NH HEALTH OFFICERS
SPRING WORKSHOP

Regional Inspectors
Septic 101

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INSPECTORS ON PANEL

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INSTALLATION TOPICS
SEPTIC 101

- Design strategy
  - pipes filters pumps etc.
- Recognizing failure
- Types of systems and choices
- Vent
- Presby advanced vs standard
2% slope required house to tank

Improperly bedded pipe
Don’t use HDPE pipe in sewer lines

4” to 6” inlet tee

Ok good inlet under opening

excellent

Outlet only! I have seen some of these on inlets (woops)
Inlet and outlet pipe depths
- Base of inlet must be at least 8" below liquid level and top of tee 1" below cover

Outlet only! I have seen some of these on inlets (woops)

PUMP STATIONS
- Is the pump station vented
- Is the alarm working and is it wired on a separate circuit than pump
- Is the pump station watertight
- Proper risers
How not to vent a presby pump

When doing by pass venting leave enough exposed so we can see
PUMP SYSTEM DIFFERENTIAL VENTING

APPLICATION SPECIFICATIONS:
- Pump Installation
- Differential Venting System

PROFILE OF PROPER PUMP SYSTEM VENTING

In a pump system, the problem lies in the flow of air between the header and the pump. A resistor operating circuit is not required for differential venting. Special emphasis is placed on the proper position of the riser from the separator to the entrance of the vent. The riser is also required to be able to be controlled by a filter, which is essential for proper operation.

Same site different angle

Riser to grade over filters

THE STAINLESS SCREW
Tag on riser labeling filter location

Nice clean professional job

Close up of label

DETERIORATED BAFFLE

Totally clogged d box result of missing outlet in tank for 6 years
REPLACEMENT PVC BAFFLE

Stone and pipe excellent job

Read tags Standard Enviro or Advanced Enviro Septic

Is this advanced or standard? We need to see the tags

Too much sand cover- tags

Innovative piping wrong
Is all your going to let me see?

Plans need to have blow up sections to specify piping

CLOGGED BERMICO PIPE
QUESTIONS

Septic 101 continued

- Bed bottom
- Soils test pit review
- Repair –replacement (permit by rule)
- Rejuvenation of presby enviroseptics
- Amended Revised

WHAT NOT TO DO

- CUTTING INTO THE HARDPAN LAYER THEN FILLING THE HOLE WITH SEPTIC SAND CAN HAVE SEVERE RESULTS

- GROUNDWATER TRAVELS ON TOP OF HARDPAN THEN FILLS IN NEW SAND AREA

- RESULTS IN FLOODING OUT THE NEW ISDS
WOOPS

BUT BOSS THE EQUIPMENT IS HERE WE HAVE TO BUILD IT TODAY

TEST PIT DATA
- MUNSELL COLOR
- STRUCTURE
- TEXTURE
- CONSISTANCY
- REDOXIMORPHIC (MOTTLES)
- HORIZION DEPTHS

1990 MUNSELL BOOK REQUIRED
- DESIGNERS REQUIRED TO USE MUNSELL BOOK
- LOG ALL TEST PITS INCLUDING SUBDIVISION

Look up soils on line
- Click on start WSS button
- Type in address for your site
- Create AOI (area of interest)
- Soil type and data will appear
- You can check soil properties, soil group
TEST PIT OVERVIEW

TEST PIT AND PERC TEST

FILL (MANMADE) OR NATURAL

Well drained/ excessively drained

WHAT % OF REDOXIMORPHIC CONCENTRATIONS DO YOU SEE

SEASONAL HIGH WATER TABLE
SEE ANY REDOXIMORPHIC FEATURES “MOTTLING”

TEXTURE STAINING OF FINGERS, FORMING BALL ETC

FIELD DETERMINATION
- SAND DRY SINGLE GRAINS FEEL VERY GRITTY - DOES NOT HOLD TOGETHER
- FLOWS FREELY BETWEEN FINGERS
- MOIST WEAK CAST CRUMBLES WHEN TOUCHED

LOAMY SAND
- SLIGHT STAINING OF THE HANDS
- FEELS GRITTY
- SOIL WILL FORM WEAK CAST THAT CRUMBLES WHEN TRANSFERRED FROM ONE HAND TO ANOTHER

SANDY LOAM
- STILL FEELS GRITTY
- STRONGLY STAINS FINGERS
- FORMS STABLE CAST WHICH WITHSTANDS MODERATE HANDLING
- CANNOT FORM RIBBON OR VERY WEAK ONE

SILT LOAM SLOW PERC
Moderately well drained shwt about 30” here

Somewhat poorley drained shwt less than 15”

Poorly drained hydric b

Poorly drained

BLOCKY STRUCTURE FIRM

CONSISTANCE

DO NOT DESIGN SYSTEMS IN DRAINAGEWAYS
DESIGN INTENT WRONG SHWT SEPARATION ON UPHILL SIDE

WHAT IS THE DESIGN INTENT HERE

WETLAND DELINEATION CHANGES

TO OBTAIN A COPY

- NRCS National Publications and Forms Distribution Center LANDCARE
- 1–800–LANDCARE
- 888–526–3227
- Landcare@usda.gov

*Application repair replacement*
Date of operational approval
Previous construction approval
Prior approval Municipalities
SIGN THERE
APPLICANT - DESIGNER
OWNER INFO

5. WATER SUPPLY
IF THE WATER SUPPLY HAS CHANGED OR HAS BEEN RELOCATED, THE LOCATION AND LOT LOADING CALCSMUST BE ACCURATELY REFLECTED ON THE EXISTING PLANS.
1. AT THE WATER SUPPLY IS EXACTLY AS DEFINED IN THE ORIGINAL STATE APPROVED PLAN OR
2. THE WATER SUPPLY HAS CHANGED OR HAS BEEN RELOCATED AS FOLLOWS:
   YES NO
   [ ] IF NO, PROVIDE A RECORDED WELL RELEASE AT THE TIME OF INSPECTION.
   [ ] MILE 0'-10' PROVIDE A RECORDED EASEMENT OR DEEDED WATER RIGHTS.
   [ ] PRE 1980 WELL
   [ ] OTHER

6. DESIGN FLOW CALCULATIONS
   NUMBER OF BEDROOMS: TOTAL FLOW (ALL BEDROOMS): GDP

7. STRUCTURE
   NUMBER OF STRUCTURES (CURRENTLY SERVED): NUMBER OF CURRENT OCCUPANTS:

8. TYPE OF DESIGN / EXISTING SYSTEM INFORMATION
   [ ] GRAVITY OR [ ] PUMP
   [ ] DOWNSLOPE OR [ ] IN-GROUND OR [ ] AT GRADE
   [ ] EFFLUENT DISPOSAL AREA TYPE (SPECIFY - E.G. STONE & PIPE:)

10. INFORMATION REQUIRED FOR ACCEPTANCE
   [ ] Prior Approval Requirements are not included in the following information required for acceptance. It will be returned to you
   [ ] prior to you being allowed to issue all required permits are issued. All data tables will be completed and the final report
   [ ] will be returned to you in this enclosure.

   [ ] R8A 485-031-R3
   [ ] RGA 485-432-R6
   [ ] RGA 485-432-R1
   [ ] RGA 485-033-R5
   [ ] DEC 905-10

   [ ] The original approved permit with the approved plans shall not vary
   [ ] from the requirements shown.

APPLICATION FOR REPAIR OR REPLACEMENT IN KIND OF AN INDIVIDUAL SEWAGE DISPOSAL SYSTEM

1. Date of operational approval
2. Previous construction approval
3. Prior approval Municipalities
4. SIGN THERE
5. APPLICANT - DESIGNER
6. OWNER INFO

APPLICATION FORM (DO NOT SUBMIT THIS FORM TO THE DEPARTMENT)

INFORMATION REQUIRED TO COMPLETE THIS APPLICATION:

1. Approval of the application form is not required for existing structures.
2. Approval of the application form is not required for existing structures.
3. Approval of the application form is not required for existing structures.
4. Approval of the application form is not required for existing structures.
5. Approval of the application form is not required for existing structures.
6. Approval of the application form is not required for existing structures.
(9) The system is not within 100 feet of any surface water, water supply well, or very poorly drained soil unless authorized by the local department of health in accordance with subsection (2); RSA 485-A:2, III(a)(12).

(10) No new wells or water supply lines are requested. RSA 485-A:3, II(a)(8).

(11) The system has not been previously installed or replaced under a permit by rule in accordance with the provisions of this paragraph. RSA 485-A:3, II(c)(8).

(12) The permitted designer shall verify that all components of the EDSS are in the approved location and installed in strict accordance with the approved plan. If any component of the EDSS is not located as approved, do not use this application; an INDIVIDUAL SEWAGE DISPOSAL SYSTEM APPLICATION is required.
AMENDED VS. REVISED

- If the bed has been moved horizontally or vertically from the location shown on the approved plan, a revision is needed.
- New submission, fee and application.

STATE SAND SPECIFICATIONS

- A med. to coarse textured sand with an effective size of 0.25 to 2.0 mm. No greater than 5% passing the #200 sieve and no particles larger than ¾ inch.
- Or materials meeting the ASTM C 33 specification.

BACKFILL MATERIAL

BORDERLINE ? AMENDED_REVISED

AMENDED ? I DON’T THINK SO
READY FOR INSPECTION
SLOPES COMPLETE WITH LOAM

QUESTIONS