

Salem County Department of Health and Human Services

ENVIRONMENTAL DIVISION

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APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Form 1—General Information

Municipality _____

1. Type of Permit Needed (Check and Fill-in applicable categories):

- a. New Construction
- b. Alteration/ No Expansion or Change in Use
- c. Alteration/Expansion or Change in Use
- d. Alteration/Malfunctioning System
- e. Repair (in-kind replacement)/ Malfunctioning system
- f. Repair (in-kind replacement) System is not malfunctioning
- g. Deviation from Standards
- h. New system installed (existing structure)

2. Location of Project:

Municipality _____ Block No. _____ Lot No. _____
Street Address Zip _____

3. Name of Applicant (print): _____

4. Applicant's Present Address: _____

5. Applicant's Phone Number: _____

6. Applicant's Email Address: _____

7. Type Of Facility:

- Residential
 - Commercial/Institutional
- Specify Type of Establishment: _____

8. Type of Wastes to be Discharged:

- Sanitary Sewage
- Industrial Wastes
- Other—Specify Type

9. If d. or e. in 1. above are checked, indicate the type of malfunction and its cause (check all that apply):

- Contamination of nearby wells or surface water bodies by sanitary sewage or effluent
- Ponding or breakout of sanitary sewage or effluent onto the surface of the ground
- Seepage of sanitary sewage or effluent into portions of building below ground
- Back-up of sanitary sewage into the building served, which is not caused by a physical blockage of the internal plumbing
- Any manner of leakage observed from components that are not designed to emit sanitary sewage or effluent.
- Direct discharges to ground water (no zone of treatment)

Describe the cause of the malfunction: _____

10. Please expand on Question #1, above, by checking if any of the following apply):

- A privy, outhouse, latrine or pit toilet is present, a system must be installed,
- A system must be upgraded as part of a real property transfer,
- A cesspool has been identified during a real property transfer and a conforming system must be installed,
- A malfunctioning cesspool has been identified and a conforming system must be installed.

11. Other Approvals/Certification/Waivers/Exemptions (Attach to Application):

- Pinelands Commission
- Highlands Water Protection and Planning Act
- U.S. Army Corps of Engineers
- NJDEP—Bureau of Flood Plain Management
- Other—Specify:

I hereby certify that the information furnished on Form 1 of this application is true. I am aware that false swearing is a crime in this State and subject to prosecution.

Signature of Applicant _____ Date _____

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- Application Denied—Reason for Denial/Citation of Rules Violated: _____
- Application Approved **PERMIT NUMBER** _____ **EXPIRATION DATE** _____
- Application Approved Subject to Approval by NJDEP

Date of Action _____ Signature of Authorized Agent _____

Name and Title _____

COUNTY/MUNICIPALITY _____

Form 2a—General Site Evaluation Data Block _____ Lot _____

- 1. Name of Site Evaluator (print): _____
- 2. Business Address of Site Evaluator: _____
- 3. Business Phone Number of Site Evaluator: _____
- 4. Special Site Limitations Identified (Check appropriate Categories): Flood Plains Bedrock Outcrops
 Wetlands Excessively Stony Disturbed Ground Sink Holes Sand Dunes Steep Slopes
 Other—Specify _____

5. Soil Logs—Enter on Form 2b—Use one sheet for each soil log.

6. Considerations Relating to Disturbed Ground:

- a) Type of Disturbance (Check appropriate categories):
 Filled Area Excavated Area Re-graded Area
 Subsurface Drains Other—Specify _____
- b) Existing Ground Surface
Elevation Relative to Ground Surface _____
Method of Identification _____
- c) Suitability of Disturbed Ground_ Unsuitable: Objects Subject to Disintegration or Change in Volume
 Excessively Coarse_ Proctor Test performed_ % Standard Proctor Density = _____

7. Hydraulic Head Test:

- a) Hydraulically Restrictive Horizon: Depth Top to Bottom _____
- b) Piezometer A: Depth to Bottom Depth of Water Level (24 hrs)
- c) Piezometer B: Depth to Bottom Depth of Water Level (24 hrs)
- d) Witnessed by _____
Signature _____ Date _____

8. Attachments (Check items included):

- Site Plan_ Key Map Showing Location of Site On U.S.G.S. Quadrangle or Other Accurate Map
- Key Map Showing Location of Site on U.S.D.A. Soil Survey Map_ Other—
Specify _____

I hereby certify that the information furnished on Form 2a of this application (and the attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Soil Evaluator _____ **Date** _____
Signature of Professional Engineer _____ **License #** _____
COUNTY/MUNICIPALITY _____

Form 2b—Soil Log and Interpretation **Block** _____ **Lot** _____

1. Log Number __ Method (Check One): _ Profile Pit _ Boring

2. Soil Log Depth (inches) _____
Top- _____
Bottom _____

Munsel Color Name and Symbol; Estimated Textural Class: Estimated Volume % Coarse Fragment, If Present; Structure; Moist or Dry Consistence; Mottling—Abundance, Size and Contrast, If Present

3. Ground Water Observations:

_ Seepage—Indicate Depth _____
_ Pit/Boring Flooded—Depth after _____ Hours _____

4. Soil Limiting Zones (Check Appropriate Categories):

_ Fractured Rock Substratum—Depth to Top _____
_ Massive Rock Substratum—Depth to Top _____
_ Excessively Coarse Horizon—Depth Top to Bottom _____
_ Excessively Coarse Substratum—Depth to Top _____
_ Hydraulically Restrictive Horizon—Depth Top to Bottom _____
_ Hydraulically Restrictive Substratum—Depth to Top _____
_ Perched Zone of Saturation—Depth Top to Bottom _____
_ Regional Zone of Saturation—Depth to Top _____

5. Soil Suitability Classification:

I hereby certify that the information furnished on Form 2b of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator _____ **Date** _____

Signature of Professional Engineer _____ **License #** _____

COUNTY/MUNICIPALITY _____

Form 3a. Soil Permeability Data

Block _____ Lot _____

Assign a number for each test and a letter for each test replicate. Show test data and calculations on Form 3b, 3c, 3d, 3e, 3f or 3g. Use one sheet for each separate test or test replicate.

1. Summary of Data—Enter data for each test replicate on a separate line.

Type of Test	Test (number)	Replicate (letter)	Depth (inches)	Result*

* For tube permeameter, pit-bailing and piezometer tests report results in inches per hour. For Soil permeability class rating give soil permeability class number. For percolation test report result in minutes per inch. For basin flooding test report result as positive if basin drains completely within 24 hours after second filing, negative otherwise.

2. Design Permeability/Percolation Rate: Specify Test Number _____

- Average of Test Replicates
- Single Replicate
- Slowest of Replicates

3.

Type of Limiting Zone Identified	Test Number

4. Attachments (Check items included):

- Form 3b—Tube Permeameter Test Data—Number of Sheets ____
- Form 3c—Soil Permeability Class Rating Test Data—Number of Sheets _____
- Form 3d—Percolation Test Data—Number of Sheets ____
- Form 3e—Pit-Bailing Test Data—Number of Sheets ____
- Form 3f—Piezometer Test Data—Number of Sheets ____
- Form 3g—Basin Flooding Test Data—Number of Sheets ____

I hereby certify that the information furnished on Form 3a of this application (and the attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Soil Evaluator _____ Date _____

Signature of Professional Engineer _____ License # _____

Form 3b. Tube Permeameter Test Data

1. Test Number _____ Replicate (Letter) _____ Date Collected _____

2. Material Tested: Fill Test in Native Soil—Indicate Depth ___

3. Type of Sample: Undisturbed Disturbed

4. Sample Dimensions: Inside Radius of Sample Tube, R, in cm ___ Length of Sample, L, in inches ___

5. Bulk Density Determination (Disturbed Samples Only):
 Sample Weight (Wt. Tube Containing Sample—Wt. of Empty Tube), grams _____
 Sample Volume (L x 2.54cm./inch x 3.14R²), cc _____
 Bulk Density (Sample Wt. /Sample Volume), grams/cc _____

6. Standpipe Used: No Yes —Indicate Internal Radius, cm _____

7. Height of Water Level Above Rim of Test Basin, in inches: At the Beginning of Each Test Interval, H1 _____ At the End of Each Test Interval, H2 _____

8. Rate of Water Level Drop (Add additional lines if needed):

Time, Start of Test Interval, t1	Time, End of Test, Interval t2	Length of Test Interval, t, minutes

9. Calculation of Permeability:
 $K, (in/hr) = 60 \text{ min/hr} \times r^2/R^2 \times L(in)/T(\text{min}) \times \ln(H1/H2) = 60 \text{ min/hr} \times _ / _ \times _ / _ \times \ln(_ / _) = _$

10. Defects in the Sample (Check appropriate items):
 None Cracks Worm Channels
 Root Channels Soil/Tube Contact
 Large Gravel Large Roots
 Dry Soil Smearing Compaction
 Other—Specify _____

11. I hereby certify that the information furnished on Form 3b of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator _____ Date _____
 Signature of Professional Engineer _____ License # _____

Form 3c. Soil Permeability Class Rating Data

1. Test Number ____ Replicate (Letter) ____

2. Sample Depth_Soil Pit/Boring Number_Date Collected__

3. Coarse Fragment Content:

Total Weight of Sample, W.T., grams _____

Weight of Material Retained on 2mm sieve, W.C.F., grams _____

Wt. % Coarse Fragment (W.C.F./W.T. x 100): _____

4. Oven Dry Weight (24 hrs., 105°C) of 40 Gram Air Dry Sample, grams, Wt _____

5. Hydrometer Calibration, Rc _____

6. Hydrometer calibration temperature (°F) _____

7. Hydrometer Reading—40 seconds, grams, R1 _____

Temperature of Suspension, °F _____

8. Corrected Hydrometer Reading, grams, R1' _____

9. Hydrometer Reading—2 hours, grams, R2 _____

Temperature of Suspension, °F _____

10 Corrected Hydrometer Reading, grams, R2' _____

11. % sand = (Wt. - R1')/Wt. x 100 = (_ - _) / _ x 100 = ____

12. % clay = R2'/Wt. x 100 = _ / _ x 100 = ____

13. Sieve Analysis:

a. Oven Dry Wt. (2 hrs., 105°C) Total Sand Fraction (Soil Retained in 0.047 mm Sieve), grams _____

b. Wt. of Fine Plus Very Fine Sand Fraction (Sand Passing 0.25 mm Sieve), grams _____

c. % Fine Plus Very Fine Sand (b/a) _____

14. Soil Morphology (Natural Soil Samples Only):

Structure of Soil Horizon Tested _____

Consistence of Soil Horizon Tested: Dry ____ Moist ____

15. Soil Permeability Class Rating (Based upon average textural analysis of this replicate and other replicate samples) _____

I hereby certify that the information furnished on Form 3c of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator _____ Date _____

Signature of Professional Engineer _____ License # _____

Form 3d. Percolation Test Data

1. Test Number _____ Replicate (Letter) _____ Date Tested _____

2. Depth _____

3. Pre-soak: _____

___ Sandy Textured Soil Only, Shortened Pre-soak—Indicate Time Required for 12 Inches of Water to Drain After Second Filling, Minutes _____

___ Four Hour Pre-soak Completed—Indicate Result:

___ Test Hole Drained Within 16 to 24 Hours After Pre-soak

___ Test Hole Did Not Drain Within 24 Hours After Pre-soak

4. Rate of Fall Data:

a. Time Interval Selected, Minutes _____

b. Record the Drop in Water Level During Each Time Interval to the Nearest 1/10th-Inch On the Lines Below:

Depth of Water, Start of Interval (inches)	Depth of Water, End of Interval (inches)	Drop in Water Level(Inches)

5. Percolation Rate:

a. Time, minutes, Required for a Six-inch Drop in Water Level__

b. Percolation Rate = $a/6 = _/_6 = _ \text{ min/in}$

I hereby certify that the information furnished on Form 3d of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator _____ Date _____

Signature of Professional Engineer _____ License # _____

Form 3g. Basin Flooding Test Data

1. Test Number ____ Reference Soil Log ____ Date Tested ____

2. Depth of Pit, ft _____

3. Area of Pit, ft² _____

4. Description of Rock Substratum Within Test Zone:

Type of Rock _____

Name of Formation _____

Average Fracture Spacing _____

Type of Fractures (Check Appropriate Category):

Open (Wide), Clean—Width of Openings, mm _____

Open (Wide), Infilled with Fines—Width of Openings, mm _____

Tight (Closed)

Orientation of Fractures:

Horizontal (Parallel to Pit Bottom) Or Nearly So

Inclined

Vertical (Parallel to Sides of Pit) Or Nearly So

Hardness of Rock: Rippable with Hand Tools

Not Rippable with Hand Tools, Rippable by Machine

Not Rippable by Machine, Explosives Used

5. Time of First Basin Flooding _____

Volume of Water Added, Gal. _____

6. Result of First Basin Flooding:

Basin Drained within 24 Hrs.—Indicate Time _____

Basin Not Drained within 24 Hrs.

7. Time of Second Basin Flooding _____

Volume of Water Added, Gal. _____

8. Result of Second Basin Flooding:

Basin Drained within 24 Hrs.—Indicate Time _____

Basin Not Drained within 24 Hrs.

9. I hereby certify that the information furnished on Form 3g of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator _____ Date _____

Signature of Professional Engineer _____ License # _____

Form 4. General Design Data

1. Volume of Sanitary Sewage, gal. _____

Residential: No. of Dwelling Units Total No. of Bedrooms

Ejector Pump YES NO Garbage Grinder YES NO Expansion Attic YES NO

Commercial/Institutional—Indicate type of establishment and show method of calculation. If estimate is based on water meter data, indicate source of data, frequency of readings, average daily flow, and maximum recorded daily reading _____

2. Alterations or Repairs

a) Reason for Alteration or Repair (Check appropriate categories):

Expansion or Change in Use Upgrade Existing Facilities

Correct Malfunctioning System Other—Specify _____

b) Describe Nature of Alteration or Repairs: _____

3. System Components:

a) Grease Trap Capacity, gals _____

Show Calculation Used: _____

b) Septic Tank Capacities, gals: First (Single) Compartment Second Compartment

Third Compartment

c) Effluent Distribution

Method: Gravity Flow Gravity Dosing Pressure Dosing

Dosing Device: Pump Siphon

d) Dosing Tank Capacities, gals: Total Capacity Dose Volume Reserve Capacity _____

e) Laterals: Number Total Length Pipe Size Spacing

f) Connecting Pipe: Size Length

g) Manifold: Size Length

h) Disposal Field: Type of Installation _____

Design Permeability (Percolation Rate) _____

Trenches: Width Total Length Bed: Area

i) Seepage Pits: Design Percolation Rate _____

Number of Pits Total Percolating Area Provided

4. Attachments (Check items included):

General Plan of System Showing Location of All System Components

X-Sections of Each System Component Including Grease Trap, Septic Tank, Dosing Tank, Disposal Field, Seepage Pits and Interceptor Drains

Pump Performance Curve

Other—Specify _____

5. I hereby certify that the information furnished on Form 4 of this application (and attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Professional Engineer _____ **Date** _____

Form 5. Design of Pressure Dosing System

1. Configuration of Distribution Network:

Type of Manifold: _____ End _____ Central
Distribution Laterals: Number _____ Length, ft _____ Spacing, ft _____
Hole Diameter, ins _____ Hole Spacing, ins _____
Diameter of Laterals, ins _____

2. Lateral Discharge Rate:

Design Pressure Head at Supply End of Laterals, Hp, ft _____
Hole Discharge Rate, Q, gpm _____
Number of Holes per Lateral, n _____
Lateral Discharge Rate, (Q x n) gpm _____

3. Manifold Length, ft _____ Manifold Diameter, ins _____

4. System Discharge Rate, gpm _____

5. Dose Volume: _____

Design Volume of Sewage, gal/day _____
Design Permeability, in/hr _ or Percolation Rate, min/in _____
Internal Volume of Distribution Network _____
Dose Volume _____

6a. Pump Selection:

Diameter of Delivery Pipe _____ Length of Delivery Pipe _____
Friction Loss in Delivery Pipe, Hf, ft _____
Elevation of Dosing Tank Low Water Level _____
Elevation of Lateral Invert _____
Elevation Head, He, ft _____
Total Operating Head, Ht (Hp + Hf + He), ft _____
Pump Model _ Rated Horsepower _____
Pump Discharge Rate at Total Operating Head, gpm _____

6b. Siphon Elevation:

Diameter of Delivery Pipe _____ Length of Delivery Pipe _____
Friction Loss in Delivery Pipe, Hf, ft _____
Velocity Head, Hv, ft _____
Total Operating Head, Ht (Hp + Hf + Hv), ft _____
Elevation of Lateral Invert _____
Elevation of Siphon Invert _____

I hereby certify that the information furnished on Form 4 of this application (and attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Professional Engineer _____ **Date** _____