

Certified Installer Examination Procedure

Individuals proposing to install an on-site sewage system in Snohomish County must first be certified by the Snohomish Health District (SHD). Installers who possess a certification from a county other than Snohomish must also be certified by SHD prior to conducting business here.

Certification required installers to undergo an examination process. This process consists of two parts, the written exam and the field review.

The written exam is comprised of a combination of true and false, multiple choice, fill-in-the-blank and essay questions. The exam is worth 100 points with a total of 70 points needed to pass. The exam may be taken any time during our normal business hours, Monday through Friday from 8:00 AM to 5:00 PM, excluding holidays. No appointment is needed. The length of time needed to complete the exam is approximately 2 hours.

A list of resources is available to assist candidates in preparing for the exam. Candidates are strongly encouraged to review this material prior to sitting for the exam. No resource materials, cell phones or other electronic devices are allowed during the exam except for a small calculator.

The field review follows the successful completion of the written exam. The field review consists of a site meeting with a Water and Wastewater sanitarian to discuss the results of the exam and also to review an installed on-site system ready for final inspection. This allows for a more hands-on discussion of installation principles and practices and is also an opportunity for the sanitarian to answer any questions the candidate may have.

After successful completion of the field review, a certificate application for installer and appropriate fee must be submitted along with a copy of a valid Dept. of Labor & Industries State Contractor's License prior to issuance of the operating certificate.

Certificates are valid for the calendar year in which they are applied for and are renewed annually.

080508s



**SNOHOMISH
HEALTH
DISTRICT**

ENVIRONMENTAL HEALTH DIVISION
Water and Wastewater Section
3020 Rucker Avenue, Suite 104
Everett, WA 98201-3900
425.339.5250

PUBLIC HEALTH
ALWAYS WORKING FOR A SAFER AND
HEALTHIER COMMUNITY

Installer's Exam Resource Materials

Regulations and Recommended Standards and Guidance Documents (RS&G's)
<http://www.doh.wa.gov/ehp/ts/WW/pubs-ww-topic.htm#RS&Gs>

SHD Sanitary Code Chapters

- 8.1.1 Vertical Separation
- 8.1.9 Use of Boot with Sandfilter Liner
- 8.3 On-Site Sewage System Installer Program
- 8.3.1 On-Site Sewage Disposal Construction Requirements
- 8.5 On-Site Sewage Disposal System Permit Process & Installation Procedures

Memos/Letters

- 1/21/00 IPC-1 Control Panel Series
- 1/21/00 Drainfield Rock Menzel Lake Gravel
- 10/21/99 Water/Sewer Line Perpendicular Crossing Requirements
- 3/10/99 Misc. Onsite Sewage System Issues
- 3/31/98 Various Onsite Issues
- 12/28/98 Misc. Onsite Sewage System Issues
- 2/29/91 6"-12" Drainfield Trench Depth
- 12/18/01 Final Inspection Deficiencies – Reinspection
- 8/7/00 Sandfilter Policy Revision
- 3/31/08 UV Disinfection Pump Relay
- 3/8/07 Time Dose Systems

Policy Statements

- 9/1/99 Standards-Watertight Tanks
- 5/17/99 Reduced Size Soil Absorption Systems

Fee Schedule

SNOHOMISH HEALTH DISTRICT SANITARY CODE

CHAPTER 8.1.1

VERTICAL SEPARATION

PURPOSE

To protect public health, the Board of Health requires that all new on-site sewage disposal systems are designed and installed in soil conditions and on lots in such a manner to provide a safe level of treatment of sewage containing potentially pathogenic organisms prior to entering groundwaters or restrictive layers.

To protect public health, the Board of Health requires that all new on-site sewage disposal systems must have three feet of vertical separation with gravity flow; or two feet of vertical separation with pressure distribution; or the system must meet the requirements of Department of Health alternative system guidelines.

SNOHOMISH HEALTH DISTRICT SANITARY CODE

CHAPTER 8.1.9

USE OF BOOT WITH SAND FILTER LINER

I. PURPOSE

The following standards are for the design and construction of a sandfilter using a synthetic membrane-lined pit with an underdrain and attached underdrain boot. These standards are established to assure that the boot is used as designed by the manufacturer, to assure that leakage at the boot is prevented through good design and construction practice, and to allow for testing the performance of the boot installation.

II. STANDARDS

- A. The System Designer is to identify the use of a sand filter liner with underdrain and boot as a part of the Application for On-Site Sewage Disposal Permit, and provide specifications detailing design and installation requirements.
- B. The boot is to be installed by the manufacturer or the manufacturer's representative.
- C. The boot outlet is to be bedded in sand.
- D. The boot is to be sized to accommodate a four (4) inch underdrain outlet pipe.
- E. The boot is to be secured to the four (4) inch outlet pipe with two (2) stainless steel bands and screws, and sealant strips as recommended by the manufacturer.
- F. The underdrain is to be designed in accordance with *Recommended Standards and Guidance for Performance, Application, Design, and Operation & Maintenance Intermittent Sand Filter Systems* July 1, 2007, Appendix C UNDERDRAINS and exit the side of the liner.
- G. Sewer pipe from the sandfilter to the drainfield shall be ASTM 3034 ring tight.
- H. The trench from the sandfilter to the drainfield shall be backfilled with a minimum five (5) foot clay or hardpan dam to prevent the trench from acting as a conduit for ground water movement towards the drainfield.
- I. During the initial implementation period of this procedure the Snohomish Health District may require performance testing of the sand filter/boot for leakage. The need for a performance test shall be discussed and agreed upon at the preconstruction conference. The performance test shall be conducted by:
 - 1. Block outlet pipe
 - 2. Fill underdrain gravel with water
 - 3. Measure and record elevation of water through observation/inspection port
 - 4. Let stand 24 hours minimum

SNOHOMISH HEALTH DISTRICT SANITARY CODE

CHAPTER 8.1.9

USE OF BOOT WITH SAND FILTER LINER, continued

5. Measure and record elevation of water through observation/inspection port
6. No allowable drop in the water level

SNOHOMISH HEALTH DISTRICT SANITARY CODE

CHAPTER 8.3 ON-SITE SEWAGE DISPOSAL SYSTEM INSTALLER PROGRAM

I. PURPOSE

Pursuant to WAC 246-272A-0340 the following Administrative Procedure is adopted.

The purpose of the Installer Program and the underlying rules and regulations thereto is to establish minimum competency standards for individuals engaged in the practice of installing onsite sewage disposal systems within the jurisdiction of the Snohomish Health District (SHD).

The Health Officer and local Board of Health shall administer these regulations under authority and requirements of Chapter 70.05, 70.46, and 43.20 RCW, as well as the underlying WAC 246-272A which specifically proclaims in WAC 246-272A-0230 a mandate for the establishment of the installer program.

II. DEFINITIONS

In addition to the definitions found in WAC 246-272A-0001 and in any Supplemental Onsite Sewage Disposal Regulations of SHD, the following shall apply:

- A. Installer Certificate of Competency: A document issued by SHD indicating an individual's satisfactory completion of the application and testing procedures relative to onsite sewage disposal systems.
- B. Design: An onsite sewage disposal system design shall consist of a complete scale drawing of the site plan showing the proposed sewage disposal system installation, including all relevant values and details, and using the format and application forms provided by SHD. The presentation of requisite soil test holes, information and markers at the site of the intended development is considered to be part of the design.
- C. Installer: An individual who personally holds an Installer Certificate of Competency and performs the actual work of installing, maintaining, repairing, and renovating onsite sewage treatment and disposal systems.
- D. Permit: Written approval from SHD to construct or repair an onsite sewage disposal system in accordance with an approved design and use.
- E. Violation Notice: Written determination that the named Installer has committed a Violation of the rules or regulations.
- F. Violation: The construction or omission of any significant element of an onsite sewage disposal system which, if left uncorrected, would likely result in the malfunction of the wastewater treatment or disposal system, or would allow the use of the system to circumvent required treatment and disposal of wastewater. Also, onsite sewage disposal system construction work that is performed without a permit or approval from SHD. This includes but is not limited to: a drainfield installation in violation of the applicable rules and regulation; an installation not fitting the size, shape or topography of the site or its setbacks; use of inadequate construction

SNOHOMISH HEALTH DISTRICT SANITARY CODE

CHAPTER 8.3 ON-SITE SEWAGE DISPOSAL SYSTEM INSTALLER PROGRAM, continued

materials, devices or methods; a sewage disposal system construction flaw that could allow the contamination of ground water; a sewage disposal system that is installed at an unsafe distance from a water supply or surface water; onsite sewage disposal system construction that would malfunction or allow sewage to discharge to the surface.

III. CERTIFICATE REQUIRED

No person shall engage directly or indirectly in the activity of installing all or any part of an onsite sewage disposal system without first having obtained an Installer Certificate of Competency from SHD.

An Onsite Sewage Disposal System Installer Certificate shall be nontransferable.

IV. DUTIES AND OBLIGATIONS

By virtue of performing onsite sewage disposal system construction an Installer incurs the obligation to comply with the minimum requirements for onsite sewage disposal which includes proper installation of an approved system design in conformance with SHD standards. All installation work is subject to inspection and approval prior to use.

V. CERTIFICATION

Does not allow an individual Installer who also holds a Designer Certificate of Competency to concurrently act as both the Installer and the Designer of the same system.

- A. Qualification: Under these regulations an individual shall be subjected to testing, as is further defined herein, as well as be obligated to satisfy Contractor Licensing requirements as referenced.
- B. Term: An Installer Certificate of Competency shall run from the date of issue concurrent with the calendar year, and will expire on December 31st of the year unless otherwise suspended or revoked.
- C. Application and Testing: Certification of Installer's Competency shall be determined in the following manner:
 1. The applicant must file notice of interest with the Manager of the Water and Wastewater Section requesting to be placed on the test candidate register.
 2. Testing will be conducted at monthly intervals by the Water and Wastewater Section Manager of individuals named in the current test candidate register. At the time of testing, an applicant for Installer Certification of Competency must submit an application and payment of the examination fee as listed in the current fee schedule.
 3. Testing will consist of three phases:
 - a. A written exam to determine the applicant's knowledge of public health

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CHAPTER 8.3 ON-SITE SEWAGE DISPOSAL SYSTEM INSTALLER PROGRAM, continued

problems involved in onsite treatment and disposal of sewage; of water and wastewater rules, regulations and policies; of standards of design, construction and installation; of soil/site evaluation; and of sewage treatment theory. If the applicant scores below 70 percent on the written exam, the applicant fails that exam and must wait until the next scheduled examination to re-take the exam, and may not continue with any other part of this examination.

- b. A practical field exercise consisting of the examination of a site for a proposed onsite sewage disposal system installation, at a time and place selected by the Manager, and a verbal description of methods of installation, and submittal of a preliminary written bid for construction of the proposed onsite sewage disposal system including an itemization of materials, equipment and labor costs. This exercise must be taken within 90 days of passing the written examination and completed to the satisfaction of the Section Manager, otherwise the applicant will be required to retake the entire testing procedure.
 - c. A satisfactory oral review with the Water and Wastewater Section Manager of the test results completes the exam.
- D. Issuance: A Certificate will be issued by the Health Officer to qualified individuals who have passed the necessary written examination, field exercise, oral review, and otherwise complied with the other licensing and bonding requirements contained herein so as to demonstrate that said candidate appears to be qualified to install sewage disposal systems consistent with the category of the certificate being sought. This Certification does not constitute a guaranty, a warranty, or any representation by SHD relative to the specific work or performance of the Certificate holder.

Test results for the purpose of certification will be retained for only a 90 day period. Failure to complete requirements and obtain Certification within that time will require reapplication and reexamination as outlined in Section V.C. of this regulation unless special arrangements are made by the Manager.

1. A new Certificate shall be issued upon:
 - a. Determination of competency through testing as described above
 - b. Proof of possession of a current, valid General or Specialty Contractor license issued by the State of Washington
 - c. Payment of the annual Certification fee as listed in the current fee schedule
2. A renewal Installer Certificate of Competency will be issued to a holder of an expired Installer Certificate; upon receipt of payment not later than March 1st of the next certificate year. A late fee, as prescribed in the current fee schedule, shall be imposed on applications for renewal received later than that date. After March 30th the Certificate will be nonrenewable and the Installer must apply for

SNOHOMISH HEALTH DISTRICT SANITARY CODE

CHAPTER 8.3 ON-SITE SEWAGE DISPOSAL SYSTEM INSTALLER PROGRAM, continued

new Certification as outlined in Section V.C. and D. of this regulation. Onsite sewage disposal installations performed by any Installer seeking renewal of the Installer Certificate will not be approved until the renewal application is completed and the annual fee is paid.

E. Suspension and Revocation: The Health Officer may suspend or revoke any Installer Certification of Competency upon making the determination that the holder has performed with negligence, incompetence, misrepresentation, or violation of the rules, regulations guidelines, policies, or practices adopted by SHD which pertain to water supply and wastewater disposal, either existing at the time of Certification or as thereafter enacted. A Certificate may be suspended by the Health Officer for any of the following reasons:

1. For committing a Violation that would allow the existence of a real or potentially serious threat to the public health or to the quality of surface and ground waters, or for making any serious, material misrepresentation of major facts as part of the construction of any onsite sewage disposal system.
2. When the holder has been issued three Notices of Violation by the Environmental Health Division staff within any 12 month period.
3. When the holder's surety bond or General or Specialty Contractor's license is no longer valid or in effect.

F. Suspension

1. Violation: When the Water and Wastewater Section Manager finds that the Installer has committed a significant violation of the regulations, principles, or practices of onsite sewage disposal system installation, a Notice of Violation shall be issued. The Installer shall be notified by certified and regular mail of the issuance of the Violation Notice. Where such violation notice constitutes the third notice of violation within any 12 month period, the Installer shall also be notified of the immediate suspension of the Installer Certificate.
2. Upon finding that the conditions of Installer Certification are no longer in effect, specifically the maintenance of the Washington State Contractor license, or by the abandonment of the occupation either by relocation out of state, or by inactivity for more than one year, the Certification shall be suspended. The Installer shall be notified by certified and regular mail of the immediate suspension of the Installer Certificate of Competency.

G. Reinstatement of Suspension

1. The Installer shall make written application for reinstatement to the Water and Wastewater Section Manager, specifying what practices, performance, and conditions that were named as grounds for suspension have been remedied, and a description of changes in performance that will occur which will directly avoid the repetition of past violations.

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CHAPTER 8.3 ON-SITE SEWAGE DISPOSAL SYSTEM INSTALLER PROGRAM, continued

2. The Water and Wastewater Section Manager, upon determining that noted deficiencies have been satisfactorily addressed, shall schedule the Installer for participation in the next available test. Re-Certification is subject to the installer's successful completion of the application and testing procedure and payment of testing and licensing fees as per Section V.C. and D, of this regulation.
3. Upon proof of reinstatement of the performance bond or Contractor's License, where that is the only fault, the Certificate of Competency can be immediately reinstated by the Manager.

H. Appeal

1. Any installer who feels that the suspension of the Certificate of Competency by the Water and Wastewater Section Manager is an incorrect action may submit an appeal. Such request must be filed in writing with the Director of Environmental Health within twenty (20) calendar days, with the date of suspension counting as the first day.
2. In the request for an administrative review, the Installer must specifically state which violations cited by the Water and Wastewater Section Manager were incorrectly cited, or which portions of these Certification procedures were incorrectly applied. In these instances, suspension of the Certificate will be stayed pending outcome of the final hearing unless, in the opinion of the Health Officer, there exists an imminent health hazard that would result from the continued activity of the Installer.
3. An administrative review shall be conducted in accordance with the Step One Appeals Procedure of SHD Rules and Regulations Governing Onsite Sewage Disposal, Chapter 8.1.6 Administrative Appeals Procedure.

I. Revocation: The Certificate may be revoked for any of the following reasons:

1. A Violation of a severity and magnitude that, in the opinion of the Health Officer, warrants immediate revocation. Including but not limited to the following actions:
 - a. The creation of an extremely serious health hazard
 - b. The concealment of major facts or pertinent information regarding an installation
 - c. Allowing another to submit work using the name on the Installer Certificate
 - d. By using the name of another Certificate Holder; fraudulent representation
 - e. Asserting undue influence on or interference with SHD staff

SNOHOMISH HEALTH DISTRICT SANITARY CODE

CHAPTER 8.3 ON-SITE SEWAGE DISPOSAL SYSTEM INSTALLER PROGRAM, continued

2. When notification of the Installer through the violation notice process has resulted in the issuance of a Notice of Violation beyond the second suspension of Certification, the Certificate shall be subject to complete revocation by the Health Officer.
 3. Once revoked, a Certificate of Competency will not be granted to an individual at any time within the subsequent three (3) year period from the date of notification.
 4. The Health Officer will not revoke a Certificate until an opportunity has been provided for a hearing before the Health Officer or the Health Officer's designee. Certificates shall be revoked through issuance of a Health Officer's Order, to be mailed to the Certificate Holder by regular and certified mail.
- J. Installing without Certification: An individual found to be engaging in the business of onsite sewage disposal system installation or repair without requisite Certification shall be notified by the Water and Wastewater Section Manager, by certified mail of these requirements. If eligible, the individual is to submit for examination at the next regularly scheduled time, and pay double the test and Certification fee. Refusal to comply with these requirements will then make the individual ineligible for Certification for three (3) years.

VI. SEVERABILITY

Should any part of these rules and regulations be declared unconstitutional or invalid for any reason, such declaration shall not affect the validity of the remainder.

SNOHOMISH HEALTH DISTRICT SANITARY CODE

CHAPTER 8.3.1

ON-SITE SEWAGE DISPOSAL INSTALLER REQUIREMENTS

I. PURPOSE

In accordance with WAC 246-272A-0340, the following specific installation requirements are required in order to maintain a high level of quality control throughout the on-site sewage disposal system construction process.

The Snohomish Health District (SHD) shall require certified installers to construct the on-site sewage disposal system, except as noted under subsection II. of this section. In all cases, construction of the on-site sewage disposal system shall include system back fill and final grading.

II. HEALTH OFFICER APPROVAL REQUIRED

The Health Officer may allow the owner of a single family residence to install the on-site sewage system for his/her single family residence when:

- A. The on-site sewage system is a conventional gravity or LPD system;
- B. A certified installer performs all installation work not done by the resident owner.

III. PROCEDURE

The installer shall:

1. Follow the approved design. Design revisions must have the concurrence of the designer and SHD before commencing work
2. Have the approved design and permit in possession during installation
3. Be on the site at all times during the construction of the on-site system
4. Install the on-site system to be watertight, except for the disposal component
5. Cover the installation only after the local Health Officer has given approval to cover
6. Back fill and grade the site to prevent surface water from accumulating over any component of the on-site system

SNOHOMISH HEALTH DISTRICT SANITARY CODE

CHAPTER 8.5

ON-SITE SEWAGE DISPOSAL SYSTEM APPLICATION PERMIT AND INSTALLATION PROCEDURES

I. PURPOSE

The process herein described relates to the permit process for application proposals for construction of new on-site sewage disposal systems. This process does not apply to an application to repair, replace or alter an existing on-site sewage disposal system.

- A. Application and review fee are received from a Certified Designer or Engineer. A review is conducted in accordance with sewage disposal/water supply requirements and department procedures.
- B. Issuance of the decision to approve or disapprove an application results in either an approved application or a denial. An approved application received after December 31, 1991, is valid for three (3) years and can be renewed for an additional two (2) year period, with written concurrence from the system designer, review and approval from the Snohomish Health District (SHD) and payment of a renewal fee.

II. PERMIT

- A. Upon receipt of a request for building permit clearance for the subject use from the city or county building department, a permit to install the approved on-site sewage disposal system will be approved for issuance providing the building department site plan and the SHD site plan are compatible.
- B. The on-site sewage disposal system is valid only when issued concurrently with the building/development permit. The permit will then remain valid for the term of the building/development permit. Expiration or termination of the building/development permit will cause the on-site sewage system permit to expire. Renewal of an expired on-site sewage disposal system will require submittal of a new application and payment of fees.
- C. In no case will an on-site sewage disposal system permit be issued prior to issuance of the building permit for the proposed structure.

III. INSTALLATION

- A. SHD shall require certified installers to construct the on-site sewage disposal system, except as noted under subsection III, of SHD Chapter 8.3.1. In all cases, construction of the on-site sewage disposal system shall include system back fill and final grading.
- B. The Health Officer may allow the owner of a single family residence to install the on-site sewage system for his/her single family residence when:
 - 1. The on-site sewage system is a conventional gravity or LPD system
 - 2. A certified installer performs all installation work not done by the resident owner

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CHAPTER 8.5

ON-SITE SEWAGE DISPOSAL SYSTEM APPLICATION PERMIT AND INSTALLATION PROCEDURES, continued

- C. The installer shall:
1. Follow the approved design. Design revisions must have the concurrence of the designer and SHD before commencing work
 2. Have the approved design and permit in possession during installation
 3. Be on the site at all times during the construction of the on-site system
 4. Install the on-site system to be watertight, except for the disposal component
 5. Cover the installation only after the local Health Officer has given approval to cover
 6. Back fill and grade the site to prevent surface water from accumulating over any component of the on-site system



ENVIRONMENTAL HEALTH DIVISION
3020 Rucker Avenue, Suite 104
Everett, WA 98201-3900
425.339.5250 Fax: 425.339.5254

----- Healthy Living/68, Healthy Communities -----

January 21, 2000

CARL GARRISON, PE
AQUAWORXINC
19208 133RD PL NE
WOODINVILLEWA 98072

Subject: IPC-1 Control Panel Series

Dear Mr. Garrison:

The Snohomish Health District (SHD) has reviewed the proposal to distribute your IPC-1 Control Panel for use on on-site sewage disposal systems requiring a pump control assembly and timer. Based on our review and the design items provided to this office, your control panel is approved for use in pressure distribution applications within Snohomish County. The panel incorporates the required features as described within the Washington State published *Guidelines for Pressure Distribution*.

While the timer feature of your panel allows for very precise and ease of setting pump run and off times, it does not allow for visual verification of settings without a personal digital assistant. In Snohomish County, the designer is required to verify controls are set as specified on the approved design, along with the ability of SHD personnel to verify settings. It is required that all designers submitting as-builts with the IPC-1 Control Panel have the means to verify the installation's compliance with the approved design. This capability must also be provided to the SHD so its obligations of final inspection can be fulfilled.

If you have any questions please call me at 425.339.5250.

Sincerely,

A handwritten signature in black ink, appearing to be 'Brent Raasina', written over a horizontal line.

Brent Raasina, R.S. Senior Sanitarian
Water/Wastewater Section
Environmental Health Division

BR/je

enclosures

cc: Designers Installers
Water/Wastewater staff

AQUAWOX.WC

(360) 886-9103

19208133 PL NE, Woodinville WA 98072
carl.garrison@aquaworx.com

(360) 886-9248 tim

Randal S. Darst
Snobomish Health District,
Environmental Health Division
3020 Rucker, #104
Everett, WA 98201

November 29, 1999

Re: Pump Control Panel

Aquaworx inc. is proud to introduce the fPCI control panel series. This is a pump controller designed specifically for the onsite wastewater intbutty. The intent of this letter is to provide documentation requested in the October 22, 1997 Memo; Subject PressUIC Distribution Control Panels and Timer Requirements.

The Control Panel is specifically designed for ODSite applications and contains the following features:

- 1) It records both the cycle count and the total run time of the pump. In addition, it records alarm events, power glitches, manual runs of the panel, and stores up to 4,000 events. Each event contains the date, time, liquid level in the pump chamber and the event.
- 2) The panel has both an audible and visual alarm. The audible alarm has a push to silence. The push to silence also acts as a manual run switch.
- 3) The panel has a UL 508 approval.
- 4) The enclosure is NEMA 4X rated.

Please see the attached documentation for further specifications relating to the panel.

For questions or comments please call Carl Garrison @ (360) 886 9103, Wastewater Solutions Design & Services, Inc.

Thank You for your time and appreciation,



S SNOHOMISH
HEALTH
DISTRICT

ENVIRONMENTAL HEALTH DIVISION
3020 Rucker Avenue, Suite 104
Everett, WA 98201-3900
425.339.5250 Fax: 425.339.5254

----- He11/ly Lif!!!y!!!\$, He111thy Communtl . . -----

January 21, 2000

ROBHILD
LAKE INDUSTRIES LLC
PO BOX 1494
MARYSVILLE WA 98270

Subject Drainfield Rock produced by Menzel Lake Gravel

Dear Mr. Hild:

The 3/4 to 2 inch washed gravel you propose to market is approved for use as drainrock for onsite sewage disposal systems within Snohomish County.

It cannot be over-emphasized that the drainrock must be clean. Clean is viewed as being free of fines. This is especially important with alternative systems as the fines are washed into the sand and may cause clogging leading to premature system failure.

If you have any questions, please contact me at 425.339.5250.

Sincerely,



Brent Raasina, RS, Senior Sanitarian
Water/Wastewater Section
Environmental Health Division

BR/je

cc Designers Installers
Water/Wastewater staff



Memorandum

October 21, 1999

To: Installers/Designers

From: Randy Darst, R.S., **Mana**
Water & Wastewater Secti'

Subject: SHD Water/Sewer Une Perpendicular Crossing Requirements

These requirements are the minimum criteria for perpendicular water line and pressure sewer line crossings: the pressure sewer line must be located in all installations below the water supply line; application design is to include crossing detail, and the as-built must certify approved design elements of crossing were met; review and concurrence by the water purveyor when a crossing will occur under one of the water purveyor's lines is required. Sample purveyor review letter enclosed.

When the vertical separation between the sewer transport line and waterline is 18 inches or greater at the crossing:

1. The pressure sewer line must be encased in PVC Schedule 40 or equivalent for a distance of 10 feet from the water line. The pressure sewer line must be supported on skids with a minimum spacing of two feet or pressure grouted per AWWA Manual 23.
2. The pressure sewer line must be pressure tested to 150% of system design, but not less than 70 psi for one hour.
3. Adhere to ASTM 02774 installation requirements.

When the vertical separation between the sewer transport line and water line is less than 18 inches at the crossing:

1. The pressure sewer line must be constructed of standard sewer pipe encased in ductile iron pipe or C-900 water pipe rated at 150 psi minimum. The pressure sewer line must be supported on skids or pressure grouted per AWWA Manual 23.
2. The pressure sewer line must be pressure tested to 150% of system design, but not less than 70 psi for one hour.
3. Adhere to ASTM 02774 installation requirements.

Gravity sewer line and water line crossings as well as parallel installations of less than 10 feet are strongly discouraged. Mitigation measures for sites where alternatives do not exist will be reviewed on a case by case basis.

If you have any questions, please call Brent Raina or Kevin Plemel at 425-339-5250.

||||

Enclosure

SAMPLE PURVEYOR REVIEW LETTER

(DATE)

fPTA NUMBER
Property Tax Acct. No.

XXX
XXX
XXX

DoM_____

The Snohomish Health District (SHD) has received an Application For An Onsite Sewage Disposal System Permit for property located at (STREET ADDRESS)

The application proposes a pressure sewage effluent line to cross and/or parallel a water main at locations shown on the attached plans. The intent of the proposal is to comply with Section C1-9.1.4 of the Department of Ecology's *Criteria for Sewage Work Design*, which calls for perpendicular crossings of pressure sewers below water mains with ductile iron or standard sewer pipe in a casing equivalent to that specified in section C1-9.1.4A for a distance of 10 feet on both sides of the water main. Sewer line that parallels a water main is to meet the applicable requirements of Sections C1-9.1.1 & C1-9.1.2.

'This information is being provided to you *as* it may impact your operations. Please check the appropriate boxes below following your review and return to Snohomish Health District at the earliest possible time.

- Plans have been reviewed by (WATER SYSTEM NAME)
- Water system purveyor requests SHD to note the following comments (attach separate page if needed).

Comments:

Signed:_____ Date:_____ Title:_____

Thank you for yoW" consideration in this matter.

Sincerely,

, R.S.
Environmental Health Specialist

/,

Encl: Additional copy ofletter
Copy of Design

cc: Applicant, no enclosure
Designer, no enclosure



**SNOHOMISH
HEALTH
DISTRICT**

M. Ward Hinds, M.D., M.P.H.
Health Office

Environmental Health Division

3020 Rucker Avenue, Suite 104
Everett, WA 98201-3900
(425) 339-5250 (425) 339-5270
Fax: (425) 339-5254 TOO: (425) 339-5252

MEMO
March 10, 1999

To: Certified Onsite Sewage Disposal Designers
Certified Onsite Sewage Disposal Installers

From: Randal S. Darst,
Water and Wastewater Division
Environmental Health Division

Subject: Miscellaneous Onsite Sewage System Issues

Sieve Test Analysis

Please remember that it has been a long-standing condition of permit issuance that the Designer is responsible for verifying sand fill quality at the job site and providing a certified sieve analysis of the delivered sand prior to final installation approval. Also, by virtue of submitting an application for permit to the Snohomish Health District (SHD) the designer incurs the obligation to comply with the minimum onsite and inspections and prepare **plans to assure compliance with the permitted design and the requirements as set forth in WAC 246-272 and Snohomish Health District Sanitary Code.**

Be advised that within the past year the SHD has been made aware of certified sieve test analysis reports that have been falsified by changing the name of project, date of report and the Sieve analysis results. Pursuant to Section 8 of the Sanitary Code, the SHD investigated the cases, held Hearings, and suspended/revoked certificates.

To reiterate, the certified designer is responsible for verifying sand quality at the job site and to provide a certified sieve test report of the sand delivered to the site. The report is not to be tampered with. The report must clearly indicate the project name which can include plat name and lot number, tax account number, owner's name if specific to one site. The report must also include the date of report, certification number, signature of responsible laboratory authority, sieve analysis and fines modulus.

Alternative System Guidelines

The State Department of Health has recently revised and/or reorganized its guidelines including: Alternating Drainfields, Dosing Gravity Drainfield Systems, Graveness Drains, Holding Tank Sewage Systems, Intermittent Sand Filter Systems, Sand Lined Trench Systems, Mound Systems, Pressure Distribution, and Water Conserving On-Site Wastewater Treatment Systems. DOH has established an effective date of April 15, 1999. We are still trying to digest these and will get copies out to you as soon as we can get some made (DOH is unable to provide us with extra copies).

Memo - Designers & Installers
March 10, 1999
Page 2

Subject: Miscellaneous Onsite Sewage System Issues

Well Site Application

Designers who are submitting the Application for an Onsite Sewage System on behalf of their client must remember to attach a detailed sketch (three Copies) which includes the required information listed on the application. The sketch must be attached to the application form. Health District Staff will not pull a sketch out of the Onsite Sewage Disposal System Application package and assume it is the sketch intended to serve as part of the well site application. It would also be helpful to label the sketch as "well site application site plan". We need to have a clear distinction between the onsite sewage disposal system application sketch and the well site application sketch. If the sketches are the same, without distinction, it becomes confusing to the applicant when one application becomes approved and one disapproved, particularly if the application cover sheet becomes detached from the sketch. Your help with this is appreciated.

Please contact me, Brent Rassina, or **vin** Plemel at 425-339-5270, or stop by the office and visit us if you have any comments or questions.

RSI>j<

cc: Robert Pekich, Director
Dave Peterson, Assistant Director
Technical Staff



**WISH
HEALTH
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**M. Ward Hinds, M.D., M.P.H.
Health Officer**

**Environmental Health Division
3020 Rucker Avenue, Suite 104
Everett, WA 98201-3900
(425) 339-5250 (425) 339-5270
Fax: (425) 339-5254 TDD: (425) 339-5252**

MEMO

March 31, 1998

To: Certified On-Site Sewage Disposal Designers, Installers & Professional Engineers

From: Randal S. Darst, **Ma** ljjj/
Brent Raasina, **Senior** ib;rian l;v
Environmental Health Division

Subject: Various Onsite Issues

Riser for Electrician

Health District (SHD) personnel met with a representative of Washington State Labor and the issues of wiring the pumps, floats and control panels that are Low Pressure Distribution Guidelines. As always, the Items such as conduit, electrical boxes and wiring must be installed for L & I inspection. However, the opening in the riser for placement of conduit can be prepared by the installer. Placement of the grommet for water tightness as required by the SHD can be installed so the electrician can place the electrical conduit without having to create a new hole in your riser.

It was suggested by the L & I representative and supported by the SHD that some of these issues concerning the SHD requirements of watertight openings into the riser and of a electrical disconnect could be more easily addressed by mounting the NEMA 4 junction box inside the riser.

Pump Chamber Sizing

The State Guidelines for Pressure Distribution Systems require a pump chamber be sized to accommodate the daily design flow volume, full lime pump submergence which includes dead space below the pump inlet, and emergency storage equivalent to 75% of daily design flow. While this sizing addresses the needs of a timed dosed system, it exceeds the needs of a demand dosed system. Therefore, in those cases where the design calls for demand dosing, the actual dose volume may be used in place of the daily design flow volume for sizing the pump chamber. Determining emergency storage requirements remains the same for both or demand dose conditions.

The tank volume between pump "on" and the alarm activation cannot be counted as emergency storage, but must be taken into account when calculating pump chamber sizing.

If you have any questions, please call Brent at 425-339-5270.

cc: Technical Staff



**SNOHOMISH
HEALTH
DISTRICT**

M. Ward Hinds, M.D., M.P.H.
Health Officer

Environmental Health Division
3020 Rucker Avenue, Suite 104
Everett, WA 98201-3900
(425) 339-5250 (425) 339-5270
Fax: (425) 339-5254 TOO: (425) 339-5252

MEMO

December 28, 1998

To: Certified Onsite Sewage Disposal Designers
Certified Onsite Sewage Disposal Installers

From: Randal S. Darst, M.S.E.
Water and Wastewater Sanitary
Environmental Health Division

Subject: Miscellaneous Onsite Sewage System Issues

Wary of Septic and Pump Tanks

We have become aware of a couple of relatively new systems which are failing, attributed in part to ground water intrusion into the septic and pump tanks. Additionally, during rainy periods in November and December, installers report receiving numerous calls from owners of systems which utilize timed dosing concerned about their high water alarm activating. Investigation revealed that ground water intrusion was the cause of the problem. The benefit of timed dosing to sound an alarm and prevent hydraulic overload of the sandfilter is realized when ground water intrusion is occurring. Timed dosing alarms bring to light fundamental problems not only with tank manufacture but also with tank location and installation. The ground water appears to be entering the tank between the tank top and side wall; around tank inlet and outlet pipe; and around the 6" manhole cover (over second compartment baffle on some tanks) and at the riser scam. Attention to assuring a water tight installation continues to be a fundamental priority. Obviously, the best practice is to keep the tanks high with the lid seam and the inlet and outlet above the ground water. Designers need to assess the proposed tank locations, and design where high ground water conditions have the least impact. Sanitarians will include tank location as a priority design and site review item. Designers, Installers and Sanitarians need to again review and assess the location of the tanks at the time of the preconstruction conference. Manufacturers need to address the quality and integrity of their tanks and assure watertightness. Builders need to be advised on proper location and elevation of the plumbing stub-out.

As a matter of practice, until watertightness assurances can be made by the manufacturers and exhibited in the field, the Health District will immediately require watertightness testing of septic and pump tanks. Although we do not have developed firm standards at this time, the tanks, at installation, must be filled to the top of the tank lid. The water shall be maintained at this level for at least 24 hours and until SHD's final inspection. As an aid to detect water movement out of the tank, we encourage the use of tracing dye. For unusual circumstances, specifics of the watertightness test procedure should be discussed at the preconstruction conference. For example, during the rainy season, if the water table is up around the outside of the tank lids then the check for watertightness will be tested for intrusion into the tanks by filling to a level just below the inlet and outlet.

Pipe Standard

Because of concerns regarding pipe deflection observed in four inch tightline entering and exiting the tank(s) upon backflow, effective immediately, a minimum PVC pipe standard of 12" 3034 sewer line pipe or equivalent, is required from the house into the septic tank, from the septic tank into the pump chamber, or with gravity systems, extend a minimum of 10 feet outside of the septic tank or to the perforated distribution pipe. Higher strength pipe will prevent compression at the inlet and outlet consequently preventing ground water intrusion into the tank through the gap.

VIEMO-Certified Designers & Installers
December 28, 1998
Page 2

Subject: Miscellaneous Onsite Sewage System Issues

Pipe Standard continued

Installers need to begin implementing this standard with all new installations as soon as possible. By the end of January all installations need to meet the pipe standard. If there is a problem with this let me or Brent know. Designers must specify the pipe standard on all new applications, redesigns, revisions and renewals.

Riser Covers

Because of safety concerns, the riser lids need to be bolted/screwed down as soon as the tank is in the ground and risers are in place.

Permit Application Permit Cards

Some designers are attaching the permit card to the as-built at the time of submittal to our office. The permit needs to remain posted on the site, preferably until the building structure is given final approval, so that all involved parties can check on status; including installer, homeowner, building inspector, etc.

Onsite Sewage System Application

Reminder to designers to submit four packets of the design and specifications. The packets should be complete and unfiled. SHD Office Assistants will not collate your copies into complete packets.

As-Built Sheets for Gravity Systems

It is not necessary to submit a page 2, as-built sheet for a gravity system providing you indicate the septic tank manufacturer, size and type of screened outlet baffle, if used, onto the as-built drawing.

Northwest On-Site Wastewater Training Center

The schedule for the training season of on-site sewage classes offered by the training center was mailed to Snohomish Health District certified installers and designers according to Dave Lenning, Director of Training. If you did not receive one you can contact me or call Dave Lenning at 360-455-8880. You are all encouraged to attend the continuing education class offered by the Training Center.

Please contact me, Brent, or Kevin at 425-339-5270, or stop by the office and visit us, with your comments and recommendations on these issues. We plan on further discussions with manufacturers very soon so would appreciate your comments as soon as possible.

RSDije

cc: Robert Pekicb, Director
Dave Peterson, Assistant Director
Technical Staff
Snohomish County Septic Tank Manufacturers

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DISTRICT

ENVIRONMENTAL HEALTH DIVISION
3020 Rucker Avenue, Swte 104
Everett. WAS8201-3000
425.339.5250 FAX: 425 339.5254

----- *Hulthy Uf9styl6s, HNithy Communities* -----

MEMORANDUM
December 18,2001

To: On8ite Sewage System Designers
Ollllite Sewage System Installers
Water and Wastewater Staff

From:?Kevin Plemel, Manager
Water and Wastewater Section

Subject: Onsite Sewage System Issues: Final htspection Deficiencies- Re-inspection

It has come to my attention that Designers may not always be a direct party to there-inspection of deficient final installations. Inasmuch as it is the Designer's responsibility to submit As-Builts only for fully compliant systems, the De!!igner must re-inspect the system prior to Snohomish Health District (SHD) re-inspection. In an effort to reaffirm Designer involvement in the re-inspection process, effective January 1, 2002, Designers must re-inspect deficient iru;tallations and make notation of their re-inspection on the permit card (sign and dale). Absent this confirmation of compliance by the Designer, SliD will not re-inspect the system or give final approval.

Also, attached, please find a copy of the revised page 2 of the as-built form. We will soon have a supply available for your use. Please keep in mind, this form does not reduce your responsibility to submit as-builts containing ALL of the required information set forth in the applicable RS&G.

Additionally, ■ remind you that ALL pressure tests are to be conducted with the orifices visible and in the 12:00 position. (Exception to this requirement will only be considered when it is demonstrated that it is physically impossible to conduct such a test)

Should you have any questions about the above issues, please contact Brent Raasina, Bruce Straughn or me at 425.339.5250.

KPfje

enclosure



ONSITE SEWAGE DISPOSAL SYSTEM PLAN (As-BUILT) Page 2

Type of System: Gravity LPD SF Mound DATU Repair
 Reduced System Other _____

Submit separate as-built Pfl.. 2 (or each pump compf){}nen/; e.g., SF+LPD, SF+Mound. or SF+pump to gravity.

Pennit No. Property Tax Account No. _____ Lot# _____

Date pressure tested > _____ Pre sure tested using nominal voltage

On.site Sewage SVstem Infermatiog

Cheek and/or specify all that apply:

Septic tank size	Ions	Septic tank manufacturer/model
Pump chamber size	ooo	Pump chamber manufacturer
Pump chamber	1/inch	Pump make/model
Dose volume	GPM	Total installed dynamic head ft.
Drawdown per dose cycle	"'"	Doses per day
Alarm location	incheoi	Control Panl make/model

Timed dosing? DYes D No If yes, then: Time pump **on**----- Time pump off _____

Lateral diameter inches Residual head squirt **height**-----
 Orifice diameter inches Total# of **orifices**-----
 Orifice spacing _____ Orificeorienmtion _____

Disinfection? DYes DNo Type of **disinfection**-----
 Sieve analysis attached? **DY** DNo
 Elapsed time meter? **DY** DNo
 Anti-siphon holeJvalve? **DY** DNo
 Gravelless drainfield system? **DY** DNo **ry** - _____

All tanks tested and found water tight? DYes DNo
ynm? _____

All orifices at 12:00 for pressure test? DYes DNo
yno -----

Orifices unobstructed? DYes DNo



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ENVIRONMENTAL HEALTH DIVISION
3020 Rucker Avenue, Suite 104
Everett, WA 95201-3900
425.339.5250 FAX. 425 339.5254

----- Healthy Lifestyles, Healthy Communities -----
Memorandum

Date: August 7, 2000

To: Certified Onsite Sewage System Designers
Certified *Onsite* Sewage System Installers
Interested Persons

From: Randal Darst, R.S., **Mana**
Water and Wastewater Specialist
Snohomish Health District

Subject: Revised DOH Recommended Standards and Guidance Documents and SHD Sand Filter Policy
Revision

The State Department of Health (DOH) has released a revised Recommended Standards and Guidance (RS&G) document for Intermittent Sand Filter Systems with an effective date of July 1, 2000. A copy of the revised document together with a DOH cover memo is attached. The revision allows for a coarse sand media (see B(1), Appendix A) and is based on technical studies and understandings as well as practical field experiences.

The following revisions will be immediately implemented by the SHD:

1. All new, renewal and redesigned intermittent sand filter system applications shall be designed specifying the use of Coarse Sand Media as detailed in Appendix A of the RS&G and incorporate the required minimum of 18 doses per day as per Section 4.4.
2. All intermittent sand filter installations, approved and/or permitted with ASTM C33 sand, shall be installed using Coarse Sand Media as detailed in Appendix A of the RS&G and with the required minimum of 18 doses per day. Revision to the Coarse Sand Media and dose events shall be discussed and agreed upon at the preconstruction conference.

Understanding there is always a transition time when implementing new standards, exceptions to #2 above will be considered for the next 90 days, if availability of Coarse Sand Media becomes limited or if a sand filter is currently under construction.

SHD has met with numerous representatives from the sand suppliers and manufacturers in Snohomish County to discuss availability of the Coarse Sand Media and to provide them with the technical specifications. As a result of those meetings, we are confident that availability will not be a problem.

Sand Filter Cover Soil

It has become increasingly apparent that the type and depth of cover soil over the intermittent sand filter is crucial for proper operation. Minimizing depth and maximizing permeability of cover soil enhances oxygen transport into the filter bed. The RS&G document allows a minimum of six inches of loamy sand cover soil. Designers should assure that acceptable cover soil is stockpiled in close proximity to the sand filter prior to final installation approval. Installers are responsible for the proper backfill of the onsite systems and should make sure that only acceptable soil is used for sand filter cover.

If you have any comments or questions please contact Brent Raasina, Kevin Plemel or me at 425.339.5250 or stop by the office.

RSD:ch

Enclosures: RS&G, DOH Cover Letter

cc: Technical Staff



STATE OF WASHINGTON

DEPARTMENT OF HEALTH

Office Of ENVIRONMENTAL HEALTH AND SAFETY

7171 Center Street, Building 4 • P.O. 47825 Olympia, WA 98512-7825

Washington State (1100) 833-7111

July 13, 2000

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Environmental Health Director
Sewage Program Coordinator
Interested Parties

00 © U111 ®

July 18 2000

Environmental Health

FROM: J. Mark Seltraw, Supervisor
Wastewater Management

SUBJECT: Revision To The Recommended Standards And Guidance For Intermittent Sand Filter

In response to continued reported problems of pipe clogging and failures of intermittent sand filter systems, the Department of Health (DOH) has revised the Recommended Standards and Guidance (RS&G) for Intermittent Sand Filter Systems. The attached document is effective as of July 1, 2000, superseding the previous Intermittent Sand Filter System RS&G - Effective Date April 5, 1999.

To address the potential for intermittent sand filter clogging and failures with ASTM C-33 sand as the filter media, the revised document allows for the use of a sand specification that is more clog-resistant than the ASTM C-33 sand specification. Recent studies on sand filter performance using sand that meets the new specification show that the treatment efficiency is similar to that using sand meeting the ASTM C-33 specification, when a lower dose is used. Subsequently, the revised sand filter treatment efficiency is not reduced with the use of the new sand specification, the revised RS&G requires a higher system dosing frequency (minimum 18 times per day).

The ASTM C-33 sand specification remains an option in the revised RS&G. If ASTM C-33 sand is used, the revised RS&G retains suggested lower loading rates and methods of improving oxygen exchange within the filter, which are intended to reduce the potential for clogging and failure of the sand filter system. With two options for sand media (with their corresponding dose frequency requirements) the matter of sand media availability should be less of an issue than it might have previously been.

You may have noted that we have dispensed with the customary delay between adoption and effective date. We have done this for three reasons:

- The relatively straightforward nature of these changes;
- The retention of the option of using ASTM C-33 sand; and,
- The timing of these changes relative to the current construction season.

We hope to have this document posted on our WebPage within two weeks. That internet site is located at:

www.doh.wa.gov/ehp/tslpubs.htm#wastewater

A Summary of Significant Changes appears at the bottom of Page 2, for your quick review. For further information or questions about the RS&G revision relating to the sand specification, please contact John Eliason, Wastewater Management Section, at (360) 236-3141 or by E-mail at john.eliason@deh.wa.gov.





ENVIRONMENTAL HEALTH DIVISION
3020 Rucker Avenue, Suite 104
Everett, WA 98201-3900
425.339.5250 FAX: 425.339.5254
Deaf/Hard of Hearing: 425.339.5252 (TTY)

Match 31,2008

To; Licensed Sewage Disposal System Designers, Professional Engineers & Certified Installers

From: \ Brent Raasina, R. S., Senior Sanitarian
Water & Wastewater Section
Environmental Health Division

Subject: UV Disinfection Pump Relay

It has been brought to the attention of Snohomish Health District, in discllision with the Septic Issues Committee, that the Salcor disinfection writ will short out when flooded. This flooding is caused when pump shuts down as a result of UV light failure. Instead of just replacing a UV bulb, the whole unit must be replaced. It would appear this potential c:lectrical hazard exceeds the benefits of automatic pump shut down with light failure.

Therefore, independent UV disinfection assembly not wired to pump chamber pump will be allowed.

If you should have any questions, comments, or concerns regarding this new pressure test inspection procedure, you may contact me at 425.339.5250.

BR/ss

cc: WWW Staff



ENVIRONMENTAL HEALTH DIVISION
3020 Rucker Avenue, Suite 104
Everett, WA 96201-3900
425.339.5250 FAX: 425.339.5254
Deaf/Herd of Hearing: 425.339.5252 (TTY)

Memorandum

March 8, 2007

TO Designers/Installers

FROM: **Brent Raasina, R.S., Senior Sanitarian**
Water and Wastewater Section
Environmental Health Division
Snohomilil Health District

SUBJECT: Time Dose Systems

It has become apparent that a reminder is in order in regards to Time Dose Systems. The "Recommended Standards and Guidance for Pressure Distribution" document incorporated within the SHD Sanitary Code prohibits timer override. It's stated **if** high water alarm turns the pump on, the system will not be approved". "A system with a timex override float wi!! not be approved".

By allowing either of these conditions to occur the function of a timed dose system in controlling flows to treatment unit or soils dispersion oomponent is nullified.

Any design and/or installation that incorporate any automatic override features are **in** violation of code and will be denied.

If you have any questions or need additional infonnation I can be contacted at 425.339.5250.

BR/jo

cc: Water and Wastewater Staff



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ENVIRONMENTAL HEALTH DIVISION
3020 Rucker Avenue, Suite 104
Everett, WA 98201-3900
(425) 339-5250 (425) 339-5270
FAX: (425) 339-5254

Subject: Standards-Watertight Tanks

Effective: September 1, 1999

Author: Brent Raasina, Senior Sanitarian
Water and Wastewater Section

Appro. by

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Robert A. Pekich, Director
Environmental Health Division

Purpose

To establish minimum construction design standards to assure watertightness of septic tanks and pump tanks. These minimum standards are intended to minimize the potential of groundwater entry into the tanks and sewage effluent from exiting the tanks except in the proscribed manner. These standards address watertightness only and are intended to compliment existing state and federal construction standards which may be in effect.

Background

On-site sewage disposal regulation, WAC 246-272, defines a septic tank as a "watertight receptacle..." The OSS Systems installed under the Department of Health (C 1996) of the LPD Guidelines requiring the use of timed dosing, first became in operation the 1998/1999. With timed dosing only allowing the designed flow to be pumped to component, it became evident that groundwater entry. Groundwater entry leads to hydraulic contributing to premature failure. The OOH is attempting to address this issue "Standards for On-site Wastewater System Tanks" but adoption is still projected for some future date.

Procedure

The following items are the minimum requirements for designation as a concrete watertight tank.

1. Tank Influent/Effluent Gaskets: The gasket must be composed of a rubberized material that is resistant to gases and other forces of its environment, cast into the tank wall to ensure integrity, and capable of accepting a non-conosive clamp and screw to secure the pipe to the gasket, i.e., boot design. When an effluent outlet is provided in the pump tank, it must be gasketed in the same manner. The clamping of gasket to pipe with a boot design prevents pipe deflection of gasket that may create a gap between gasket and pipe, and greater flexibility of joint to compensate for any settling of tanks or pipe.
2. The sides and bottom must be a mono pour of sufficient mix, and strength to prevent migration of groundwater into the tank and sewage effluent out of the tank.
3. The tank rim and lid base must be free of all irregularities that may prevent a uniform watertight fit.
4. The sealant between tank rim and lid must be able to provide a watertight seal regardless of weather conditions or temperature during sealant application.

5. The tank riser(s) must be watertight and placed into tank lid at time of pour. Electrical and effluent pipe that exit the riser must use a rubberized gasket as its watertight seal and must be able to withstand vibration and/or settling.
6. An inspection access (4 inch minimum) at the intercompartmental wall of the septic tank is not required by the SHD to be considered for approved use. The DOH may require it in the future. **If** an inspection access is provided it must be PVC Schedule 40 or equivalent and cast into the tank lid. It must extend above the tank sufficiently to accept a watertight cap/seal.
7. The tanks must be identified by the manufacturer as watertight. A non-deteriorating identification must be located within the riser or on the tank lid and contain the minimum information of manufacturer's name, a W.T. for watertight, and month/year of construction.
8. Manufacturer must submit for SHD review all tank specifications for tanks with the watertight designation.

The following are the minimum requirements for designation as non-concrete watertight tank.

1. The tank riser(s) must be an integral part of the tank and provide a watertight seal/joint at connection to tank and at any riser extensions. A rubberized grommet must be used when exiting the riser with electrical or pump lines.
2. The riser lid must be lockable, water and gas tight, and allow for ease of removal for servicing and inspection.
3. The tanks must be bedded per the manufacturer's specifications. They must also be installed in a manner to prevent movement due to buoyancy during periods of high ground water conditions.
4. The inlet/outlet must be capable of accommodating a flexible rubberized joint approved for this use, and secured by a non-corrosive clamp and screw to tank inlet/outlet and pipe. The flexible joint secured in the noted manner will allow for any settling of tank or pipe deflection during backfill while maintaining watertightness.
5. An inspection access (4 inch minimum) at the intercompartmental wall of the septic tank is not required by the SHD to be considered for approved use. **If** one is provided it must be an integral part of the tank body and must extend above the tank sufficiently to accept a watertight cap/seal.

The minimum standards in this policy will remain in force until the SHD notes otherwise.

Subject: Reduced Size Soil
Absorption Systems

Effective: May 17, 1999

Supersedes: Sanfiller Systems
April, 1997

Author: Randal S. Darst, Manager
Water and Wastewater Section

4. fi" L
Robert A. Pekich, Director
Environmental Health Division

Philosophy

The Washington State Department of Health (DOH) Recommended Standards and Guidance documents set forth standards for the design, installation, operation and maintenance of alternative onsite sewage disposal systems. While the guidelines provide a comprehensive set of general standards regarding alternative systems they lack standards and operating procedures which take into consideration local conditions and concerns. Of particular concern is the lack of state and local performance data on reduced sized soil absorption systems, which use soil loading rates in excess of those required in WAC 246-272-11501(2)(k), herein referred to as a reduced size soil absorption system.

Purpose

To allow limited use of onsite sewage disposal systems which utilize soil loading rates in excess of the rates specified in WAC 246-272-11501(2)(k), in order to gather information and data relative to their performance in Snohomish County, and to develop a process to assure compliance with DOH operation and maintenance requirements together with a mechanism for funding Snohomish Health District (SHD) supervision of data collection and management. The SHD will review and evaluate this Policy, and the use of reduced size soil absorption systems after receiving performance data from a significant representation of local installations and may make appropriate modifications to this Policy as a result.

Procedure

The following procedure sets forth conditions under which the SHD will allow reduced size soil absorption systems.

- A. The parcel must be an existing legal lot of record.
- B. The onsite sewage disposal system shall be located within the property line boundaries of the lot containing the structure to be served.
- C. This option cannot be used in combination with any other drainfield size reductions as may be provided for in the Guidelines or Health District Sanitary Code.
- D. This option cannot be used in combination with Health District policy regarding redundant drainfields.
- E. All design, installation and monitoring requirements as set forth in the applicable DOH Onsite Sewerage and this Policy shall be followed.

- F. When benches are used they shall be for the site, shall not exceed three feet in width, and shall be separated by a minimum of six feet of original undisturbed soil between sidewalls.
- G. The onsite sewage disposal system application shall include a *Declaration Of Covenant* which describes the system type, addresses service agreement requirements, operation and maintenance requirements, reporting requirements, emergency response procedures, and special conditions and agreements. The covenant shall describe and acknowledge any special conditions for approval of a reduced size soil absorption system using increased soil loading rates as outlined in the DOH Guideline and this Policy, including but not limited to the following:
1. Owner's understanding and acknowledgment that the onsite sewage disposal system is designed and approved in accordance with the applicable Department of Health Guideline and SHD Policy.
 2. Owner's understanding of their responsibility and obligation to assure *proper* operation and maintenance of their system and to provide performance monitoring inspection reports to the SHD. Performance monitoring inspections must be conducted by a certified onsite sewage system designer or professional engineer two times ¹ per year (once every six months) during the first and second year following installation of the system and annually thereafter and in response to complaints or problems. Inspection *reports* shall be submitted to the SHD upon completion.
 3. Monitoring is to be in accordance with the inspection/monitoring criteria established in the applicable guideline issued by the Washington State Department of Health and shall also **include** contained in the Snohomish Health District Sanitary Code and Policies regarding the use of reduced sized soil absorption systems.
 4. Upon request for release of Health District installation permit, Owner agrees to provide SHD a copy of a service contract with a certified onsite sewage system designer or professional engineer to conduct a sewage system Operation inspection and conduct (or coordinate) preventative maintenance every six months for the first two years after the system is installed, approved and operational. Contract to set forth minimum inspection report data to include Water use figures, effluent dose volumes and frequencies, observed and measured polluting in trenches after installation, etc.
 5. Upon request for release of Health District Installation permit, Owner agrees to pay fees to the Snohomish Health District which will cover costs the District will **=for** operation and maintenance records management for a minimum two year period; such fee established in the Snohomish Health District Fee schedule.
 6. It is the Owner's obligation to immediately report any failure, damage, or change of conditions relating to the onsite sewage disposal system to the Snohomish Health District.
 7. It is the Owner's agreement to not cause any part of the **system** to become non-functional or ineffective.
 8. It is the Owner's agreement to grant the Snohomish Health District the right to enter the property during normal business hours for purposes of routine inspections for onsite sewage disposal system monitoring and enforcement of the Sanitary Code and this Policy.

H. Prior to issuance of the onsite sewage disposal system installation pemrit the following shall be provide to the SHD:

1. A copy of the **orded** operation and maintenance covenant.
2. A copy of an operation and majntenance service agreement with a certified designer or professional engineer.
3. Payment of SHD operation and maintenance records management fee for a minimum two year period.

EXAMPLE

DECLARATION OF COVENANT

The undersigned, hereinafter referred to as the "OWNER" is the owner having the right to possess and use the following described real property located in Snohomish County, State of Washington. To wit:

(ENTER LEGAL DESCRIPTION)

declare the following and places shown on record.

It is the purpose of this covenant to describe the conditions for allowing the installation and use of a (ENTER) size soil absorption system for allowing the installation and use of a (ENTER) size soil absorption system. The system has been designed in accordance with the Washington State Department of Health (SHD) policy (ENTER) size soil absorption systems which prescribes special design and operation requirements.

The OWNER agrees that the following "PC" onsite SOWIF disposal design requirements shall be followed for approval and covenant that shall abide by the following reservations and practices:

1. OWNER shall operation, maintenance and monitoring is the responsibility of the OWNER. is a prerequisite for SHD approval of (ENTER) size soil absorption system. This is to be conducted in accordance with requirements established in the Guideline issued by the Washington State Department of Health and contained in the Snohomish Health District Sanitary Order and Policy (ENTER) size soil absorption system &.
2. OWNER agrees to provide performance monitoring inspection (ENTER) with the SHD. Performance monitoring inspection shall be conducted by a certified (ENTER) system designer or professional engineer two times per year (ENTER) during the first year after the system is installed and opened, one time per year thereafter following installation and in response to complaints or problems. Performance monitoring inspection shall be submitted to the SHD upon completion.
3. Upon request in writing of the SHD installation permit, OWNER shall provide (ENTER) a copy of a service contract with a certified onsite SOWIF system designer or professional engineer, to conduct sewage system performance monitoring and operation and maintenance inspections every six months for the first two years after the system is installed, approved, and operational. Contract to set forth minimum performance monitoring inspection required data as required in the latest version of the Operating Manual including but not limited to use figures, effluent dose volumes and frequencies, observed and measured ponding in trenches after dose, etc.
4. OWNER agrees to report to the SHD any system failure as defined in WAC 246-272-01001 or long-term, continuous and increased ponding of wastewater within the (ENTER) size soil absorption system and to take appropriate action to modify (ENTER) the drainfield to the benefit of permit issued by the SHD.
 - OWNER agrees to not cause any part of the system to become non-functional or ineffective.
6. Upon request in writing of the SHD installation permit, OWNER agrees to pay fees to the SHD which will cover costs the District will incur for operation and maintenance (ENTER) for a two year period; such fee will be established in the SHD fee schedule.
7. OWNER agrees to grant the SHD the right to enter the property during normal business hours for purpose of (ENTER) inspections for onsite sewage disposal system monitoring and enforcement of the Snohomish Health District Sanitary Order and this Policy.

