Appendix A

San Juan County Health & Community Services

On-site Sewage Program Plan

Adopted July 20, 2011

This program plan applies to on-site sewage systems not designated by as Larger On-Site Systems.

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INTRODUCTION:

This plan was developed to describe San Juan County Health & Community Service's on-site sewage program policies and procedures. It is the intent of this plan to identify and focus on-site sewage program efforts on those practices that have the greatest potential impact on public health. The plan is broken into seven sections detailing: goals and objectives, permit requirements, design submittal, design and installation requirements, operation and maintenance requirements, public education, and quality control/assurance. By focusing our efforts as detailed in this plan, we will be able to maximize public health protection with existing staff.

SECTION ONE: PROGRAM GOALS AND OBJECTIVES

The goal of the San Juan County Health & Community Service's On-site Sewage Program Plan is to protect the public health in San Juan County through a comprehensive on-site sewage program. A comprehensive program includes providing public education, insuring on-going operation and maintenance, improving communication between the designer, installer and Health department staff, and enforcing applicable codes and regulations. The following objectives were developed to meet and improve our on-site sewage program goal:

Objective #1: Insure all Identified Failures are repaired within 360 days.

Objective #2: Double the Operation & Maintenance Compliance Rate. Including insuring 100% of Property Sales have required inspections & upgrades.

Objective #3: Conduct Quality Control/Quality Assurance Inspections of Wastewater System Inspectors and homeowners.

Objective #4: Review Design Applications within 14 days.

Objective #6: Improve Quality of Design Drawings (e.g. cross sections, improve contours, more accurate plot plans, etc…). This includes providing examples to designers on expectations.

Objective #7: Improve Data Entry Timelines & Accuracy (all applications & reports in database within one week).

Objective #8: Provide On-line Reporting Capabilities for O&M & Pumper Reports.

Objective #10: Separate Homeowner Training Workshops into two tracts.

SECTION TWO: ON-SITE SEWAGE PERMIT PROCEDURAL REQUIREMENTS

1. PERMIT REQUIREMENTS

A. New or Repair Septic Systems

San Juan County Health & Community Services (Health Department) requires an approved On-site Sewage Design for a variety of activities, including, installing new systems or repairing failing systems. The table below lists a variety of on-site septic activities, whether or not a design is required and the appropriate fee category. Activities not listed may require a design. Therefore, property owners, designers and installers are encouraged to contact the Health Department to determine if an activity not listed below requires a design application.

Table 1: Septic Activity & Appropriate Design Requirements

Septic Activity	Design Required (Yes/No)	Appropriate Fee
Install new system	Yes	Sewage Design Approval
Design revision to expired permit – Drainfield in same location	Yes	Sewage Design Approval – Existing Soil Log Data
Design revision to a current permit – Drainfield in different location (new test holes required)	Yes	Sewage Design Approval
Install a repair system	Yes	Repair Design Approval
Design resubmission – Initial design not approvable	No	N/A – covered under original design fee
Replace septic tank including pumping and crushing of existing tank **(note: installers may submit the necessary paperwork for tank replacements)**	Yes	Existing Design Revision Approval
Upgrade system to current code	Yes	Sewage Design Approval
Replace a drainfield lateral: 1. Same Area 2. Different Area	 No Yes	 N/A Repair Design Approval
Add to drainfield	Yes	Existing Design Revision Approval
Replace sand filter, ATU or other proprietary treatment device with another technology	Yes	Repair Design Approval
Repairsand filter, ATU or other treatment device	No	N/A
Replace portion of drain pipe	No	N/A
Replace pump, floats, screens	No	N/A
Abandon septic system/privies/fixtures	No	N/A
Repair or replace D-box	No	N/A
Add additional cover to existing non-failing system	No	N/A
Remove roots from drainfield	No	N/A
Replace septic tank baffles	No	N/A
Replace portion of drain rock or gravelless chamber	No	N/A

B. Existing Systems

Many parcels have an existing septic system already installed. Individuals wanting to utilize an existing system for a building permit proposal may be allowed provided the system is not failing, complete records are on file and the proposal does not exceed the design flow rates. Existing systems not meeting these requirements potentially can be utilized; however, the system may need to meet additional requirements. Complete requirements for utilizing existing systems can be found in

Appendix 1.

2. DESIGN, STAKE-OUT AND SITE INSPECTION

A. Design Submittal

The first step is to have a State Certified Designer complete a sewage design application, provide test holes for inspection, and submit the design with the appropriate fee to the Health Department. The designer must place a white 1/2" PVC pipe and ribbon in the middle of the primary drainfield area. This will alert homeowners of these critical developmental features so that building and excavation activities can be controlled appropriately. This will also allow health department staff to confirm the adequacy of designs prior to installation of systems. The design application will need to show the exact location of the test holes and provide measurable distances between test holes and property lines, or reliable reference point.

Property owners may design their own gravity distribution system provided the following conditions are satisfied:

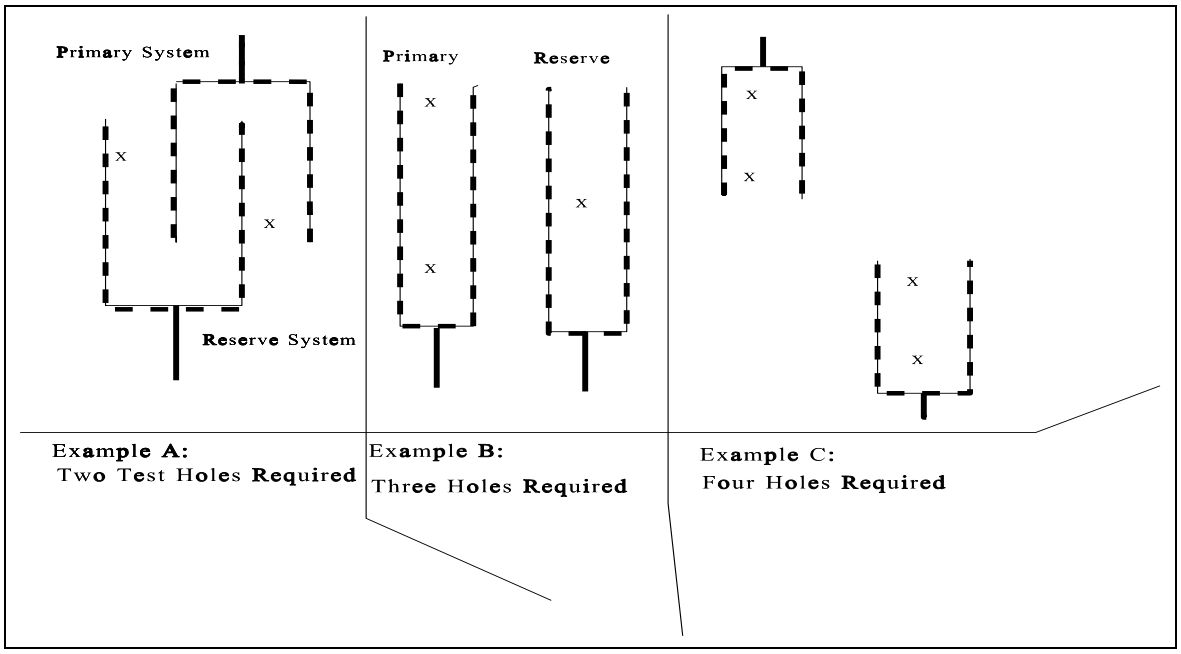
- A State Certified Designer has completed soil evaluations that indicate sufficient soil exists for a standard gravity system
- The property owner has met with the Environmental Health Specialist to review design requirements.

Do not submit the design application until the test holes have been excavated and are ready for inspection.

B. Number and Location of Test Holes

A minimum of 2 to 4 test holes are required per site, depending on the location of the reserve repair area.

- If the reserve area is located interior to the primary system (Example A, below), a minimum of 2 test holes are required.
- If the reserve area is located contiguous to the primary system (Example B, below), a minimum of 3 test holes are required.
- If the reserved area is located in an area separated from the primary system (Example C, below), a minimum of 4 holes are required.



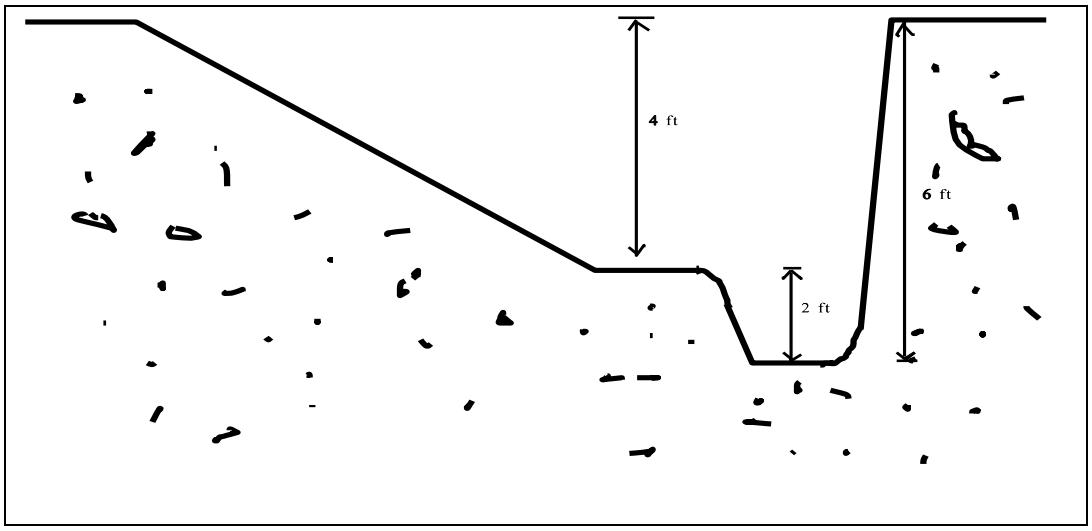
C. Dimensions of Test Holes

The holes are generally excavated by a backhoe and need to be a minimum of 6 feet deep, 2 feet wide, and have one end sloped for easy ingress and egress. The minimum depth of the test hole is set at 6 feet because allowed drainfield depth can go up to 3 feet, and system designs are determined by the 3 feet of soil under the adsorption bed or trench bottom. In addition, the sidewalls of backhoe pits often sluff reducing the depth of observable sidewall.

An exception to this rule is where hardpan or definite impermeable layer is encountered shallower than 5 feet. In such cases, the backhoe should quit digging when the hole has been excavated 6 inches into the impermeable layer.

Backhoe operators may opt for providing shallower test holes, depending on soil sloughing characteristics and access to the site by children or animals. These situations will be considered by the Health Department on a case-by-case basis.

Open test holes can be a safety concern to children and animals. All tests holes must be filled once the soil evaluation has been completed. Whenever possible the designer should arrange to have Health Department staff on-site to confirm soil conditions prior to back filling the test holes. In situations where this is not possible, (e.g., staff not available) the designer must contact the Health Department and arrange an alternative. This may include temporarily covering the test holes with plywood and back filling once reviewed, taking pictures of the soil profile, or leaving small quantities of each soil horizon available at the surface for review.



Note: Safety is a legitimate concern of both backhoe operator and Health Department staff. Holes should be excavated with a 6 foot deep end and a 4 foot deep shelf. The end of the shelf should then be ramped up to the ground surface. This allows staff to enter and exit the hole via the ramp, and to examine the 6 foot sidewall without going deeper than 4 feet by standing on the shelf.

D. Health Department Review

Submitted design applications are initially routed to the San Juan County Community Development and Planning for a "Critical Area" review. Here the applications are reviewed to insure proper setbacks to critical areas (e.g. wetlands, hazardous slopes, and endangered species habitats) are maintained. The Health Department then reviews the design for compliance with State and local regulations. If in compliance, the design is approved.

Approved designs will be numbered, signed and dated by the Health Department. If the design is not numbered, signed and dated it should not be installed.

3. NOTIFICATION AND INSPECTIONS

Proper installation of on-site sewage disposal systems in San Juan County requires a partnership between designers, installers, and the Health Department. Communication is essential to this partnership. Listed below are the three steps that are necessary to insure the installations can be completed and approved.

A. Sewage Installation & System Start-up Verification Permit

The first step in beginning the installation process is for the installer to obtain a Sewage Installation & System Start-up Verification Permit from our department. This permit must be obtained prior to beginning construction.

B. Pre-Construction Contact

Once the Sewage Installation & System Start-up Verification Permit has been obtained, the installer will need to contact a Designer (hereafter "the Designer"). This contact must occur prior to beginning construction and will insure the Designer and installer are in agreement limiting potential issues with the installation. Items that should be discussed include any special installation issues, determining if a pre-construction meeting is necessary, and identification of the inspection requirements. Work may not start until the designer has been contacted.

C. Designer & Health & Community Services Inspection(S)

During the pre-construction contact, the Designer will determine the number and type of inspection(s). The number of inspections may vary depending upon the site. For example, one installation may only require a single inspection by the Designer whereas another more complex installation may require three to four inspections. Inspections may include pre-construction, trench installation, pressure test, and cover. The number and type will be determined by the Designer. Finally, our department will conduct our normal final installation inspection. This can be done with or without the Designer present.

4. RECORD DRAWING, SYSTEM START-UP & FINAL APPROVAL

A. Record Drawing

Once the installation has been completed and approved, the Designer is responsible for the record drawing of the system. The record drawing will verify the installation was completed in accordance with the approved design. Any deviations must be documented on the record drawing by the Designer.

B. Installation & Record Drawing Approval

The installer will be responsible for submitting the completed record drawing, to our department for final review. The record drawing must be received within 30 days of completing the installation. The record drawing will be reviewed and approved by our department. The system will not receive a "final approval" until the system start-up & verification has been completed (see C below)

C. System Start-up Verification & Final Approval

On-site sewage treatment and disposal systems will not receive "final approval" until a system start-up inspection has been completed the Designer or Installer. The system start-up inspection must occur after the system has been connected to the structure, power installed (if applicable), and all

components tested to verify operation. Once said inspection has occurred, the Designer or Installer will need to sign and date the Sewage Installation & Start-up Verification Permit. Once signed, our department will conduct a final review and issue a "Final Approval."

5. DESIGN RENEWALS

A. New, Expanding and Alteration On-site Sewage Designs

Designs are valid for four years from date of issuance. Designs are eligible to be renewed once for an additional four years. The applicant is responsible for renewing the design. Designs that have either been expired for four (4)+ years or renewed one or more times will not be eligible for renewal.

i. To be considered eligible for a renewal the applicant must submit a request with the adopted review fee, either prior to the expiration date or within four years after the design expires. **The review fee is not refundable**.
ii. The Design will be reviewed by the Environmental Health Specialist to determine compliance with current State and Local sewage codes. Minor modifications (e.g. risers on septic tanks, timer controls, etc) may be required to be in compliance. Changes noted on the design must be incorporated into the installation.
iii. Designs found to be in compliance with the codes will be renewed for four (4) years from the original expiration date. (For example, a design that expires on 1/1/08 will be renewed until 1/1/12, or a design that expires on 1/1/10 will be renewed until 1/1/14.)
iv. Designs not in compliance with current codes will not be renewed *(note: designs that have not expired will be considered valid until the original expiration date)* and will be marked "Dead File." Said designs will be filed in the parcel file for a period of four (4) years at which time they will be discarded.
v. Incomplete installations such as those where the septic tank has not been installed will be subject to the same protocol. A Design may be renewed for a one four year period beyond the original expiration date as a "tank only" renewal. If the entire installation is not completed within that time period the design will expire and a new design, meeting current codes, will be required to receive a Final installation approval. If the septic tank is the only uninstalled component of the system when renewal expires, a "tank only" design will be required for septic tank installation in order to complete the system.

Note: This procedure does not apply to repair designs. Repair designs are valid for one year from date of issuance. Repair designs not installed within a year will be subject to a full design fee and action under the departments Enforcement Policy.

SECTION THREE: DESIGN SUBMITTAL REQUIREMENTS

1. PROPERTY AND APPLICANT INFORMATION

Information in these sections identifies the parcel, applicant, designer, application type, and system type. This information is needed for the design to be accurately filed, to determine the appropriate fee, and for use by the Health Department to review the design.

2. DESIGN PARAMETERS - DRAWINGS AND SKETCHES

This portion of the design requires drawings that provide sufficient detail to allow the design to be reviewed and the system to be installed. Checklists are included for each drawing and all applicable items in the checklist must be shown on the appropriate drawings.

A. Scaled Plot Plan

This drawing needs to show the placement of the septic system in relationship to the overall developmental plan for the property.

B. Scaled Layout Sketch

This drawing shows the detail of the drainfield layout and details of the system design. The layout sketch is intended to be a close-up of the portion of the plot plan where the septic system is located.

C. Cross-Section Sketch

This drawing shows the depth from original grade of the septic system components. The cross-section sketch is intended to be used both as a guide for system construction and as verification that vertical separation and component depths meet code. At a minimum, a cross-section sketch is needed for the drainfield indicating the maximum trench depth.

D. Elevation Sketch

This drawing shows the difference in elevations system components and various property features. This sketch is similar to the cross-section sketch but must include all system components ((tank(s), treatment devices, & drainfield)), structures, roads, cuts, and other property features. The sketch is intended to verify elevation differences and insure proper setbacks.

3. OPERATION AND MAINTENANCE AGREEMENTS

Design applications for proprietary systems must include proof that both an Environmental Covenant has been recorded with the County Auditor and a Proprietary Treatment Products Service Agreement has signed and submitted. The department will not issue design application until these forms have been completed and submitted.

SECTION FOUR: DESIGN AND INSTALLATION REQUIREMENTS

1. COMMUNICATION

Proper installation of on-site sewage disposal systems in San Juan County requires a partnership between designers, installers, and the Health Department. Communication is essential to this partnership.

Designers and installers have a responsibility to communicate with each other and with the Health Department when they find site conditions different than those listed in the permit or design.

The Health Department has a responsibility to protect public health by developing the most effective permitting process possible and being accessible to designers, installers, and the public.

2. FLOW CALCULATION

Design flow calculations for single family residences are found in WAC 246-272A. Design flows for other facilities (e.g. commercial buildings, restaurants) must be based on projected flows from comparable facilities or calculated using the EPA design manual. The design must include calculations and source used to determine the proposed design flow.

3. SEPTIC TANKS

A. Install only approved two-compartment septic tank with a minimum volume based on the number of bedrooms in the home, as follows:

Number of Bedrooms	Volume of Tank (in Gallons) – Gravity Systems	Volume of Tank (in Gallons) – Pressure Systems w/Vaulted Pump	Volume of Tank (in Gallons) – Pressure Systems w/Separate Pump Chambers
1-3	1,000	1,250	1,000 Septic Tank + 500 gallon pump chamber)
4	1,000	1500	1,000 Septic Tank + 750 gallon pump chamber
5 or more	Add 250 gallons per bedroom	Add 250 gallons per bedroom	Add 250 gallons per bedroom to septic tank & pump chamber

Note 1: For Facilities handling residential strength sewage, other than one single-family residence, size the septic tank at 1.5 times the daily design flow with a minimum of 1000 gallons.

B. Place septic tank close to house to minimize the need for step-downs.

C. Install clean-outs and inspection accesses for both compartments and baffles at or above finished grade

D. Install tanks to be water tight, with protection against floatation and groundwater intrusion.

E. Tightline 3 feet to and out of septic tank using ASTM 3034 pipe and fittings.

F. Make sure the inner partition separating the compartments is intact and no gaps are seen between the partition and the side of the tank. Also, make sure when using tanks with concrete baffles that all residual concrete is knocked off leaving a smooth surface.

4. PUMP CHAMBERS

A. Install only pump chambers from the approved list maintained by the department and approved by the Health Officer;

B. Install clean-outs and inspection accesses on all compartments and baffles at or above finished grade; and

C. Install tanks to be water tight, with protection against floatation and groundwater intrusion.

5. WATERTIGHT TESTING (SEPTIC TANKS AND PUMP CHAMBERS)

All new septic tanks and pump chambers must be leak-tested prior to backfilling to confirm tanks are water-tight. All tanks must be filled to 2 inches into the riser, and allowed to soak for 24-hours. After 24-hours return and refill tank to 2 inches into the riser. After refilling tank, the tank must be monitored for a period of one hour. Tanks that show visible leakage on the exterior or a water level drop (more than an 1/8 inch) during the monitoring period must be rejected and/or repaired. Exception: Tanks that are installed at grade (i.e. no risers) need only to be filled to the operating level, invert of the outlet.

Note: Designers may specify additional leak testing requirements based upon site conditions or other factors. Installers are encouraged to clarify leak testing requirements with the designer during the pre-construction meeting.

6. SLOPE OF LINES

A. Tightline From House

Maintain 1/8 to 1/4 inch drop per running foot (1% to 2% slope). Use a sweep or two 45-degree fittings and a clean-out when a step-down is necessary. Locate step-downs as close to house and as far from septic tank as possible to avoid unnecessary turbulence in septic tank.

B. Gravity Tightline From Septic Tank

Maintain minimum of 1/8 inch drop per running foot (1% slope) to the drainfield.

7. TRENCH SYSTEMS

A. Trench Depth

Excavate trench bottom no deeper than 3 feet from finished grade. Contact the designer and Health Department immediately when conditions beyond the installer's control (such as building plumbing depth) necessitate a trench deeper than 3 feet; the Health Department will consider such situations on a case-by-case basis. Installations contrary to the design or deeper than 3 feet will require specific approval from the designer and Health Department.

B. Trench Width

Measure trench width at bottom of trench. May be up to 3 feet wide at designer's discretion, unless otherwise specified on the permit.

C. Trench Layout

Limit length of any one trench to 100 feet. Make all trenches and laterals equal length when using gravity distribution. Separate trenches by a minimum of 6 feet of original, undisturbed soil. Follow ground contour with each trench.

Determine trench length based on total square footage of trench bottom specified on permit.

NOTE: It is extremely important the trench bottom is excavated to be level.

D. Trench Layout – Special Considerations for Sloping Sites

Do not use step-downs. Divide flow equally between trenches by using a distribution box (d-box) located at or above the uppermost trench.

E. Install two (2) SSAS lateral inspection ports per drainfield lateral. The ports are to be capped at or above grade and located approximately 6 feet from each end.

8. USE OF DISTRIBUTION BOX

A. Distribution box construction must allow unobstructed view of all outlets, in order for the Health Department to verify proper installation.

NOTE: D-boxes with only a small observation port on their tops are not acceptable.

B. When the d-box outlet that is located directly across from the inlet is used, the inlet must be diverted downward in order to prevent short-circuiting effluent across the d-box.

C. Distribution boxes (d-boxes) are required in order to achieve equal distribution of effluent on sloping sites and on flat sites where two drainfield laterals are utilized.

D. Install d-boxes on undisturbed or compacted soil. In addition, the d-box must be bedded in concrete to reduce risk of settling. Effluent must be tightlined a minimum of 3 feet from each outlet of a d-box, except where the d-box is located on the interior portion of a bed design.

E. The outlets of the d-box must be water leveled by the installer prior to the final inspection by the health department.

Note: If wet mortar is involved, leave the water level just below the mortar seal. During final inspection, the Health Department staff will insert an object into the d-box to temporarily displace enough water to overflow the outlets and verify compliance.

F. The Health Department recommends use of Speed Levelers or equivalent for easy, precise equalization of d-box outlet flow.

G. Access to grade must be provided to allow for on-going operation and maintenance.

9. USE OF CURTAIN DRAIN

The following are guidelines for curtain drain usage. Because they are recommendations and not requirements, variations can be made provided there is sufficient technical justification.

IMPORTANT!

When reduced design standards for sewage systems are proposed based on an increase in vertical separation provided through use of a curtain drain, the curtain drain must be proven effective. Therefore, the design must be conditioned to state that "Enhance treatment must be installed if the curtain drain fails to adequately lower the water table." In addition, the design must show installation of a minimum of 2 observation ports with one between the curtain drain & upper lateral and one 10 feet below the lowest lateral. Recommended monitoring port design will consist of a vertically oriented section of 2-4 inch diameter perforated pipe, wrapped in filter fabric and bedded in clean, washed drainrock or pea-gravel. The monitoring ports must be installed at or below the depth of soil needed for the designed system type (i.e. 3 feet below trench bottom for gravity etc.).

B. Trench Discharge

Trench should discharge at least 30 feet downslope from the lowermost drainfield lateral. At least the last 3 feet of the discharge end of the curtain drain pipe should be graveled so that the end of the line will not be exposed. If a solid line is needed to carry discharge water from the curtain drain, a solid, 4-inch pipe may be utilized.

C. Trench Depth

Trench depth must be a minimum of 6 inches into underlying restrictive layer.

D. Trench Width

Trench width should be a minimum of 12 inches.

E. Slope

Trench and pipe slope should be a minimum of 1% in order to properly drain.

F. Perforated Pipe

Perforated pipe running the length of the intercepting portion of the curtain drain should be located 2 inches off the bottom of the trench until it is within 10 feet of the disposal portion of the curtain drain,

where it will be sloped down to the bottom of the trench. The pipe should be smooth, 4-inch diameter ASTM D2729, D3033, or D3034, and perforations in drainpipe should be oriented the same as for drainpipe used in a gravity drainfield (holes @ 5:00 & 7:00 o'clock). Corrugated drainpipe, 4-inch diameter, is also acceptable.

G. Protection from Clogging

Curtain drains must be protected from infiltration of fine soil particles that can seal the drain. In addition, 6-mil plastic must be utilized on the downslope sidewall of the curtain drain trench to improve the drains effectiveness.

10. CONDITIONS DURING INSTALLATION

A major cause of sewage system failure is installation of the system during periods when the soil is nearly saturated with water. Such conditions result in finer textured soils smearing and compacting during construction of the system. Systems should therefore be installed during dry weather conditions.

During the period November 1 to March 30, no systems, including system components (e.g. transport lines, curtain drains, etc…) shall be installed in Type 4 (sandy loam) or finer textured soil without the designer first inspecting the site, examining the soil, and communicating to the installer and Health Department that conditions are suitable for system installation.

11. SOURCE OF SAND

Sand must be from a commercial gravel pit and meet design specifications. The design must contain the sand specifications for the system. A copy of a sieve analysis/certification performed on the sand must be provided with the record drawing.

Commercial gravel pits may perform their own sieve analyses, provided the method used conforms to ASTM C-136 Method for Sieve Analysis of Fine and Coarse Aggregates and ASTM E-11 Specifications for Wire-Cloth Sieves for Testing Purposes, Annual Book of ASTM Standards, Volume 04.02.

12. SMALL DIAMETER PIPE

Transport, manifold, and lateral pipes must be Class 200 or better and a minimum of 1 inch in diameter.

13. BARRIER MATERIAL

Geotextile (filter fabric) is required as a barrier material for all alternative systems.

14. DRIP IRRIGATION

All drip irrigation fields must be proceeded by the treatment device that meets Treatment Level D or better. The ends of each drip line must be left exposed for final inspection by the Health Department to verify: 1) the lines follow the contours; 2) total linear footage installed; and 3) installation depth. The designer is responsible for inspecting the headworks to insure proper installation and flow requirements.

15. PRESSURE CHECKS

The Health Department will verify that there is a minimum residual head and uniform distribution for pressure distribution and sand filter systems. Connect laterals to the manifold, with orifices pointed up. During the final inspection, the pump must be cycled and the height of the squirt measured.

Note: All systems must be pressure tested prior to final approval. The Health Department highly recommends utilizing generators or other means of supplying power to conduct the pressure test during the final inspection. Pressure tests not observed by department staff generally will require documentation, such as pictures or verification from the designer (initials on Permit to Install), be submitted with the as-built.

When all laterals cannot be left exposed for the pressure check, due to site conditions requiring the laterals to be backfilled during construction, at least one of the laterals plus 6 feet at the end of the other laterals will be left exposed with orifices facing up for the pressure check. Other pressure check alternatives will

be considered for approval by the Health Department on a case-by-case basis.

16. RESERVE AREAS

A full size reserve area must be designated on all designs. This includes designs for enhanced treatment where a 50% reduction in drainfield sizing is allowed.

SECTION FIVE: OPERATION AND MAINTENANCE REQUIREMENTS

1. MAINTENANCE FEATURES

A. New Installations
   i. Access risers must be installed on all septic tank and pump chamber access ports at or above final grade to allow for on-going operation and maintenance.
   ii. Clean-outs - Pressure Distribution, Mound & Sand Filter Systems
      a. Install clean-outs at the end of each lateral by using 45's or sweeps.
      b. Be protected and marked.
   iii. Observation Ports – All Systems
      a. Install a minimum of two observation ports per drainfield lateral and one observation port per sand filter. For drainfield laterals place a port approximately 6 feet from each end. In sand filters, place port to detect ponding at interface between drainrock and sand.
      b. Construct observation ports of 4 inch diameter PVC, extended 4 inches above finished grade, or enclosed in durable, accessible box.
      c. Observation ports must be equipped with easily removable caps.

B. Existing Systems
   i. Existing systems not equipped with maintenance components will be required to install the following features at time of sale:
      a. Access risers on the septic tank and pump chamber
      b. Access riser installed on "D"-boxes or the location clearly marked
      c. Observation ports in the drainfield, sand filter or mound
      d. Cleanouts on pressure distribution laterals
      e. Audible and visual alarms on all pumps
      f. Effluent filters

2. INSPECTION FREQUENCY

The property owner is responsible for properly operating and maintaining the on-site sewage system per design standards. All sewage disposal systems need on-going inspections to insure proper operation; however, not all systems require the same inspection frequency.

A. All systems must be inspected in accordance with WAC 246-272A-0270. Said inspections must be completed as follows:
   i. At least every three years for systems consisting solely of a septic tank and gravity subsurface soil absorption system (SSAA);
   ii. Annually for all other systems unless more frequent inspections are specified by the local Health Officer.

B. Systems serving commercial establishments (activity involving the sale of goods or services) must be inspected as follows:
   a. Systems serving restaurants, markets, delis and/or other establishments preparing multiple meals must be inspected quarterly;
   b. Systems serving transient accommodations including, Bed & Breakfasts, motels, hotels, resorts and transient rentals, must be inspected annually;
   c. Systems serving other commercial establishments (e.g. offices, automotive centers, etc.) must be inspected annually.

3. RECORDS

There are approximately 1000 unknown systems and numerous known systems without adequate records. Therefore in order to identify unknown systems and to complete the records of known

systems, a record drawing must be on file for all systems prior to obtaining a building permit or at time of sale. Said drawing must be completed by a licensed installer, a licensed wastewater system inspector or state certified designer.

4. SYSTEM UPGRADES

Seepage pits will be required to be upgraded to current design standards at time of sale or application for a building permit. If a conforming drainfield cannot be located onsite, then the department may consider allowing pretreatment to Treatment Level A with final disposal into the existing seepage pit.

SECTION SIX: COMPLAINT RESPONSE & ENFORCEMENT

All complaints and enforcement actions will be investigated and processed in accordance with the Environmental Health Enforcement Procedures.

SECTION SEVEN: PROGRAM FORMS & PUBLIC EDUCATION

1. CURRENT LIST OF AVAILABLE FORMS & EDUCATIONAL MATERIALS

A. Codes and Regulations

i. DOH (2005), "Rules and Regulations of the State Board of Health for On-site Sewage Treatment and Disposal," WAC 246-272A
ii. DOH "Regulations for On-site Sewage System Tanks," Chapter 246-272C WAC
iii. SJCC 8.16 "Rules and Regulations of the San Juan County Board of Health Regarding On-site Sewage Disposal."

B. Program Forms

i. Sewage Design Application
ii. Repair Sewage Design Application
iii. Sewage Installation Permit
iv. On-site Sewage System Inspection Report
v. On-site Sewage Pumpers Report
vi. Environmental Covenant
vii. Washington State Approved Proprietary Treatment Products Service Agreement

C. Informational Handouts

The following Recommended Standards and Guidance (RS&G's) Documents
i. Alternating Drainfields
ii. Dosing Gravity Drainfield Systems
iii. Gravelless Distribution Products
iv. Holding Tank Sewage System
v. Intermittent Sand Filter Systems
vi. Mound Systems
vii. Pressure Distribution Systems
viii. Proprietary On-site Wastewater Treatment Products
ix. Recirculating Gravel Filter Systems
x. Remediation Technologies and Processes
xi. Sand Lined Trench Systems
xii. Stratified Sand Filter Treatment Systems
xiii. Subsurface Drip Systems
xiv. Water Conserving On-site Wastewater Treatment Systems
xv. Plants Suitable for Raised Leach Fields
xvi. Hazards of Failing Septic Systems
xvii. Sewage System Do's & Don'ts
xviii. Why Do Septic Systems Fail
xix. Save Money by Maintaining Your Septic System
xx. Landscaping Your Drainfield
xxi. How Often Should I Pump

2. REVIEW OF FORMS & EDUCATION MATERIAL

Program handouts, packets and forms shall be reviewed biennially. The program Environmental Health Specialist shall initiate and oversee the process. The Environmental Health Manager shall

provide the final approval.

A. Review procedures

i. The program EHS shall review all forms and educational material every odd year. All critical changes or correction shall be made throughout the year as necessary.
ii. Materials needing corrections or changes should be updated utilizing the "track changes" feature in Microsoft Word with a "Draft" watermark place on the document until all changes are approved.
iii. All corrections or suggested changes shall be reviewed and approved by the Environmental Health Manager.
iv. Final copies shall include an "update" date.
v. All outdated material shall be removed and recycled.
vi. The Environmental Health Manager shall insure the most current electronic form is available in the shared files and on the web site.

B. Evaluation Criteria

i. Information is current, reliable and error-free. Includes logo, phone numbers, web addresses and contact information.
ii. Material is professional in appearance. Appropriate use of fonts, line spacing, and alignment.
iii. Material is relevant to current program.

C. Review Documentation

Program staff shall maintain an Excel spreadsheet listing all forms, packets and educational material. The spreadsheet shall include dates the material was reviewed and if the material was updated.

SECTION EIGHT: QUALITY CONTROL/QUALITY ASSURANCE

1. JOINT INSPECTIONS

A. On-site

In order to contribute to uniform application of on-site sewage requirements in San Juan County, joint inspections will be made with the on-site sewage sanitarian and environmental health manager twice per year.

Inspectors	Month	Review Elements
Gary Covington	January	Overall program and joint inspection of soil logs
Mark Tompkins		
Gary Covington	July	Joint inspection of soil logs and final installation.
Mark Tompkins		

APPENDIX 1: EXISTING SYSTEM REQUIREMENTS

NEW BUILDING PERMIT PROPOSALS

Environmental Health On-site Sewage Requirements
Building Permit Proposals
Served by Existing Systems

I. Existing On-site Septic System – Complete Records

Expansions – Increases in anticipated sewage flows by either increasing the number of bedrooms beyond the total approved on the septic permit or changing the use of the structure (e.g.: residential to commercial), or changes that would result in adverse impact on the existing system & reserve.

- ***Requirements*** – System and reserve must be in compliance with current codes. This typically will require submittal of a new or revised design showing how system will be expanded to accommodate increase flows.

Additions/Remodels – No increase in anticipated sewage flow or number of bedrooms and no structural or use changes that would adversely impact the existing system and/or reserve area.

- ***Requirements*** – System must be non-failing. In order to document the system is non-failing, the applicant must submit a an On-site Sewage System Inspection form, from the past 3 years for gravity systems and within the past year for all other systems (pressure distribution, sand filters, aerobic units, etc.), documenting the non-failing status of the system. Note: Gravity systems installed within last 3 years are exempt from this requirement.

Structural Repairs – Routine maintenance and repair of roofs, foundations or walls without restructuring the basic floor plan of the residence.

- ***Requirements*** – Not applicable

II. Existing On-site Septic System – Incomplete Records

Expansions (see definition above) - System and reserve must be in compliance with current codes. This typically will require submittal of a new or revised design showing how system will be expanded to accommodate increase flows. Proposals to add onto or utilize the existing system will require completion of a record drawing for the existing system showing location, layout, depth to bottom of trench, soil type & depth of profile and other key components.

Additions/Remodels that Expand Building Footprint (but do not increase the load) - System must be non-failing. In order to document the system is non-failing, the applicant must submit an On-site Sewage System Inspection form, from the past 3 years for gravity systems and within the past year for all other systems (pressure distribution, sand filters, aerobic units, etc.), documenting the non-failing status of the system. In addition, a designer must complete a record drawing documenting the primary and reserve drainfield area.

Internal Remodels Only - System must be non-failing. In order to document the system is non-failing; the applicant must submit an On-site Sewage System Inspection form from the past 3 years for gravity systems and within the past year for all other systems (pressure distribution, sand filters, aerobic units, etc.), documenting the non-failing status of the system.

Structural Repairs (see definition above) – No requirements

Note: Systems installed after January 1, 1998, should have complete records on file. If no records can be found, the applicant must apply for an on-site septic permit (including fee), expose the ends of each lateral to verify length and layout, dig a test hole adjacent to the drainfield and two test holes in an area suitable for a reserve field. A designer must complete a record drawing and submit records for the system.