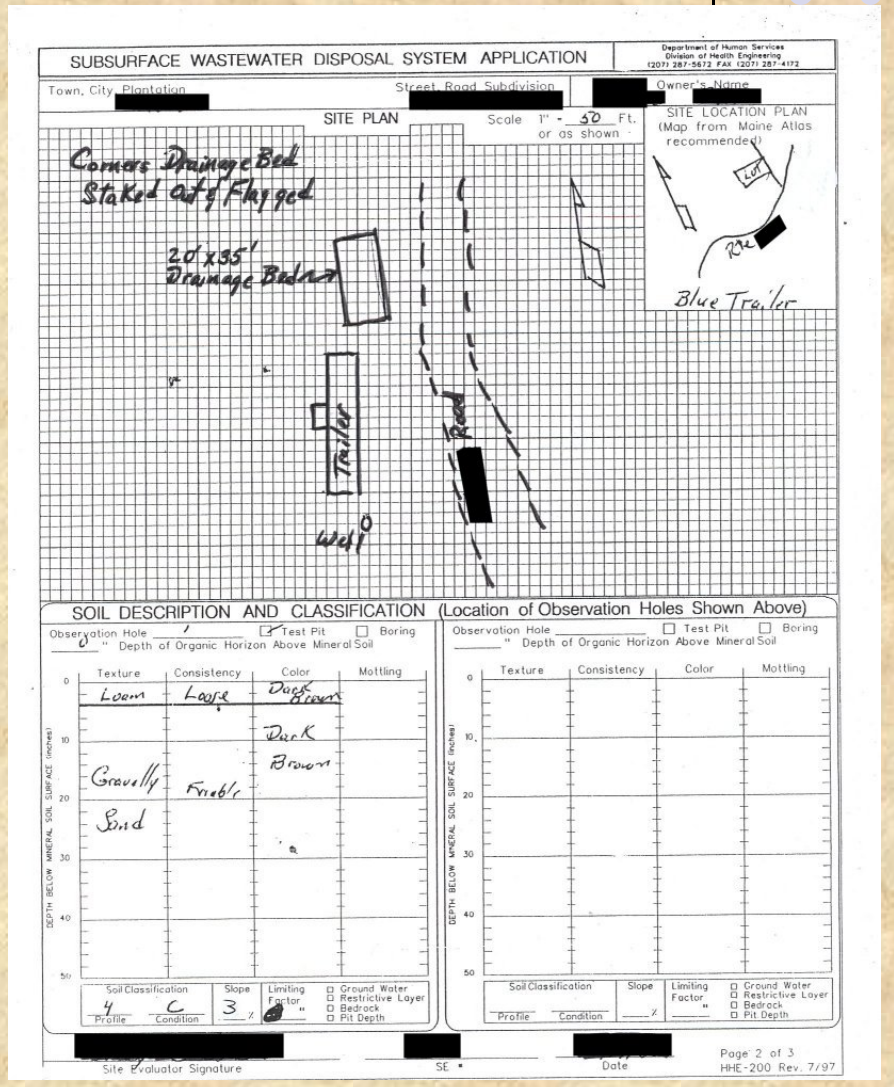
SITE EVALUATOR STATEMENT

HHE-200 Form

Page Two

The site plan should show all prominent features in the vicinity of the proposed system.

Test pit logs should be complete and accurate.



SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering
(207) 287-5672 FAX (207) 287-4172

Town, City Plantation [redacted] Street, Road, Subdivision [redacted] Owner's Name [redacted]

SITE PLAN

Scale 1" = 50 Ft. or as shown

Corners Drainage Bed Staked out & Flagged

20'x35' Drainage Bed

Trailer

Well

SITE LOCATION PLAN (Map from Maine Atlas recommended)

Lot

Rte

Blue Trailer

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole 1 ☑ Test Pit ☐ Boring

0" Depth of Organic Horizon Above Mineral Soil

Depth Below Mineral Soil Surface (inches)	Texture	Consistency	Color	Mottling
0	Loam	Loose	Dark Brown	
10	Gravelly Sand	Friable	Dark Brown	
20				
30				
40				
50				

Soil Classification: Profile 4, Condition C; Slope 3 %; Limiting Factor: ☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

Observation Hole ____ ☐ Test Pit ☐ Boring

" Depth of Organic Horizon Above Mineral Soil

Depth Below Mineral Soil Surface (inches)	Texture	Consistency	Color	Mottling
0				
10				
20				
30				
40				
50				

Soil Classification: Profile ____, Condition ____; Slope ____ %; Limiting Factor: ____ " ☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

[redacted] Site Evaluator Signature [redacted] SE # [redacted] Date

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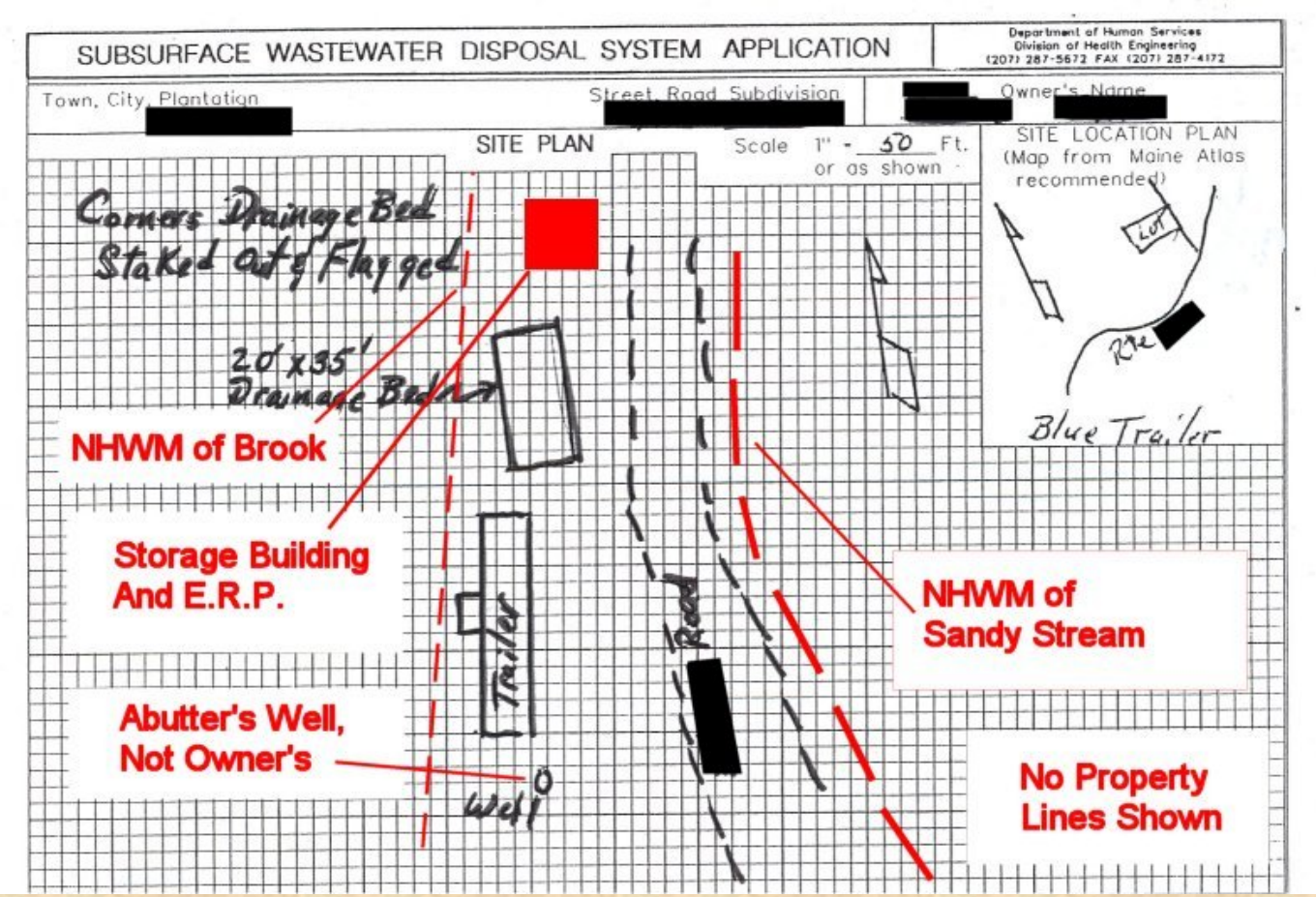
HHE-200 Rev. 7/97

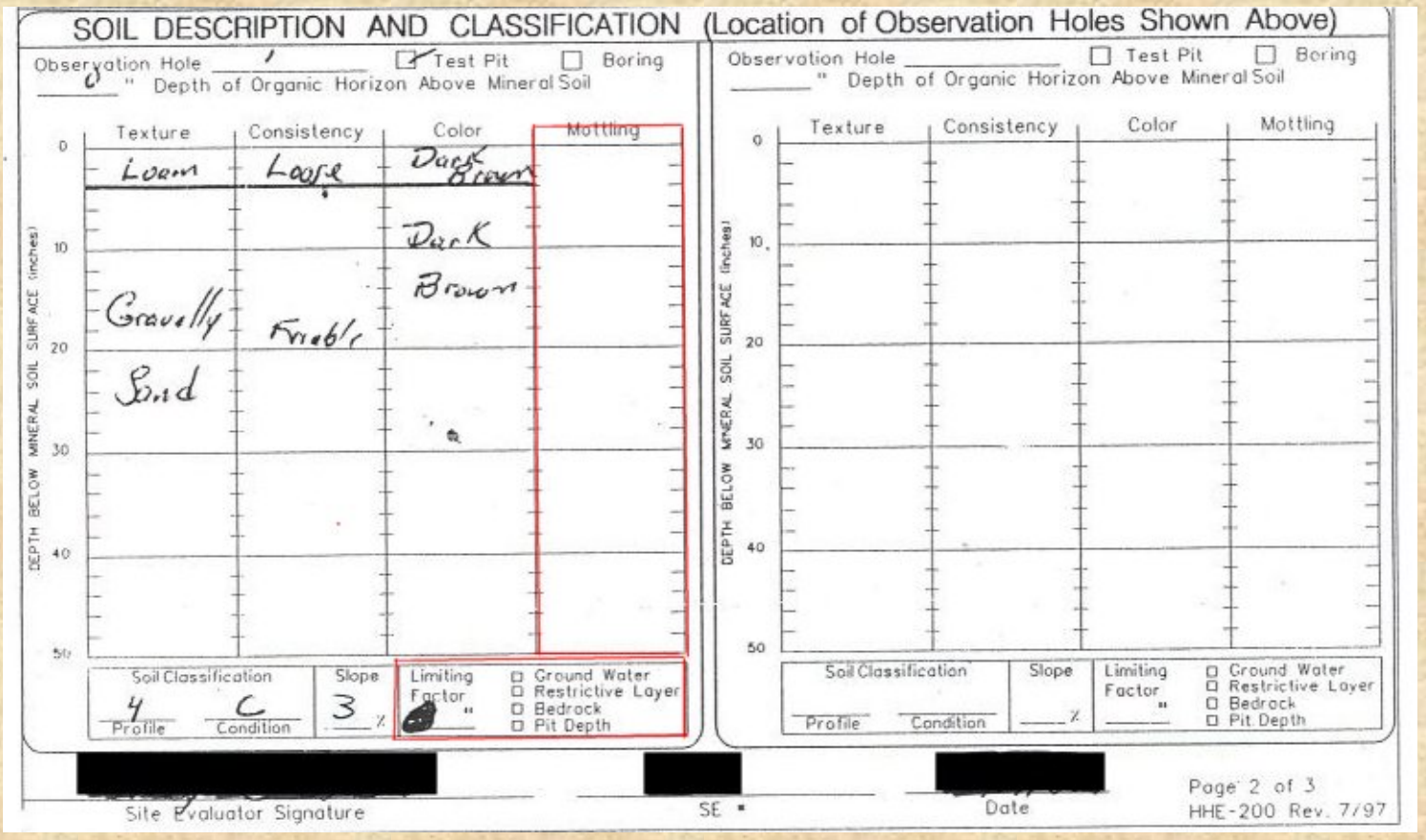
HHE-200 Form

Page Two



HHE-200 Form

Page Two



SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole 1 ☒ Test Pit ☐ Boring

0 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0	Loam	Loose	Dark Brown	
10	Gravelly Sand	Friable	Dark Brown	
20				
30				
40				
50				

Soil Classification: Profile 4, Condition C

Slope: 3 %

Limiting Factor: " ☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

Observation Hole ☐ Test Pit ☐ Boring

" Depth of Organic Horizon Above Mineral Soil

	Texture	Consistency	Color	Mottling
0				
10				
20				
30				
40				
50				

Soil Classification: Profile ____ Condition ____

Slope: ____ %

Limiting Factor: " ☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

[redacted] Site Evaluator Signature

SE [redacted]

[redacted] Date

Page 2 of 3

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Maine Department of Health & Human Services

HHE-200 Form

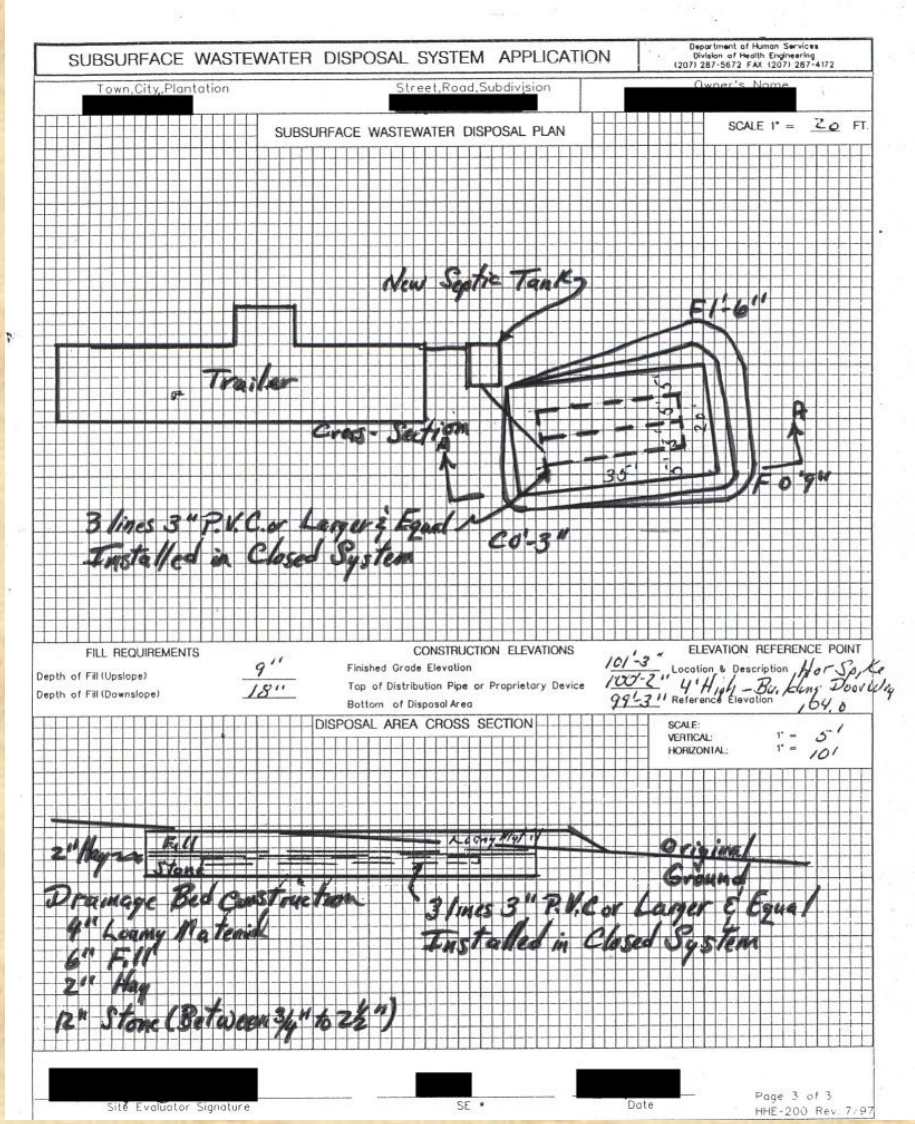
Page Two

Maine Department of Health &
Human Services

HHE-200 Form

Page Three

Page three should contain all necessary construction data for installation of the disposal area.


SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering
(207) 287-5672 FAX (207) 287-4172

Town, City, Plantation [redacted] Street, Road, Subdivision [redacted] Owner's Name [redacted]

SUBSURFACE WASTEWATER DISPOSAL PLAN

SCALE 1" = 20 FT.

New Septic Tank
Trailer
Cross-Section
3 lines 3" P.V.C. or Larger & Equal Installed in Closed System
E 1'-6"
F 0'-9"
C 0'-3"
35'

FILL REQUIREMENTS
Depth of Fill (Upslope) 9"
Depth of Fill (Downslope) 18"

CONSTRUCTION ELEVATIONS
Finished Grade Elevation 101'-3"
Top of Distribution Pipe or Proprietary Device 100'-2"
Bottom of Disposal Area 99'-3"

ELEVATION REFERENCE POINT
Location & Description Hor. Spike 4' High - Back Door Way
Reference Elevation 104.0

DISPOSAL AREA CROSS SECTION

SCALE:
VERTICAL: 1" = 5'
HORIZONTAL: 1" = 10'

2" Hay
Fill
Stone
Original Ground
Drainage Bed Construction
4" Loamy Material
6" Fill
2" Hay
12" Stone (Between ¾" to 2½")
3 lines 3" P.V.C. or Larger & Equal Installed in Closed System

[redacted] Site Evaluator Signature [redacted] SE # [redacted] Date

Page 3 of 3
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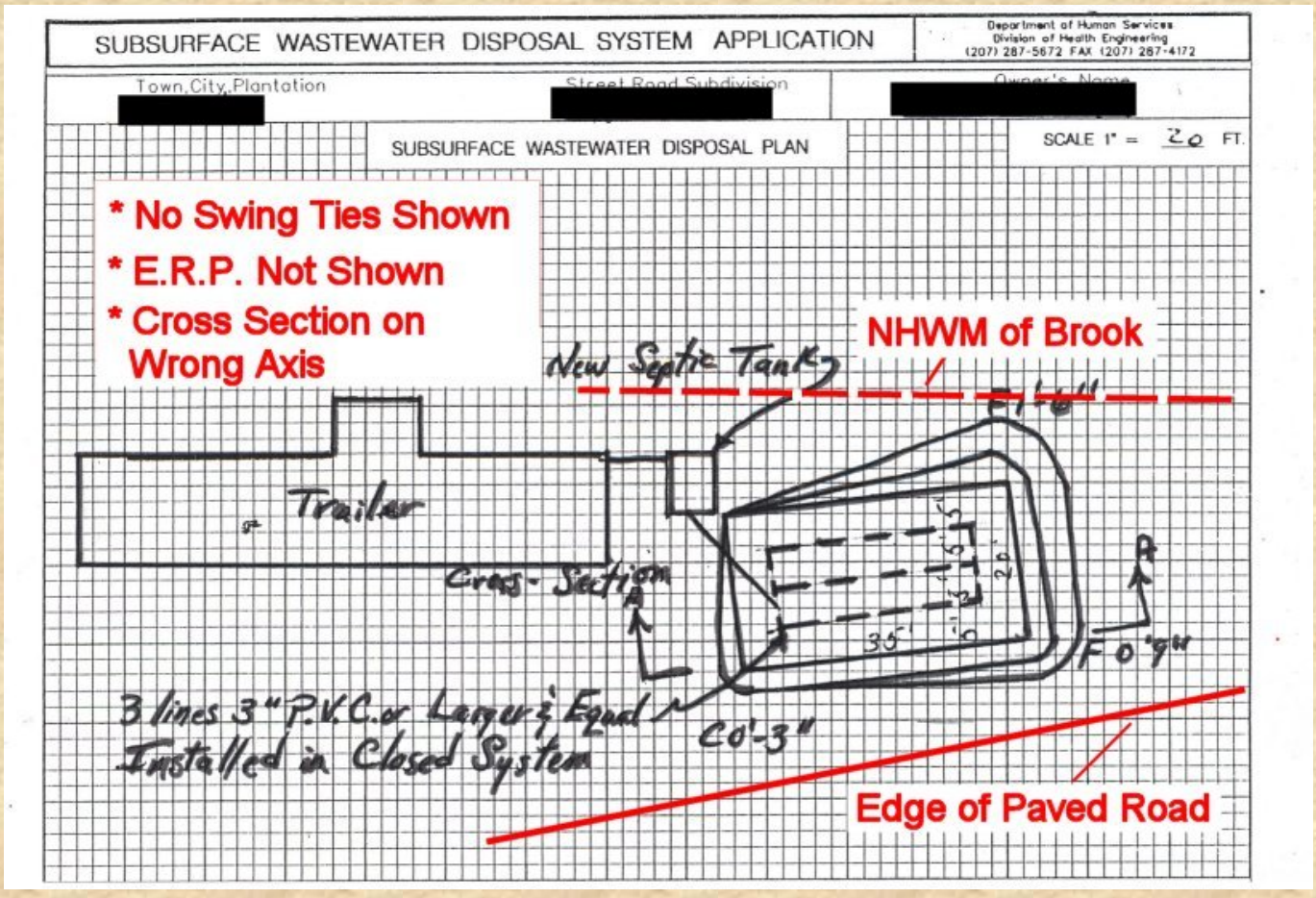
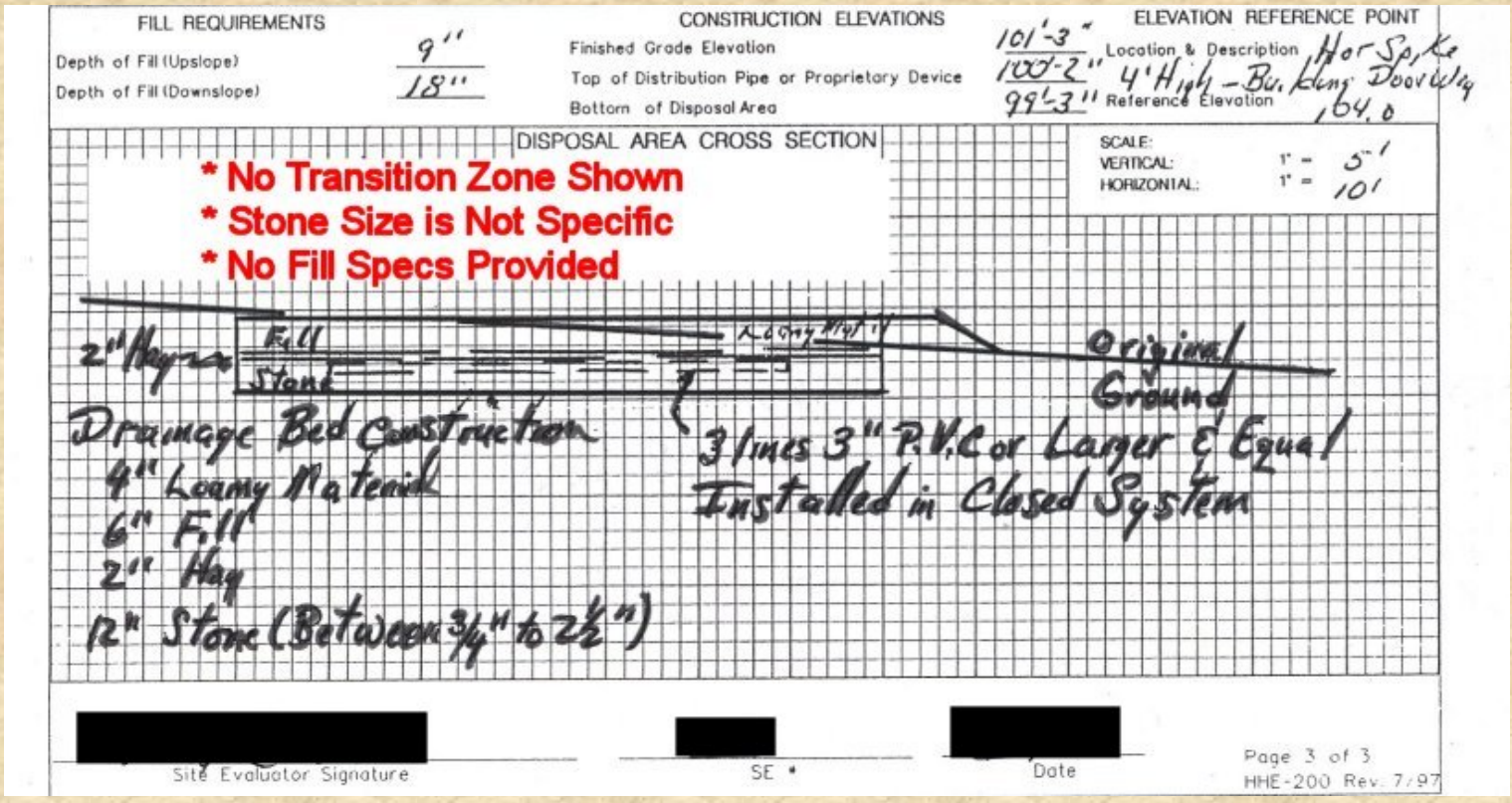
Page Three



HHE-200 Form

Page Three



FILL REQUIREMENTS

Depth of Fill (Upslope) 9"

Depth of Fill (Downslope) 18"

CONSTRUCTION ELEVATIONS

Finished Grade Elevation 101'-3"

Top of Distribution Pipe or Proprietary Device 100'-2"

Bottom of Disposal Area 99'-3"

ELEVATION REFERENCE POINT

Location & Description Hor Spike 4' High - Bu. King Door Jamb

Reference Elevation 164.0

DISPOSAL AREA CROSS SECTION

SCALE:
VERTICAL: 1" = 5'
HORIZONTAL: 1" = 10'

* No Transition Zone Shown
* Stone Size is Not Specific
* No Fill Specs Provided

2" Hay
Fill
Stone
Original Ground
3 lines 3" P.V.C or Larger & Equal Installed in Closed System

Drainage Bed Construction
4" Loamy Material
6" Fill
2" Hay
12" Stone (Between 3/4" to 2 1/2")

[redacted]
Site Evaluator Signature

[redacted]
SE #

[redacted]
Date

Page 3 of 3
HHE-200 Rev. 7/97

ISSUES

Replacement system?
KNOW WHERE THE TANK IS

Steuben man killed in accident during wood delivery

By Sharon Kiley Mack

BDN Staff

CHERRYFIELD, Maine — Forest Dale, Sr., 46, of Steuben was killed Saturday morning when he was crushed between the cab and the dump body of his delivery truck.

Dale was delivering a load of firewood to a home in Cherryfield about 11 a.m. when the accident occurred, according to Sgt. Timothy Tabbutt of the Washington County Sheriff's Department.

In the process of attempting to raise the dump body on his 1-ton flatbed, Dale's truck broke through an abandoned underground tank, Tabbutt said. The truck fell through all the way to its frame.

Dale, who had climbed under his truck to release the piston to dump the load of firewood, was caught between the cab and dump body when the truck fell and he was crushed.

Tabbutt said the tank was located behind a local home and was likely an abandoned septic tank.

Tabbutt was assisted at the scene by the Cherryfield Fire Department and Ambulance service.

But I want to use my Septic System…

Maine Department of Health &
Human Services

Maine Department of Health &
Human Services

Maine Department of Health &
Human Services

Campgrounds

Maine Department of Health &
Human Services

Maine Department of Health &
Human Services

Maine Department of Health &
Human Services

Maine Department of Health &
Human Services

Maine Department of Health & Human Services
Maine Center for Disease Control & Prevention
Division of Environmental Health – Subsurface Wastewater Unit

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Voluntary Certification Program

Subsurface Wastewater Disposal System Installer

In association with the Maine Department of Environmental Protection, Nonpoint Source Training and Resource Center the Division of Environmental Health is pleased to offer a voluntary certification program for individuals who install subsurface wastewater disposal systems. The Maine Subsurface Wastewater Disposal Rules, CMR 241, do not require certification as a condition of obtaining a permit for the purpose of installing a subsurface wastewater disposal system; however possession of this certification **may allow the installer to sign an affidavit (HHE-238B) to cover the first system inspection noted in Section 111.5.1 of the Rules if the local plumbing inspector is in agreement.**

Once issued the certification is good for five (5) years. The following criteria must be met for initial certification by the Department:

1. Attendance at one (1) Basic System Installation Training Session conducted by the Subsurface Wastewater Program; and
2. Submission of page one from two (2) HHE-200 Forms which were permitted and installed by the applicant and inspected and found in compliance with the Rules by the Local Plumbing Inspector. **PLEASE MAKE SURE THAT THE 1ST AND 2ND INSPECTIONS ARE DONE ON THESE HHE FORMS.**

The certification will be automatically renewed after five (5) years if the certified individual submits proof of attendance at subsurface waster related training session(s) providing a minimum of 6 contact hours within the past certification period. Individuals attending JETCC sponsored sessions will be credited automatically. It is the responsibility of the certified individual to insure that proof of attendance is provided to the Division of Environmental Health.

Mail to: **Maine Department of Health & Human Services**
Division of Environmental Health
Attn: Wendy Austin
11 State House Station
Augusta, Maine 04333-0011

Name: _____

Company: _____

Address: _____

Municipality: _____ State: _____ Zip: _____

Telephone: _____ Email: _____

Training Session Attended: _____ Date: _____

Revised 12/10/09

Maine Department of Health & Human Services

DIVISION OF ENVIRONMENTAL HEALTH

SUBSURFACE WASTEWATER PROGRAM

AFFIDAVIT OF SITE PREPARATION

This affidavit is to be completed by a certified system installer and submitted to the Local Plumbing Inspector to document compliance with **Section 111.5.1** of the Maine Subsurface Wastewater Disposal Rules, **144 CMR 241.** ***Permission to utilize this document in lieu of a site preparation inspection by the Local Plumbing Inspector must be verified when the permit is issued.*** This affidavit is ***not*** to be utilized in place of the system inspection described in **Section 111.5.2** of the Rules.

INSTALLER NAME: _____
(Please Print)

CERTIFICATION NUMBER: _____

SSWD PERMIT NUMBER: _____

PERMIT ISSUE DATE: _____

PROPERTY OWNER NAME: _____

PROPERTY ADDRESS: _____

MUNICIPALITY: _____

By signing and submitting this document to the Local Plumbing Inspector, I certify that all construction activities noted in **Section 111.5.1** including removal of all vegetation from the disposal field area and fill extensions as specified in **Section 801.3**; roughening of the ground surface as specified in **Section 801.4**; establishment of a transitional horizon as specified in **Section 801.5**; and placement of erosion control devices as specified in **Section 801.2** have been completed in full compliance with the Maine Subsurface Wastewater Disposal Rules, **144 CMR 241** for the referenced SSWD permit.

INSTALLER SIGNATURE: _____

DATE SUBMITTED: _____

By signing and accepting this document from the Certified Installer, I acknowledge that a site preparation inspection was not conducted for the referenced SSWD permit.

LPI SIGNATURE: _____

ACCEPTANCE DATE: _____

HHE-238-B (Revision 01/2008)

THIS FORM ONLY TO BE USED AFTER THE LPI'S APPROVAL

Maine Department of Health & Human Services

Contact Information

Other Agencies

Maine Department of Environmental Protection

1-800-452-1942 or 207-287-3901

Maine Land Use Regulation Commission

207-287-2631

State Planning Office

1-800-662-4545 or 207-287-3261

Plumbers Examining Board

207-624-8627

Contact Information

Program Staff

- **James Jacobsen, Project Reviews, Webmaster 287-5695**
- **Douglas Coombs, LSE, Site Evaluation Program 592-2084**
- **Brent Lawson, State Plumbing Inspector 592-7376**
- **Wendy Austin, Plumbing Permits & Data Entry 287-5672**
- **Lorraine Martin, Plumbing Permits and Program Support 287-5689**
- **Roger Crouse, Director Drinking Water Program**

The End