

PUTNAM COUNTY

DEPARTMENT OF HEALTH

DIVISION OF ENVIRONMENTAL HEALTH SERVICES

PROCEDURES & POLICIES

SEWAGE SYSTEM REPAIR PERMITS

BULLETIN RP-1

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PUTNAM COUNTY DEPARTMENT OF HEALTH DIVISION OF ENVIRONMENTAL HEALTH SERVICES

1.0 INTRODUCTION

The Putnam County Department of Health (the “Department”), Division of Environmental Health Services has developed this detailed guide for submission requirements, policies and procedures relative to approval of Repair Permits for subsurface sewage treatment systems. The following is a description of the requirements of the Department for submission of an application for a Repair Permit. This document is not meant to substitute for the design standards of the New York State Department of Health (NYSDOH) and/or NYC Department of Environmental Protection (DEP), as applicable, set forth in documents listed below, but should serve as a guide to Department requirements and procedures. The Department may require additional information or procedures as considered necessary based upon engineering review of a project.

All projects located within the NYC Watershed in Putnam County are also subject to the NYC DEP Watershed Regulations. Certain projects within the NYC Watershed have been delegated to the Department for review and approval of sewage system repairs per the Delegation Agreement located in Appendix B.

All applications for review and approval of new sewage system repairs to be located within the NYC Watershed shall be sent to the Department, and need not be sent in duplicate to the DEP, although the project may require DEP approval of the sewage system repairs prior to final approval by the Department. Such approval will be coordinated internally between the Department and DEP.

2.0 DESIGN DOCUMENTS AND PARAMETERS

- A. The following documents will be utilized during the review of projects by the Department.
 - A. 10 NYCRR Part 75, Standards for Individual Water Supply and Individual Sewage Disposal Systems.
 - B. 10 NYCRR Appendix 75-A, Wastewater Treatment Standards – Individual Household Systems.
 - C. NYS Department of Health Publication, Individual Wastewater Treatment Design Handbook.

- D. NYCDEP Watershed Regulations, “Rules & Regulations for the Protection from contamination, Degradation and Pollution of the New York City Water Supply and its Sources.”
- B. The Putnam County Health Department has adopted the following design requirements which are more stringent than those in the above documents.
- Soil percolation test to conform with procedures in Appendix A of this document, “Procedure for Running Soil Percolation Tests.”
 - Pre-cast concrete septic tanks are preferred, although fiberglass tanks will be allowed, on a case-by-case basis, if a concrete tank cannot be installed.
 - New drywells are not permitted.
 - Existing drywells are recommended to be abandoned and the wastewater redirected to the septic tank. The Department will only allow the replacement of a drywell if it cannot be rerouted to the septic tank.
 - The utilization of plastic leaching chambers must be installed with gravel.
 - A geotextile filter fabric is to be utilized over the top layer of gravel, for all types of sewage systems, prior to backfilling.
 - The relocation of the sewage system to a new area outside of the existing system /reserve area or alteration/modification of the system will require a sewage system design to be completed by a NYS Licensed Design Professional.
- C. Erosion control requirements as per local municipality.

3.0 SEWAGE SYSTEM REPAIR DESIGN REQUIREMENTS & PARAMETERS

A. Repair Plan (General)

A sketch plan shall be submitted to the Department showing owner’s name, property address, property lot lines – to the best of your knowledge - house location main road driveway, existing onsite well, proposed sewage system in detail, and all off-site wells within 100 feet of the proposed sewage system

B. Percolation Tests

Soil percolation test results are indicative of the ability of a soil to absorb wastewater and percolation tests are one of the most important factors in determining the size of a SSTS. The test should be performed in natural soil within the area planned to be utilized for sewage treatment.

The percolation tests must be used in conjunction with the deep test soil observations and should be consistent with deep test soil observations.

Soil Percolation tests must be performed in accordance with Appendix A, “Procedure for Performing Soil Percolations Tests”.

If a conventional absorption trench system is planned, the bottom of the percolation test holes shall be 24 to 30 inches below grade. If seepage pits are under consideration, percolation tests should be done at one-half depth and at full depth of the proposed seepage pit.

Percolation tests may be conducted anytime except when the ground is frozen or precipitation interferes with the test (i.e., adds water to the test hole). The Department will require the witnessing of soil percolation test for all repairs involving the installation of additional or remediated/repared sewage absorption area within the NYC Watershed.

The Department representative will observe a minimum of three (3) runs or until the percolation rates have stabilized in each percolation test hole. This will be performed after the holes have been dug and presoaked by the septic system installer.

C. Deep Test Holes

The design of a sewage system repair is predicated upon site conditions, percolation test results, observation of soil strata in deep test holes and the location of adjacent wells. One segment of the Department’s review and approval of a proposed sewage system repair is the inspection of deep test holes. The Department will inspect deep test holes prior to receipt of a repair permit; however, a plan shall be submitted, which includes as a minimum, the following items:

- Property lot lines.
- Existing house, well and SSTS locations.
- Proposed sewage system repair area.
- Adjacent wells within 200 feet of property.
- Water courses, ponds, lakes or wetlands within 200 feet of property.

The Department will not schedule field testing without a plan as specified above. Deep test holes must be excavated to a depth at least 5 feet below the bottom of the proposed absorption system. Normal absorption trench systems require 7 feet deep holes. Seepage pits require holes equal to the pit depth dimension plus 6 feet. Visual observation of the deep test, such as soil mottling, silt and clay content, soil density, etc., shall be considered in the design evaluation and sizing of the absorption area. Deep test holes are to be backfilled immediately upon inspection by the Department. Construction equipment for excavating deep test holes is recommended to be on-site during the inspection.

D. Proposal for Explanation of Septic System Failure

If the type or nature of sewage system repair is uncertain (unsure of the cause of failure) and a need for exploration of the SSTS to explore is necessary, than the request form entitled “Proposal for Explanation of Septic System Failure” shall be fully completed and submitted to the Department. The Department will then contact the requestor to set up a mutual date to dig/excavate the septic system area. Please note that the proposal for exploration form is not a permit and does not entitle any person or persons to dig or excavate without a PCDH representative being present at such time.

4.0 **REPAIR PERMITS**

Prior to any construction of a sewage system repair, plans for such system must first be approved by the Department. The submission requirements for a repair permit application are as follows:

1. Repair Permit application.
2. Application fee of \$ 150.00 in the form of a Certified Check or Money Order.
3. Sketch plan, to scale, including the following:
 - a. Property lines.
 - b. Existing house, driveway, well and SSTS location.
 - c. Location of all existing wells within 200 feet of proposed SSTS or a note stating that none exist within 200 feet.
 - d. Locations of any watercourses, ponds, lakes or wetlands on, or within 200 feet of property.
 - e. Title box indicating name and address of property owner; parcel tax map identification number; property location, including street and municipality; name, address and phone number of Design Professional; date of drawing, including dates of any revisions; and scale.

5.0 **FINAL INSPECTIONS**

The Department must be notified prior to backfilling of the sewage system repair in order for the Department to exercise its options to schedule an inspection of the work. The “Request for Final Inspection” form (FIR-99), is to be provided to this Department by the septic system installer prior to the Department performing a final SSTS inspection. No completed work is to be backfilled until authorization to do so has been obtained from the Department. Upon completion of the installed system, the septic system contractor shall take two-point measurements from a fixed object (i.e., house, garage, etc.) to all components of the installed system, and prepare an as-built sketch. The as-built sketch is to be submitted to the Department within 30 days of completion of the repair. The septic system contractor is responsible for measuring the installed system and providing an as-built plan to the Department.

APPENDIX A

PROCEDURE FOR PERFORMING SOIL PERCOLATION TESTS

The following procedure shall be used for conducting soil percolation tests:

- Step 1: Dig a hole with vertical sides 12 inches in diameter or square to the projected depth of the bottom of the proposed absorption trench or seepage pit (24 to 30 inches for a standard trench system). Where seepage pits are proposed, percolation tests at full and half pit depth, are necessary.
- Step 2: Record all percolation test data onto Putnam County Health Department Form, "Design Data Sheet".
- Step 3: Place washed gravel/stones in the lower 2 inches of each percolation test hole to reduce scouring and silting action when water is poured into the hole. The sides of percolation holes should be scraped to avoid smearing.
- Step 4: Establish a fixed reference point at the top of the hole from which all measurements are to be taken.

PRE-SOAKING

- Step 5: Pre-soak the test hole by periodically filling the entire hole with water and allowing the water to drain completely. This procedure should be performed for at least 4 hours and should begin 1 day before the test, except in clean, coarse sand and gravel. After the water from the final pre-soaking has drained, remove any loose soil that has fallen from the sides of the hole.

PERCOLATION TEST

- Step 6: Refill hole to a depth not to exceed 6 inches, measured from bottom of hole.
- Step 7: Measure: a) the time for the water level to drop exactly 3 inches; or, b) the water level drop for 30 minutes, whichever comes first. Refill to original level and repeat the test a minimum of three (3) times until results of approximately equal magnitude are obtained on successive tests. (i.e., ≤ 1 minute for 1-30 min/inch, ≤ 2 minutes for 31-60 min/inch)

All soil percolation tests resulting in rates equal to or greater than 30 minutes per inch will require the tests to be conducted with a minimum of three (3) 1-hour runs or until the rate stabilizes, whichever comes first.

- Step 8: Calculate time per inch of drop in water level for each run. The last measurement shall be utilized as **THE SOIL PERCOLATION RATE**

APPENDIX B

Summary of Delegation Agreement between NYC Department of Environmental Protection & Putnam County Department of Health

This document is intended to serve both as a summary of the delegation agreement between the DEP and the Department for SSTS review and approval and as a guide to the Design Professional submitting SSTS projects to the Department for approval.

Applicable Regulations: include NYSHD Appendix 75-A, the NYCDEP Watershed Rules and Regulations, PCHD Bulletins ST-19, RS-21, RP-1 and CS-31, and NYSDEC standards for Intermediate Sized Wastewater Treatment Works.

DEFINITIONS:

- a. Alteration or Modification with respect to an SSTS shall mean any change in the physical configuration, intensity of use, location, plans, design, site, capacity, or treatment standard or method of the SSTS, other than as a result of a failure. Activities that are considered alterations or modifications include, but are not limited to : increasing flow to a previously approved system, changing the nature of the waste to be treated, adding new laterals outside the previously approved replacement area, and any other alteration or modification to a septic system that does not constitute a repair or remediation as defined below.
- b. City shall mean the City of New York.
- c. County shall mean the County of Putnam.
- d. NYCDEP shall mean the New York City Department of Environmental Protection.
- e. PCHD shall mean the Putnam County Department of Health.
- f. Remediation, with respect to an SSTS, shall mean the non-routine repair or replacement of the SSTS to address its failure. Activities that are considered remediation include, but are not limited to, installation of a new septic tank of a different size or in a different location, adding new laterals outside of the previously approved replacement area, and installing a new absorption field, provided, however, that for purposes of this Delegation Agreement only, the following shall be deemed a “repair” and not a “remediation”:
For an SSTS which was installed with an undersized septic tank (i.e., not compliant with the standards in 10 NYCRR Appendix 75-A) prior to December 1, 1990 – replacement of the tank with a larger tank that is compliant with the standards in 10 NYCRR Appendix 75-A.
- g. Repair, with respect to an SSTS, shall mean the routine repair, maintenance, and replacement in kind of broken, damaged, or worn part(s) of an SSTS, of the type that

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would not require approval from NYCDEP under Section 18-38(a)(9)(iii) of the Watershed Regulations. Activities that are considered repairs include, but are not limited to: the placement in kind of laterals, septic tanks, pumps or siphons, and installation of

new laterals within the previously approved replacement area; leveling of distribution boxes (“d-boxes”) or junction boxes (“j-boxes”), and removal of a blockage.

- h. SSTS failure shall mean the discharge of sewage from an SSTS to the surface of the ground or to groundwater.
- i. SSTS shall have the same meaning as set forth in Section 18-16(a)(104) of the Watershed Regulations.
- j. Watershed/Watershed area shall mean those portions of the County lying within the watershed of the New York City water supply system.
- k. Watershed Regulations shall mean the *Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources*, 15 Rules of the City of New York, Chapter 18.

Application Procedures: All applications will be submitted to the Department and the Department will be responsible for forwarding a copy of each application received to the DEP. The Department will be the primary contact for scheduling field inspections and for transmitting comments/receiving responses to comments. These procedures will be followed for both delegated and non-delegated lots. The Department has agreed to abide by the time frames as set forth in the DEP Watershed Rules & Regulations.

Joint and Delegated Review and Approval

NYCDEP has delegated to PCHD administration of Section 18-38 of the Watershed Regulations with respect to the review and approval of all new, altered, modified, and remediated SSTSs proposed to be located in the Watershed within Putnam County, whether proposed for a realty subdivision or not, except NYCDEP will or may, as the case may be, exercise joint authority with PCHD in the following instances:

- a. NYCDEP and PCHD will have joint review and approval of the following new, altered, modified, and remediated SSTSs:
 - i. All SSTSs which are proposed for a lot within a realty subdivision and which are proposed to be located within 200 feet of either a watercourse, as defined in the Watershed Regulations, or a DEC mapped wetland;
 - ii. All SSTSs which are proposed to be located within 500 feet of a reservoir, reservoir stem or controlled lake, as defined in the Watershed Regulations;
 - iii. All SSTSs which are proposed to be located within the drainage basins of Boyds Corner Reservoir, Croton Falls Reservoir or West Branch Reservoir;
 - iv. All SSTSs with a design flow greater than 1000 gpd (based on Appendix 75-A or NYSDEC standards, as applicable), all commercial systems or “other” systems, as

defined in the Watershed Regulations, or any system which requires a State Pollutant Discharge Elimination System permit; and

- v. All failed SSTs for which a repair permit was issued by PCDH for either the repair or remediation of that system within the past five (5) years.

- b. NYCDEP may exercise joint review and approval with PCHD of all SSTs which are proposed for a lot not within a realty subdivision and which are proposed to be located within 200 feet of either a watercourse, as defined in the Watershed Regulations, or a DEC mapped wetland.

- c. NYCDEP may exercise joint inspection, as part of a joint review and approval with PCHD of the following SSTs:
 - i. All SSTs which are proposed to be located within 200 feet of a wetland shown on the Fish and Wildlife Service Maps dated 1994 and on file with NYCDEP and PCHD; and
 - ii. All SSTs which are proposed for an area of a lot which has been modified to meet the minimum standards set forth in Appendix 75-A.

NYCDEP recognizes that in issuing approvals for all SSTs located in the portion of Putnam County within the Watershed, PCHD will require that all SSTs in previously approved subdivisions be designed to meet all current standards, to the extent PCHD determines possible. NYCDEP agrees to accept realty subdivision approvals issued by PCHD or NYSDOH prior to May 1, 1997, except as follows:

- a. All SSTs which are proposed to be located either within the drainage basin of Boyd's Corner Reservoir, Croton Falls Reservoir, or West Branch Reservoir or within 500 feet of a reservoir, reservoir stem or controlled lake, and which have not been approved by DEP shall require NYCDEP approval.
- b. All SSTs which are proposed to be located within 200 feet of either a watercourse, as defined in the Watershed Regulations, or a DEC mapped wetland, and which received final realty subdivision approval after December 31, 1992 but which have not been approved by NYCDEP shall require NYCDEP approval; and
- c. NYCDEP and PCHD shall work together to require all SSTs which are proposed to be located within 200 feet of either a watercourse, as defined in the Watershed Regulations, or a DEC mapped wetland, and which received final realty subdivision approval on or

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before December 31, 1992 but which have not been approved by NYCDEP to meet all current standards, including the Watershed Regulations to the extent possible.

Uniform Procedures

- a. In Reviewing and making determinations on SSTSs pursuant to this Agreement, PCHD shall comply with the procedures and time frames set forth in section 18-23 of the Watershed Regulations and shall be responsible for issuing notices that applications are complete or incomplete and final determinations in a timely manner.
- b. PCHD's application packet for any project in the Watershed involving an SSTS shall have a cover sheet stating that although the application for review and approval of a new, altered, modified or remediated SSTS to be located within the Watershed shall be sent to PCHD, and need not be sent in duplicate to NYCDEP, the project may also require NYCDEP approval of the SSTS prior to final approval by PCHD. The application cover sheet shall further state the NYCDEP is an involved agency pursuant to SEQRA and that the project may also require NYCDEP's review and approval of other aspects of the project, such as stormwater plans or the creation of impervious surfaces, and that the applicant should obtain the appropriate forms for such activities from NYCDEP and submit those forms to NYCDEP for review and approval.
- c. PCHD shall notify NYCDEP of all applications sent to PCHD for review for projects involving new, altered, modified or remediated SSTSs proposed for the portion of Putnam County located within the Watershed, by forwarding copies of all such applications and accompanying plans to NYCDEP within two (2) business days after PCHD accepts the application for processing. PCHD shall also promptly forward to NYCDEP copies of any amended applications and plans and any correspondence relating to projects subject to joint review. NYCDEP shall promptly forward to PCHD copies of any materials submitted by an applicant seeking approval of an SSTS which appear not to have also been submitted to PCHD.

Procedures for Review of Delegated SSTSs

For all SSTSs delegated to PCHD that are not subject to joint review, an employee of PCHD shall:

- a. Witness percolation tests and inspect the deep hole tests for the primary and reserve field site as part of the review and approval process for any SSTS. All soil test results are to be entered onto a Soils Test Report, Site Inspection Report, or other similar report, and signed by the PCHD employee who observed the tests. A copy of the signed soils tests report shall be included with the materials forwarded to NYCDEP each quarter;
- b. Visually inspect construction and installation of the SSTS for all new construction after completion of construction and prior to backfilling the site, including the size, bedding and levelness

of the septic tank; the size, bedding and levelness of the distribution box; the slope of the sewer pipe from the house to the septic tank, the distribution tank, and headers and laterals; and the setbacks to dwellings, property lines, watercourses, wetlands, reservoir stems and controlled lakes; and
- c. Forward to NYCDEP a copy of the as-built construction compliance diagram, signed by

the design engineer and accepted by an employee of PCHD, with the materials forwarded to NYCDEP each quarter, or sooner. Where PCHD accepts the design Engineer's certification that the system was installed in accordance with the approved design, a copy of that certification shall be forwarded to NYCDEP each quarter or sooner. For SSTS repairs, the PCHD shall forward as-built installation sketch layouts, after they are submitted by the septic system installer, to NYCDEP.

Procedures for Joint Review and Inspection of SSTSs

For all new, altered, modified or remediated SSTSs subject to joint review and inspection, PCHD shall follow the same procedures set for the for review of delegated SSTSs. In addition, PCHD shall notify NYCDEP of the times and locations for all required soil tests. NYCDEP, in its discretion, may witness percolation tests and inspect deep holes. NYCDEP will inform PCHD, by the date the soil tests occur, whether NYCDEP intends to exercise its right of joint review and inspection of an SSTS.

Procedures for Joint Review and Approval of SSTSs

- a. For all SSTSs which are subject to joint review and approval, PCHD shall schedule all required soil testing and shall notify NYCDEP of the times and locations for such tests. NYCDEP will inform PCHD, by the date the soil tests occur, whether NYCDEP intends to exercise its right of joint review and approval of an SSTS.
- b. For all SSTSs which are subject joint review and approval, PCHD shall inspect all deep holes for the primary and reserve field sites and NYCDEP may exercise its options to inspect deep test holes. Each agency shall witness percolation tests, as it deems appropriate, and shall enter all soils test results onto Soils Test Report, Site Inspection Report, or other similar report signed by the NYCDEP or PCHD employee who observed tests. NYCDEP and PCHD must each approve the plans for all SSTSs which are subject to joint review and approval prior to the commencement of all such work.
- c. PCHD will not issue its determination until NYCDEP has issued its determination to PCHD or the parties have attempted to resolve any disagreement in accordance with the procedures set forth in paragraphs 11(a)-(c). If PCHD and NYCDEP agree on whether to approve or disapprove an SSTS, PCHD shall issue the approval or disapproval, as the case may be, on behalf of both agencies, to the applicant. If PCHD and NYCDEP disagree as to the appropriate determination, even after dispute resolution by NYSDOH or NYSDEC pursuant to paragraphs 11(a)-(c), then each agency shall issue its own

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determination and each determination shall state that NYCDEP and PCHD are issuing separate determinations and that the approval of both NYCDEP and PCHD is necessary before the SSTS can be constructed.

- d. For all SSTSs which are subject to joint review and approval, PCHD and NYCDEP will provide each other copies of all NOV's, inspection reports, site plans, final determinations, and stipulations relating to such SSTSs.

Procedures for Remediation of SSTs

- a. PCHD will review its repair permit records to determine if a repair permit has been issued for this system within the past five (5) years. If a permit had been issued within such five-year period, and if the proposed solution is determined by either PCHD or NYCDEP to be a remediation, the liaisons will notify each other, and the remediation will be subject to joint PCHD/NYCDEP review and approval.
 - b. If the failure was detected as a result of a complaint, PCHD will visit the site and conduct the appropriate testing to confirm the failure on the next business day. PCHD liaison will notify NYCDEP that a dye test is being performed to permit the opportunity for NYCDEP to observe the dye test results. If the test confirms a failure, PCHD shall issue a Notice of Violation.
 - c. All remediations in the Watershed Area must have a repair permit issued by PCHD. Copies of all repair permits will be faxed to NYCDEP on the date of issuance. Repair permits shall include, as a minimum, name of property owner, address of property, a description of the repair work approved, and the name, address, and telephone number of the contractor. Each agency shall review the plans and exchange comments within three (3) business days for residential SSTs and five (5) business days for non-residential SSTs.
 - d. All remediations must be completed by a County-registered, licensed or certified installer. PCHD shall be responsible for issuing licenses, registrations and/or certifications to installers who will be performing work pursuant to this Agreement. PCHD shall also provide installers with initial training and continuing education in accordance with such licenses, registrations and/or certifications.
 - e. PCHD will provide the property owner ten (10) days from issuance of the Notice of Violation to determine the cause and remedy the failure. During this period, the septic tank is to be pumped out as needed in order to prevent continuing and future failures, and the applicant is to complete the PCHD preprinted repair form that details the proposed remediation. PCHD will fax to NYCDEP copies of all repair forms received on any day to NYCDEP daily. The remediation will be subject to either PCHD or joint PCHD/NYCDEP review and approval as provided in Paragraph 3, depending on the type and location of the system.
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- f. PCHD is to inspect the system at the end of the ten-day period to determine that the approved remediation has been made as approved and described in the repair permit. If the system is not found to be corrected, PCHD will issue a second Notice of Violation and fax a copy to NYCDEP.
 - g. An adjudicatory hearing will be conducted by PCHD if the remediation is not completed in the five-day period following the issuance of the second Notice of Violation. PCHD's liaison will send copies of the hearing notice and charges to NYCDEP's liaison

within 24 hours of issuance.

APPENDIX C

Forms: Repair Permit
Request for Field Inspection, FIR-99
Proposal for Exploration of Septic System Failure

**PUTNAM COUNTY DEPARTMENT OF HEALTH DIVISION OF
ENVIRONMENTAL HEALTH SERVICES**

ATTENTION

REQUEST FOR FINAL INSPECTION

For: Fill _____

All information must be fully completed prior to any Trenches _____
Inspections being made.

PCHD Construction or Repair Permit # _____

Located: _____ (T) (V) _____

Owner/Applicant Name: _____ TM _____ Block _____ Lot _____

Formerly: _____ Subdivision Name: _____

Subdivision Lot # _____

Is system fill completed? _____ Date: _____

Is system complete? _____ Date: _____

Is system constructed as per plans? _____

Is well drilled? _____ Date: _____

Is well located as per plans? _____

Are erosion control measures in place? _____

I certify that the system(s), as listed, at the above premises has been constructed and I have inspected and verified their completion in accordance with the issued PCHD Construction Permit and approved plans and the Standards, Rules and Regulations of the Putnam County Department of Health.

Date: _____ Certified by: _____ PE _____ RA _____

Design Professional

Address: _____ Lic. # _____

Comments: _____

Form FIR-99