ON-SITE SEWAGE MANUAL

YUBA COUNTY ENVIRONMENTAL HEALTH

Table of Contents

Chapter 1. Introduction and Organization of Manual

This On-Site Sewage Manual (hereafter “Manual”) establishes technical and procedural requirements for on-site, subsurface sewage disposal. The Yuba County Environmental Health Department (hereafter, “Department”) is the agency responsible for the application of this Chapter.

The California Regional Water Quality Control Board Central Valley Region (hereafter “Regional Board”) is the state agency responsible for the protection of ground and surface water quality. While the Department administers this Manual, the Regional Board retains the authority to issue permits for any discharge of waste that may affect water quality, including discharges from individual systems. The Regional Boards adopt “Basin Plans” to define beneficial uses of water, adopt water quality objectives, and provide guidelines to protect water quality.

This Manual, adopted by Yuba County Board of Supervisors, will be updated periodically and as required by the Yuba County Wastewater Advisory Committee and the Department, with updating Resolutions presented to the Board of Supervisors when changes have been made.

Every effort has been made to make this Manual user-friendly by the use of cross references throughout the document. As changes are made to the Manual, cross references throughout the Manual are also subject to change. Failure of a cross-reference to indicate the appropriate Chapter of requirements due to these changes does not void the applicability of the requirements.

Chapter 2. Site Evaluation Requirements

A. Review Department Records

In general, all Department property files are public information. You are encouraged to review the property file before you make an application for a site evaluation. An approved Site Evaluation Report is not required where soils testing was conducted prior to the adoption of this Manual and the Department determines that the data on record is adequate for design purpose.

B. Obtain a Consultant

Unless waived by the Department, it will be necessary for you to obtain the services of an approved consultant (Professional Engineer, Registered Geologist, or Registered Environmental Health Specialist) to conduct the site evaluation. The consultant will work with you and the Department, and assist you in making important decisions affecting your parcel. The consultant is the person that performs your percolation tests, examines your soil test pit, and prepares the site evaluation report.

C. Submit an Application and Pay the Required Fee

1. You must submit an application for a site evaluation to the Department and pay the required fee. The Yuba County Board of Supervisors sets the fees as part of the Consolidated Fee Ordinance, Chapter 13.

2. The application form for this service must be filled out completely by the owner or the owner's agent.

3. It is important that sufficient information be provided with the application. This must include:

a. An accurate location map. We must be able to find your property.

b. A legible copy of the Assessor's plat.

c. Additional information will be helpful. This could include: a copy of the survey map (if available), location of wells, streams, ponds, drainage ways, proposed house site or other out buildings, existing buildings, rock outcrops, easements, proposed driveways, proposed or existing ground mounted solar and so forth.

D. Schedule the Site Evaluation

Your consultant will schedule an appointment with the Department to meet at your property to perform the soils tests. The “soils test pits" or “soil mantles” are excavations with a backhoe to examine the different soil layers. It is essential that the property boundaries are located and clearly identified.

E. Conduct the Site Evaluation

1. Your consultant, the backhoe and operator, and the Department representative will all meet at the property.

2. A minimum of two (2) soils test pits will be excavated in an area proposed for placing a system. In some cases, more soils test pits will be needed to find a suitable area for the sewage disposal system.

3. Along with the soils test pits, the overall site will be evaluated by the Department and your consultant for other considerations, such as slope, leaking irrigation ditches, setbacks, road cuts, etc. The Department will complete a report for each site evaluated after receiving and reviewing the consultant's site evaluation. The report will contain information that defines all areas tested, and comments on the ability to dispose of sewage.

4. All soils test pits must be protected to prevent people and animals from falling in. There are specific State laws, which also regulate this. For greatest safety, the soils test pits shall be backfilled upon completion of the evaluation. Where sufficient information is already available, the Department may waive the requirement for soils test pits.

F. Have Percolation Tests Performed

Percolation tests are typically required before a site evaluation report can be completed. Percolation tests must be done according to the requirements in this Manual.

G. Obtain a Site Evaluation Report

The primary purpose of the site evaluation is to determine whether or not a parcel can accommodate a system and what type of system, standard or alternative may be approved. Your consultant will be responsible for performing all required testing. The Department's role is one of verification and to serve as a resource. This prudent system of "checks and balances" has proven to provide for the best possible project in compliance with the Yuba County On-Site Sewage Disposal Ordinance, Chapter 7.07.

If a suitable site is identified at the site evaluation, this will be confirmed in the Department's site approval report. It also helps preserve property rights by establishing a probable future sewage disposal site for setback considerations when improvements are proposed for neighboring properties, such as wells, ponds, etc. However, if the site evaluation does not identify a suitable area, the site evaluation and approval reports will not support the issuing of a sewage disposal system permit and will not protect the proposed area from improvements on neighboring properties.

1. Regardless of the outcome of the site evaluation, the consultant for the site must provide the Department a site evaluation report, including a scaled (1"= 50' minimum) site plan identifying the location and results of all soils testing performed. The soils test results provided must show the minimum information required on forms specified by the Department. For sites where a sewage disposal area is identified, the proposed system area and layout must also be shown.
2. A site approval report must be prepared by the Department before a sewage disposal system permit application can be accepted. (Exception: a site approval report is not required where soils testing was conducted prior to the adoption of this Manual and the Department

finds that the site and prior test results are acceptable.) The site approval report is not a permit to install a system.

3. The site approval report will specify the type(s) of system(s), if any, that can be approved for a specific property. It will also note any specific limitations or conditions that may be part of an approval for a system.
4. A site approval report is transferable and stays with the land records.
5. An area approved for a system in a site approval report will be considered the same as an already installed system, for purposes of determining on-site or off-site setbacks. An owner may revoke a site approval report by written request to the Department and by establishing a new site.
6. Future changes in laws governing sewage disposal systems may require a modification to the site approval report.
7. The site approval report and approval for a sewage disposal area are based upon property conditions at the date of the report. Changes made to the property may render that area unacceptable. Examples of types of changes include: grading, cuts and fills, new buildings, wells, ponds, etc. Owners must take care not to encumber or alter the approved area in a manner that affects the future system.

Chapter 3. Septic Permit Requirements

A. Permit Required

A sewage disposal system permit is needed in order for any person to install, replace/repair (except as provided for in 7.07.204), abandon, or change a system. This applies whether you are an owner, tenant, contractor, company or public agency. A septic permit is valid for two (2) years from the date it is issued. It may be renewed under procedures described in Chapter 4.

B. Site Approval Report Required

A site approval report must be on file at the Department before a sewage disposal system permit application for a new installation can be submitted. (*Exception*: A site approval report is not required where soils testing was conducted prior to the adoption of this Chapter and the Department finds that the site and prior test results are acceptable.) In general, all of the Department's property files are public information, and you are encouraged to review your property's file before you make an application.

C. Sewage Disposal System Permit Application

The owner or the owner's authorized representative must fill out the application for the permit. The application must be filled out completely. You can obtain an application for a sewage disposal system permit (hereafter "Permit") at the Department offices or on the Yuba County website (www.co.yuba.ca.us).

D. Apply for the Sewage Disposal System Permit and Pay the Required Fee

Make sure your application is complete, and that a site approval report prepared by the Department is in the Department's file. (Exception: a site approval report is not required where soils testing was conducted prior to the adoption of this Chapter and the Department finds that the site and prior test results are acceptable.) You must pay a permit fee when you make your application. The permit fee varies with the type of permit, and the Yuba County Ordinance, Chapter 13 determines the fee amount. A complete application includes, at a minimum:

1. A good location map with clear instructions on how to find the property (conditions may have changed since the site evaluation).

2. Two (2) copies of a site development plan drawn to scale. Scale must be a minimum of one (1) inch equals fifty (50) feet. An example of a site development plan is available from the Department. The plan must be drawn so that it is clear and readable. Include the following information on your plans:

    a. Street address and Assessor's Parcel Number;

    b. Property boundaries, dimensions and a North arrow;

c. All existing and proposed structures/improvements (e.g. houses, barns, wells, driveways, water lines, ground mounted solar etc.);

d. Any physical features, including rock outcrops, creeks, ponds, drainage courses, cuts, fill areas, springs and similar;

e. Any easements, including, but not limited to, roads, water lines, BVID, YCWA, power;

f. Accurate location of all soils testing (soil mantles and percolation tests) done on the property, with numbering to correspond with the site approval report;

g. Exact location and layout of the proposed system, including any septic tank, pump tank (if applicable), secondary treatment unit (if applicable), distribution system, leach field, and 100% replacement area;

3. If it is an advanced standard system, include the following:

a. The consultant's system design work & calculations;

b. Two (2) copies of a site development plan with the consultant’s wet stamp (original) and signature;

c. Certification from the consultant;

4. If it is an advanced alternative system, include the following:

a. The consultant's system design work & calculations;

b. Two (2) copies of a site development plan with the consultant’s wet stamp (original) and signature;

c. Certification from the consultant;

d. Acknowledgement of system type and the requirements of that system; and

e. Right of entry agreement with the County, notarized and recorded.

E. Permit to be Acted Upon

The Department will either: issue, conditionally approve, or deny the permit application within twenty (20) working days after receipt of your completed application.

Every effort is made to ensure that your permit application is reviewed and approved quickly. However, certain situations may result in delays or denial of a permit application, renewal, or transfer. These include:

1. The application is incomplete or contains incorrect information.

2. The proposed system would be in conflict with this Manual or those of another County, State or Federal agency.

3. The proposed system is significantly different from what was approved in the site approval report.

4. The proposed system location has been modified or encumbered.

5. A public sewer system is available as follows:

a. For existing parcels, the sewer connection point is within two hundred (200) feet of the proposed building, as measured in a straight line; or

b. For Parcel Maps the sewer connection point is within six hundred (600) feet of any boundary of the property, as measured in a straight line. For commercial projects and final maps the distance requirement will be evaluated on a case-by-case basis.

c. The public sewer connection can be legally and physically achieved.

If your permit is denied for any reason, the Department will notify you in writing.

Chapter 4. The Issued Permit

Your permit will be issued with certain conditions. These are tailored to your specific parcel circumstances and type of system to be installed. It is important that the person working on your system has a copy of the approved permit and plans. The conditions of your permit ensure that your system is installed properly. In order to facilitate proper installation the following shall be adhered to:

A. The system must be installed according to the permit conditions. Specific conditions of operation and maintenance issued for your septic permit will remain in effect for the life of the system, unless otherwise specified in the permit.

B. The person who works on your system must be a licensed contractor or the property owner.

C. A copy of your approved permit and plans must be at the job site once the work begins and until the final inspection and approval of the work.

D. Your permit is valid for two (2) years from the date it is issued. It may be renewed or transferred by following these procedures:

1. Permit Renewal

a. Your permit may be renewed, prior to expiration, for a maximum of two (2) additional years, one (1) year at a time. A renewal fee will be assessed. If your permit has expired; a new application and fee are required.

b. In order to renew your permit, you must make a written request to the Department.

c. A permit considered for renewal may require review to ensure that there have not been significant changes in technology or knowledge that affect the design of the system. In some cases, the consultant may be required to review their design.

d. A renewed permit expires when four (4) years have elapsed from the date the permit was first issued. Any further review requires a new permit application and fee to be paid.

2. Reevaluation of Expired Permits - An expired permit is no longer valid. In order to obtain a new permit, a new fee and application are required. When the Department performs an evaluation of your expired permit, consideration is given to the following:

a. A recent history of system failures in the area.

b. The proposed type of system has a history of problems, and/or is no longer approved for use.

c. The Department was not present for the original soil testing, or there is new information about soils in the area.

3. Permit Transfer - A new owner must make a written request for transfer of the permit upon the change of ownership. Expired permits are non-transferable.

E. If you propose a change to the septic permit (e.g., adding bedrooms, different type of system, new system location, etc.), an additional review fee and new permit conditions may be required.

F. At times it may be necessary to revise a system design. Either the consultant or the Department may require this due to changes in technology or new information about a particular type of system. This may require the Department to revise the existing permit requirements and/or conditions.

Chapter 5. System Inspections

Be sure to follow the permit conditions and requirements closely. For approved permit designs that require the consultant and the Department to inspect the system make certain that you coordinate the inspections so that the consultant and the Department will both be present. This is especially important for such inspections as operations or “squirt” tests. Clear communication with your system installer, consultant and the Department is vital.

A. Inspections of the system are required. Unless waived by the Department, an onsite preconstruction meeting is required. The Department may waive any required inspection with sufficient justification.

B. The system must be installed as required by this Manual and any permit conditions. Make sure the installer has a copy of the approved permit and plans. Any changes to the permit or plans must first be approved by the Department and the consultant.

C. A request for an inspection must be made to the Department twenty-four (24) hours prior to the date the inspection is wanted. Incorrect or incomplete inspection request information may delay your inspection.

D. The system must be ready for the type of inspection you are requesting. All necessary components must be installed and functioning. If extra inspections are needed, an additional inspection fee will be charged.

E. An accurate "as-built" or record drawing of the complete installed system must be provided to the inspector at the time of final inspection. The Department will provide an "as-built" drawing form with your permit that can be used to meet this requirement. The “as-built” map should be no larger than 11”x17”.

F. Following the inspection, the Department will provide you with a written record of inspection(s) made of the system. The record will indicate if any further work or action is required. The system may only be backfilled (covered) with written approval from the Department. For work that is not approved, a correction notice will be provided that specifies the changes to be made.

G. When a consultant's inspection is required, they must provide the Department with written certification. A certification form will be provided to the engineer by the Department. This is required before a permit can receive final approval.

H. Systems must be backfilled within ten (10) days of written approval for backfill from the Department and the consultant (if required), or as specified by the approved design. In any case, the system must be protected from damage caused by weather, earth-moving, or other causes, and must not pose a public health and safety hazard. Adequate erosion control measures must be in place in accordance with applicable requirements of other county regulations.

I. The Department will consider the permit final for the system upon acceptable completion of the requirements of the permit and this Manual.

Chapter 6. System Repairs, Modifications, or Expansions

A. Permit Required

A system permit is required for you to change, repair, or increase the sewage flow to your existing system. However, a permit from Environmental Health is not required for servicing or replacing installed mechanical or electrical parts of the system. This would include such items as: float switches, pumps, electrical box, sanitary tee in the septic tank, minor structural corrections to the tank. Replacement or addition of a septic tank, distribution box, sewage transport line or leach field does require a sewage disposal system permit.

B. Obtain a Site Evaluation

For certain types of changes or repairs to your system, a site evaluation may be required, as described in Chapter 2. For purposes of this Chapter the Department may waive the requirement of a consultant for the site evaluation. Examples of situations that may require a site evaluation include: a failing system, adding a bedroom to your house, and relocating your system.

C. Make Your Permit Application

The process for applying for this type of permit is similar to the procedure described in Chapter 3. A permit will be issued if the requirements can be met, there is an approved site approval report (if applicable), and the proposed system will not create a public health hazard or degrade or pollute protected waters.

D. Special Considerations for System Repairs

A failing system creates a public health hazard and/or can pollute water.

1. A failing system

    a. A failing system must be immediately repaired, or its use immediately discontinued. The Department will require temporary measures to eliminate a public health hazard.

    b. If an immediate repair cannot be accomplished, the Department may allow a delay in making the repair. In this case, a Notice of Violation will be issued and the Department will specify temporary measures required to eliminate the immediate public health hazard or pollution of protected waters.

2. Replacing the system

    a. If the site does not meet the requirements for a standard system, the Department may approve a permit for an advanced standard or advanced alternative system so long as those requirements can be met. The replaced system must be abandoned as described in Chapter 17.

b. If the site does not meet the requirements for a standard or advanced system, the Department may approve a permit for other repair in order to eliminate a health hazard.

c. Where no type of system can be approved, the system must be abandoned as described in Chapter 17.

E. Permit Final

The Department will give final approval of the permit for the system upon acceptable completion of the requirements of the permit and this Manual.

Chapter 7. Authorization Notice

A. General Statement

An authorization notice is the administrative approval which allows an increase in sewage flows, a substitution of one structure for another, or a change in use for an existing, previously approved onsite sewage system.

B. How to Apply

1. Submit a detailed, scaled plot plan of your property showing at least the following:

    a. The lot boundary locations and dimensions with a north arrow.

    b. The existing structures, septic systems, water wells, and the 100% repair area of the leach field.

2. Complete an application for a Septic Authorization Notice and pay applicable fees.

C. Submit a septic tank pumpers report indicating tank capacity, and that the septic tank has been pumped within the previous three (3) years and is structurally and functionally adequate.

The Department reserves the right to require any soils testing deemed necessary in order to make the finding that the system is functioning adequately and/or that there is available suitable soils for a repair system.

Chapter 8. Standard System Requirements

A. General Statement

A standard system is a system consisting of a septic tank, distribution unit and gravity-flow disposal field constructed with a minimum of twelve (12) inches of filter material below a minimum three (3) inch diameter distribution pipe, and maintaining not less than four (4) feet of effective soil depth below the bottom of the trench.

B. Criteria for Approval

In order to be approved for a Standard System, each site must meet the applicable requirements of Yuba County Code, Chapter 7.07.203 (B), and all of the following:

1. Effective soil depth shall extend a minimum of six (6) feet in the disposal area and replacement area (if the replacement is to be a standard system) and shall extend a minimum of four (4) feet below proposed disposal trench bottoms;

2. Groundwater is not present for at least four (4) feet below the proposed disposal trench bottoms;

3. Soils in the proposed disposal area and replacement area (if the replacement is to be a standard system) are either sandy loam, sandy clay loam, sandy clay, loam, non-expansive clay, silt loam, or clay loam, and the design percolation rate is six (6) to sixty (60) minutes per inch;

4. The slope shall not exceed thirty (30) percent within the disposal area and replacement area;

5. A minimum one hundred (100) percent replacement area shall be available;

6. The site has not been filled or the soil has not been modified in a way that would adversely affect functioning of the system;

7. The site shall not be on an unstable landform, where operation of the system may be adversely affected;

8. The site of the disposal area and replacement area shall not be covered by asphalt or concrete, or subject to the activity associated with vehicular traffic, corrals, pens, arenas or other concentrations of livestock, or other activity which would adversely affect the soil or integrity of the system;

9. The site of the disposal area and replacement area shall not be subjected to excessive saturation due to, but not limited to, artificial drainage, driveways, road and roof drains;

10. Setback criteria in Table 1 (contained in Chapter 36) can be met;

11. An artificial drain may be required to intercept and/or drain water from a disposal area; however, it may be required to demonstrate that the site can be dewatered prior to issuing a

permit. Where required, artificial drains are an integral part of the system, but do not need to meet setback requirements to property lines, streams, lakes, ponds or other surface water bodies. However, artificial drains shall meet the setback requirements to systems as specified in Table 1 (contained in Chapter 36). Artificial drains shall be designed by a consultant and meet the other requirements of Chapter 35.

C. Site Evaluation Report Requirements

The consultant must submit a site evaluation report including the following information to the Department in order for the Department to prepare a site evaluation report as detailed in Chapter 2. Soil properties must be described using the classes defined in this Manual, or using standard USDA–Natural Resources Conservation Service terminology as defined in "Soil Survey Manual, Agricultural Handbook No. 18, 1993". The site evaluation report must include the following information:

1. A scaled site map showing the location and identification of all soils test pits and percolation test holes. The map must include a North arrow, the percent and direction of slope in the area tested, and site features, which affect the location of a system. The scaled site plan must be stamped and signed by the qualified consultant. The boundaries of the proposed sewage disposal area must be shown on this map.

2. The soil description for each soils test pit. Every soil test pit must be described, even if the test shows unsuitable soil or is located in an area that will not be used. Each soils test pit description must include the following information:

a. Slope – percent and direction.

b. Effective soil depth.

c. Depth to groundwater (if observed).

d. Description of each soil horizon (layer) which shall include the following characterization, using the terminology indicated (where provided):

i. Depth of horizon.

ii. Soil texture – sand, loamy sand, sandy loam, sandy clay, sandy clay loam, loam, clay, clay loam, silty clay, silty clay loam, silt loam, silt.

iii. Soil rock fragment content in percent by volume.

iv. Soil color (moist) using the Munsell Soil Color Chart or other Department approved color chart.

v. Redoxymorphic features (if present)–otherwise known as mottling.

vi. Soil structure – granular, platy, or blocky; fine, medium, or coarse; structureless–single grain, or massive.

vii. Soil pores – few, common, or many; fine, medium, or coarse.

viii. Soil consistence – loose, very friable, friable, firm, very firm, extremely firm, or solid.

ix. Soil plasticity – non-plastic, slightly-plastic, plastic, or very-plastic.

x. Soil stickiness – non-sticky, slightly-sticky, sticky, or very-sticky.

xi. Soil roots – none, few, common, or many; very fine, fine, medium, or coarse.

xii. Soil horizon boundary – smooth, wavy, irregular, or broken; abrupt, clear, gradual, or distinct.

xiii. Soil moisture – dry, damp, moist, saturated, or seepage.

3. The percolation data sheet(s), correction factor calculation, and average percolation rate. Or, the soil type(s) utilized for determining the sizing if percolation tests were not used for sizing.

4. The proposed type of system (e.g., Standard, Capping Fill, Pressurized Distribution, Pump, Deep Trench, Seepage Pit, Steep Slope, Intermittent Sand Filter, Mound, Advanced Standard or Advanced Alternative System) and location with respect to specific soils test pit locations.

5. The business name, address and telephone number of the consultant.

6. The date that the testing was conducted.

7. License or registration number or seal/stamp with signature.

D. Criteria for System Sizing

1. Single-family dwellings. Systems serving single-family dwellings shall be sized at one-hundred fifty (150) gallons per bedroom for the first two (2) bedrooms. For structures larger than two (2) bedrooms projected daily sewage flow shall be calculated at seventy-five (75) gallons per day per bedroom for every bedroom over two (2).

2. For dwellings with large square footage as compared to the number of bedrooms, the following flow rates shall be used at a minimum:

Square footage	
2000-2499	375 gpd
2500-3500	450 gpd
≥3500	525 gpd

3. Disposal trench sizing for single-family dwellings and commercial facilities. The effective absorption area required shall be based upon the projected daily sewage flow and one of the following:

a. Rate of sewage application based on soil group in chart below

Soil Group	Rate of Sewage Application
A* – sand, loamy coarse sand	1.2 gpd/ft 2
B – loamy sand	0.8 gpd/ft 2
C – sandy loam	0.6 gpd/ft 2
D – sandy clay loam, porous silt loam, clay loam, non-expansive clay	0.45 gpd/ft 2
E* – sandy clay, silty clay, silty clay loam	0.2 gpd/ft 2

*Soil Groups A and E are not suitable for a standard system.

b. Effective absorption area required, when given the design percolation rate, shall be calculated using the following formulas:

i. For gravity-fed trenches: $3.5/ \sqrt{t}$

ii. For pressure-distribution trenches*: $5/ \sqrt{t}$

Where “t” is the percolation rate in minutes per inch. Percolation rates of less than six (6) minutes per inch (mpi) and greater than sixty (60) mpi, are unsuitable for a standard system.

*Note: When a pressure-distribution trench is utilized, the sewage disposal system is an alternative system, as described in Chapter 9.

4. When sizing by soil group and more than one soil group is encountered within a soil profile, disposal trench sizing shall be based on the most restrictive soil group encountered within thirty-six (36) inches from the bottom of the disposal trench.

5. When sizing by percolation rate and more than one soil group is encountered within a soil profile, disposal trench sizing shall consider the soil characteristics within thirty-six (36) inches from the bottom of the disposal trench, and may require percolation tests in deeper soil layers.

6. For calculating the required lineal feet of the disposal field, the trench bottom area shall be considered. In certain situations the Director may allow for additional sidewall credit to be given.

E. Percolation Test Requirements and Procedures

1. General requirements

a. Percolation testing shall be required when it is determined by the Department that such testing, when coupled with soils test pit evaluations, is necessary to aid in system sizing and design.

b. All percolation tests shall be conducted in accordance with the procedures outlined in this Chapter, or as otherwise approved by the Department.

c. Percolation tests are required as part of the site evaluation process for the creation of new lots and parcels.

2. Test hole preparation requirements

a. Unless otherwise indicated by the Department, there shall be a minimum of six (6) percolation test holes when the disposal area and replacement area are close (as determined by the Department); more may be required when the areas are separate (as determined by the Department). Additional test holes may be required by the Department to completely identify a suitable area.

b. Unless otherwise approved by the Department, the bottom depth of three (3) of the percolation test holes shall be equal to the proposed disposal trench bottom depth. For the remaining three (3) test holes, the bottom depth shall be at eighteen inches (18”) below the proposed trench depth. A posthole digger or manual auger shall dig the test section (bottom eight (8) inches) of the test hole.

c. Unless otherwise approved by the Department, the diameter of the test hole shall be from six (6) to eight (8) inches.

d. The test hole sidewall in the test section should be roughened to remove any smearing or compaction caused by the hole excavation process. All loose soil shall be removed and two (2) inches of pea gravel or other material approved by the Department shall be placed in the bottom of the hole. In order to prevent silting of the bottom of the hole and sidewall cave-in, a sidewall gravel pack is to be used in accordance with the chart in this Chapter. Two methods for retaining the sidewall gravel pack are:

i. One eighth (1/8) inch mesh galvanized hardware cloth rolled into a cylinder at least twelve (12) inches long;

ii. Perforated plastic pipe in twelve (12) inches (or longer) sections.

3. Presoak requirement

The hole shall be filled with clean water to a minimum depth of twelve (12) inches above the base of the hole. The presoak shall be maintained for a minimum of twelve (12) hours.

4. Test measurement requirements

a. Percolation tests shall be measured to the nearest one-sixteenth ($1/16^{th}$) inch from a fixed point.

b. The percolation test shall begin within four (4) hours following completion of the presoak. Adjust the water level to six (6) inches over the pea gravel bottom and begin the test. This may require adding or removing water to adjust the level.

c. Readings shall be taken at thirty (30) minute intervals. Refill as necessary to maintain five (5) to six (6) inches of water over the pea gravel bottom at each interval. Readings shall be taken until two (2) consecutive readings do not vary by more than ten (10) percent per reading, with a minimum of three (3) readings. The last thirty (30) minute interval is used to compute the percolation rate. If four (4) inches or more of water seeps from the hole during the thirty (30) minute interval, readings may be taken at ten (10) minute intervals. Readings shall be taken until two (2) consecutive readings do not vary by more than ten (10) percent per reading with a minimum of three (3) readings. The last ten (10) minute interval is used to compute the percolation rate.

5. Test rate determination

The following chart provides a correction factor to determine the corrected percolation rate:

Hole diameter	Gravel thickness (annular space)	Correction factor
6"	1"	1.59
6"	1/2"	1.27
8"	1"	1.14
7"	1/2"	1.04

Calculation:

Standard percolation value (minutes per inch) =

Test percolation value (minutes per inch) X (correction factor)

Example: A six (6) inch hole is used with a one (1) inch gravel pack. The test percolation value is 25 minutes per inch (mpi).

25 mpi (1.59) = 40 mpi

40 mpi is the standard percolation value for that test hole and will be used in combination with other test hole results when designing the system. The mean percolation rate calculated from all test hole results accepted by the Department shall be the final percolation rate (design percolation rate) assigned for sizing the system.

F. Building Sewer Design, Materials, and Construction Requirements

The building sewer shall be constructed with materials in conformance with building sewer standards identified in the California Plumbing Code. The building sewer pipe shall have a minimum diameter of three (3) inches. Inspections regarding building sewer connection to septic tank shall be performed by the Yuba County Building Department.

G. Septic Tank Design, Materials, and Construction Requirements

1. Materials and construction shall be in accordance with Chapter 28.

2. The minimum liquid capacity of any septic tank installed shall be one thousand (1000) gallons.

3. Septic tanks to serve single-family dwellings shall be sized on the number of bedrooms or square footage in the dwelling (whichever is more stringent), as follows:

1 to 3 bedrooms ---------1000 gallons

4 to 6 bedrooms or $\geq$ 2500 square feet---------1500 gallons

For each additional bedroom over 6, add 150 gallons.

H. Effluent Sewer Design, Materials and Requirements

The effluent sewer pipe shall extend at least five (5) feet beyond the septic tank before connecting to the distribution unit. It shall be installed with a minimum fall of four (4) inches per one hundred (100) feet, but in no instance shall there be less than two (2) inches of fall from one (1) end of the pipe to the other. For installations where more than one (1) disposal trench is utilized with serial distribution, there shall be a minimum of four (4) inches elevation drop from the invert of the septic tank outlet to the invert of the disposal field distribution unit. When connecting a three (3) inch pipe to a four (4) inch pipe, they shall be joined by a fitting that provides a water-tight seal. The effluent sewer pipe materials and construction shall be in conformance with this Chapter.

I. Distribution Box and Diversion Valve Design, Materials, and Construction Requirements

Distribution box and diversion valve design, materials, and construction shall meet the minimum standards set forth in Chapters 29 and 30.

J. Tightline (Header) Pipe Design, Materials, and Construction Requirements

1. Unless otherwise approved, the tightline pipe materials and construction shall at a minimum, meet the standards set forth in Chapter 33.

2. The pipe shall be watertight, have a minimum diameter of three (3) inches, and be bedded on undisturbed earth.

K. Disposal Trench Design, Materials, and Construction Requirements

1. Disposal trenches shall be constructed in accordance with the standards below, unless otherwise specified:

a. Length maximum: 100 feet

b. Bottom width minimum: 24 inches

Bottom width maximum: 36 inches

c. Depth minimum: 24 inches

Depth maximum: 30 inches

d. Minimum distance of undisturbed soil between disposal trenches (sidewall-to-sidewall) shall be six (6) feet.

2. Disposal trench sizing methods and calculations shall be in accordance with this Chapter.

3. Filter material shall extend the full width and length of the disposal trench to a depth of not less than twelve (12) inches. There shall be at least twelve (12) inches of filter material under the distribution pipe and at least two (2) inches over the distribution pipe.

4. A soil barrier shall be placed on top of the filter material to exclude fines from the filter material. The barrier shall consist of suitable filter fabric, four (4) inches of straw, or untreated building paper.

5. There shall be a minimum of twelve (12) inches of backfill over the filter material.

6. Gravelless trench construction may be utilized instead of filter material in disposal trench. The design, manufacturing and materials used shall be durable and acceptable to the Department. Sizing for the gravelless disposal trench shall be in accordance with the latest Department policy for gravelless trench sizing. The policy shall be updated and maintained as new information becomes available for this technology, with input provided from the Sewage Advisory Committee.

L. Distribution Pipe Design, Materials, and Construction Requirements

1. Unless otherwise approved, distribution pipe materials and construction shall meet the minimum standards set forth in Chapter 33.

2. The distribution pipes shall have a minimum diameter of three (3) inches.

3. All perforated pipe shall be installed with centerline markings up.

M. Installation Requirements

1. Septic tanks shall be installed on a level, stable base.

2. Septic tanks located in high groundwater areas shall be weighted or provided with an anti-buoyancy device to prevent flotation.

3. All septic tanks shall be installed with watertight risers extending to the ground surface or above. Construction and materials specifications for risers shall be in accordance with Chapter 28.

4. Septic tanks shall be installed in a location that provides access for servicing and pumping.

5. Systems shall not be installed when moist or wet conditions cause trench sidewall or bottom area degradation of soil structure and porosity (which frequently appears as smearing and compaction).

6. The bottom of the disposal trench shall be level to within a tolerance of two (2) inches in one hundred (100) feet.

7. Each disposal trench shall have distribution piping that is centered in the trench and laid level to within a tolerance of two (2) inches in one hundred (100) feet.

8. Disposal trenches shall be installed on contour.

9. Prior to backfilling the trench, the filter material shall be covered with soil barrier.

10. Backfill shall be carefully placed to prevent damage to the system.

11. Backfill shall be native soil free of large stones, frozen clumps of earth, masonry, stumps, waste construction materials, or other materials that could damage the system.

12. All distribution boxes shall be level, bedded on undisturbed soil, aggregate with a minimum of 90% compaction, or concrete.

13. Monitoring wells, of a design approved by the Department, shall be installed at the ends of the disposal trenches.

14. The system shall be installed as specified in the approved permit.

15. Adequate erosion control measures shall be utilized at all times in conformance with the applicable county development code.

N. Required Inspections

All portions of the system are subject to inspection and verification prior to covering. The system shall be inspected for conformance with the permit requirements, including all applicable setbacks. The portions normally inspected include:

1. The building sewer entering the septic tank.

2. The septic tank, including access into any manhole covers.

3. The effluent sewer, distribution unit, and absorption facility.

Other portions of the system may be inspected as required by the permit or if deemed necessary by the Department to determine compliance with the regulations. Additional inspection and permit finalization requirements are specified in Chapter 5.

O. Large System Requirement

Systems with a projected daily sewage flow greater than two thousand five hundred (2,500) gallons shall be designed in accordance with the requirements set forth in Chapter 27.

Chapter 9. Advanced System Requirements

A. Definitions

1. An advanced standard system is any onsite sewage system consisting of treatment and/or disposal components other than a standard system, which the Department has determined does not meet the requirements of this Chapter for a renewable operating permit. Advanced standard systems may include but are not limited to: pressure-distribution, deep trench systems, capping fill systems, sand filters, and/or seepage pits.

2. An advanced alternative system is any onsite sewage system consisting of treatment and/or disposal components other than a standard system or an advanced standard system, which the Department has determined meets the requirements of this Chapter for a renewable operating permit. Advanced alternative systems may include but are not limited to: other NSF approved pretreatment systems, mounds, large systems, and/or seepage pits.

B. Provisions

Unless otherwise indicated in specific advanced standard system or advanced alternative system sections or by the Department, all provisions pertaining to the site evaluation criteria; design (including sizing), installation, construction, and maintenance of standard systems, shall apply to advanced standard or advanced alternative systems.

C. Criteria for System Sizing

The sizing criteria for standard systems shall apply to advanced standard or advanced alternative systems except as otherwise specified in this Chapter.

1. A design percolation rate less than six (6) mpi or greater than sixty (60) mpi shall utilize pressure distribution as the means of distribution in the disposal field, consistent with the requirements of Chapter 11.

2. Any proposed design utilizing soil types “A” or “E” shall utilize pressure distribution as the means of distribution in the disposal field, consistent with the requirements of Chapter 11.

D. Periodic Inspection of Installed Advanced Alternative Systems

Annual inspection of installed advanced alternative systems shall be required by a qualified service provider. Periodic inspections by the Department may be conducted at the time of the annual service inspection.

The service provider shall prepare a report of each inspection and provide a copy to the system owner and the Department. The report shall list system deficiencies and a correction report shall be provided to the system owner and the Department. When an onsite inspection by the Department is not conducted the system owner shall provide the Department certification that the annual service to the system has been conducted by a qualified provider. Reports are to be submitted to the Department

within 30 days following the inspection. Reports of failed systems or systems with serious malfunctions shall be reported within 24 hours of the malfunction. Any necessary follow-up inspections shall be scheduled and any follow-up inspections required by the Department may be charged a fee. Reports of follow up inspections must also be submitted to the system owner and the Department.

E. Commercial Facilities

Projected daily flows for commercial facilities shall be estimated using Table 2 Design Flows (contained in Chapter 36). The Department may approve, on a case-by-case basis, metered water use data, or other supporting data in lieu of the estimated sewage flows set forth in Table 2.

F. Commercial Facilities That Prepare Foods

Commercial facilities that prepare foods, (e.g., kitchens, restaurants) shall install a grease trap or interceptor pursuant to the requirements of the most recently adopted edition of the California Plumbing Code and amendments thereto, and the requirements of the Yuba County Building Department, including a permit if required by that department or by the Department.

G. Consultant Inspections

Unless otherwise indicated in a specific section of this Manual, all advanced standard and advanced alternative systems shall be designed and installed under the inspection and approval of a qualified consultant and the Department. A consultant shall submit written certification (form available at the Department) that the system has been installed in accordance with the approved construction/design plan and permit conditions. The Department shall not accept a system as final for any system installation until certification of the installation is received from the consultant. The consultant shall provide the owner with a maintenance manual that outlines the operation of the system, including the owner's responsibilities for maintaining the system.

H. Systems Approved for the Creation of Lots, or Other Building Sites

Advanced alternative systems approved for the creation of lots, parcels and additional building sites shall demonstrate a minimum usable sewage disposal area (MUSDA) in accordance with the chart in Article 7.07.209.

I. Inspection Risers

Inspection risers shall be installed at the ends of the disposal trenches.

J. Septic Tank Sizing for Commercial Facilities

1. For projected daily sewage flows up to fifteen hundred (1500) gallons, the septic tank shall have a liquid capacity equal to at least one and one-half (1-1/2) days sewage flow, or one thousand (1,000) gallons, whichever is greater.

2. For projected daily sewage flows greater than one thousand five hundred (1,500) gallons, the septic tank shall have a liquid capacity equal to one thousand two hundred (1,200) gallons plus seventy-five (75) percent of the projected daily sewage flow.

3. Additional volume may be required by the Department for special circumstances.

4. The quantity of daily sewage flow shall be estimated in gallons per day using Table 2 - Quantities of Sewage Flow (contained in Chapter 36). The Department may approve, for other than single-family dwellings, data from reliable (as determined by the Department) metered water use data in lieu of the estimated sewage flows set forth in Table 2.

K. Permit Application and Construction/Design Plan Requirements

An application for a permit shall be made in accordance with the procedure and requirements of Chapter 3 and include a construction schedule (including critical points during construction at which time inspections shall be made by the consultant).

Chapter 10. Capping Fill System Requirements

A. General Statement

A capping fill system is an advanced standard system where the disposal trench effective sidewall is installed a minimum of twelve (12) inches into natural soil (gravity trench) or a minimum of nine (9) inches into natural soil (pressure trench) below a soil cap of specified depth and texture. The shallow construction of the system allows for installation where fractured bedrock, a limiting layer, or groundwater is closer to ground surface. This Chapter describes the requirements for gravity-fed capping fill systems. Pressure-dosed capping fill systems shall meet the requirements of this Chapter as well as Chapter 11.

B. Criteria for Approval

In order to be approved for a capping fill system, each site must meet both of the following conditions:

1. The slope shall not exceed twenty (20) percent in the disposal area and replacement area.

2. Unless otherwise approved by the Department, the effective soil depth shall extend a minimum of four (4) feet below the bottom of the disposal trench. Effective soil depth requirements may vary with pre-treatment systems used in conjunction with a capping fill.

C. Design Criteria

Unless otherwise specified, the system shall be designed in accordance with the provisions of Chapter 8.

1. Disposal trenches:	Depth: 12 inches minimum and 21 inches maximum
	Width: 24 inches minimum and 36 inches maximum
2. Cap depth:	12 inches (after settling)

D. Installation Requirements

Unless otherwise required by the Department, the installation shall meet the installation and construction requirements of Chapter 8 and the following:

1. The soil to be used for the cap may be examined and shall be approved by the Department and consultant prior to placement.

2. The disposal area shall have the vegetation removed and shall be scarified, parallel to contours, no deeper than six (6) inches.

3. Soil cap shall extend a minimum of ten (10) feet beyond the exterior trench side-wall and tapering with a 4:1 slope to grade.

4. The site shall be landscaped for erosion control in accordance with the approved construction/design plan and permit requirements. Additionally, the site shall be protected from the activity of vehicular traffic, corrals, horse arenas, stables, or other activities that could damage the system or the integrity of the soil.

E. Required Inspections

Inspections and finalization of permit shall be in conformance with Chapter 5, and include the following:

1. The disposal area and fill material shall be inspected for scarification, soil texture, and moisture content.

2. Prior to backfill of the installed disposal system.

3. The final placement of the soil cap will be inspected.

F. Criteria for System Sizing

System sizing shall meet the minimum requirements of Chapter 8.

Chapter 11. Pressurized Distribution System Requirements

A. General Statement

Pressurized distribution refers to a method of distributing effluent evenly over the entire soil absorption area through a network of small diameter pipes under low pressure. This method may be an alternative for some sites to mitigate the limitations associated with soils with rapid permeability or slow permeability.

B. Criteria for Approval

Pressurized distribution systems shall meet the following requirements:

1. Pressurized distribution systems may be permitted on any site that meets the requirements for standard systems, or on sites approved for advanced standard or advanced alternative systems. The pressurized distribution system shall meet all the applicable requirements for a system as stated in Chapter 8 unless otherwise specified.

2. There must be a minimum of three (3) feet or thirty-six (36) inches of effective soil depth beneath the disposal trench bottom in the proposed disposal area. Effective soil depth requirements may vary with pre-treatment systems used in conjunction with pressure distribution.

3. For existing lots or parcels, pressure distribution systems may be installed in soil Groups A, B, C, D, or E, as identified in Chapter 8, or percolation rates 6-240 minutes per inch. Percolation rates of 1-5 minutes per inch require pre-treatment equivalent to an intermittent sand filter system.

4. For creating lots and parcels, pressure distribution systems may be installed in Soil Groups A, B, C, D, and E as identified in Chapter 8, or percolation rates 6-120 minutes per inch. Percolation rates of 1-5 minutes per inch require pre-treatment equivalent to an intermittent sand filter system.

5. System monitoring and inspections requirements in conformance with Chapter 24 if a Pressurized Distribution System is used in conjunction with an Advanced Standard or Advanced Alternative pretreatment system.

C. Design, Materials and Construction Requirements

1. General

a. All materials used in pressurized systems shall be structurally sound, durable, and capable of withstanding normal stresses incidental to installation and operation.

b. Nothing in these rules shall be construed to set aside applicable building, electrical, or other codes. An electrical permit and inspection from the local Administrative Authority shall be obtained if required for pump wiring installation.

2. Criteria for system sizing

The disposal area and septic tank capacity shall at a minimum meet the provisions of Chapter 8.

3. Pressurized distribution lateral requirements

Piping, valves and fittings for pressurized systems shall meet the following minimum requirements:

a. All pressure transport, manifold, distribution lateral piping and fittings shall meet or exceed the requirements for Schedule 40 PVC pressure pipe as identified in ASTM Specification D1785 or other material approved by the Department.

b. All pressure distribution laterals and fittings shall be adequately sized for the design flow.

c. All pressure transport and manifold piping shall be adequately sized for the design flow.

d. Pressure transport piping shall be uniformly supported along the trench bottom, and at the discretion of the Department, it shall be bedded in sand or other material approved by the Department.

e. The ends of lateral piping shall have blow-off risers that accommodate threaded plugs or caps.

f. All joints in the pressure distribution manifold, lateral piping, and fittings shall be solvent welded, using the appropriate solvent for the pipe material. Pressure transport piping may be solvent welded or rubber ring jointed.

g. A gate valve or ball valve shall be placed on the pressure transport pipe, in or near the dosing tank, when required.

h. A check valve shall be placed between the pump and the gate valve, when required. A check valve is not required if the pump has an internal check valve. All check valves and gate valves must be in accessible and protected locations for maintenance and repair.

i. An anti-siphon valve shall be placed between the pump and leach field when the leach field is down slope of the pump.

4. Pump

The pump shall meet the minimum design, materials, and construction standards as outlined in Chapter 32.

5. Dosing tank design, materials and construction requirements

a. Materials and construction for dosing tanks shall comply with the minimum standards in Chapter 31.

b. The capacity of the tank shall be sufficient to deliver the design dose and with an additional storage capacity of one day's design flow above the high level alarm. The liquid capacity shall be measured from the invert elevation of the inlet fitting, to the bottom of the tank.

c. Duplex alternating pumps may be required by the Department for some installations (e.g., large systems approved for commercial facilities).

d. The dose volume shall be calculated using the following minimum and maximum dosing range formulas:

$V_{min} = V_s + 5V_l$

$V_{max} = V_s + 10V_l$

Where:

V_{min} = Minimum volume of dose

V_{max} = Maximum volume of dose

V_s = Volume of supply line

V_l = Total volume of lateral lines

6. Disposal trench design, materials, and construction requirements

a. Unless otherwise allowed by the Department disposal trenches shall be constructed using the specifications for the standard disposal trench as stated in Chapter 8, except for the following:

i. Pressure lateral piping shall have a minimum six (6) inches of filter material below, and not less than three (3) inches of filter material above the piping.

ii. Depth: minimum 11 inches

maximum 30 inches

iii. Bottom width: minimum 24 inches

maximum 36 inches

iv. Length: minimum 50 feet

maximum 100 feet

b. The top of the filter material shall be covered with filter fabric or other material approved by the Department.

c. A minimum of two (2) inches of backfill is required over the filter fabric within the disposal trench.

d. Inspection and blow-off risers shall be placed at the end of the pressure distribution lateral within the disposal trench.

e. All orifices of pressure distribution laterals that face upward shall be covered with orifice shields to prevent soil washout.

D. Hydraulic Design Criteria

1. There shall be a minimum five (5) feet head at the orifice furthest from the manifold and no more than ten (10) percent head variation within a disposal trench.

2. Lateral piping shall have discharge orifices drilled up with two (2) orifices per lateral drilled down for purposes of drainage, a minimum diameter of one-eighth (1/8) inch, and evenly spaced at a distance not greater than two (2) feet in coarse-textured soils or greater than six (6) feet in finer-textured soils.

3. The effect of back drainage of the total volume of effluent within the pressure distribution system shall be evaluated for its impact upon the dosing tank and system operation.

E. Installation Requirements

Installation standards of Chapter 8 shall apply, and:

1. The pressure distribution lateral laid within the center of the trench above the gravel shall be level to within two (2) inches in one hundred (100) feet.

2. Small earth berms may be required at specific intervals on trench bottoms at the discretion of the Department and/or design consultant, including but not limited to the ends of the trench adjacent to the manifold.

3. Each dosing tank shall be installed on a stable level base.

4. Each dosing tank shall be provided with a watertight riser extending to the ground surface or above, with a minimum inside horizontal measurement equal to or greater than the tank access

manhole. The watertight riser shall meet the materials and construction provisions of Chapter 28.

5. Dosing tanks located in high groundwater areas shall be weighted or provided with an anti-buoyancy device to prevent flotation.

F. Sloping Site Requirements

1. Ball or gate valves or flow restrictors shall be installed on each pressure distribution lateral to facilitate regulation of flow within the laterals.

2. Where the disposal field is located down-slope from the pump, an anti-siphon valve on the supply line to the trenches shall be installed in the dosing tank, above the high liquid level.

G. Required Inspections

Inspections and issuance of a finalization of permit shall be in conformance with Chapter 5, and include the following:

1. A pre-construction meeting between the consultant and the installer; the Department may require to be involved in certain cases.

2. Inspection of the dosing system components, (e.g., the location of the pump, screen, floats, switches, alarms, and valves).

3. Inspection of the pressure distribution system and verification of hydraulic head over the pressure distribution laterals (AKA, “squirt test”). Water and electricity must be available for this inspection. If this inspection is performed utilizing a temporary power supply (such as a generator), a final inspection conducted by either the consultant or the Department shall be made after connection to the permanent power supply, to verify the design head over the distribution system.

4. As approved by both the Department and design consultant a “modified squirt test” may be performed in order to allow the trench to be covered and to perform erosion control. This test will check squirt height at the distal end of the laterals with an orifice drilled cap on the lateral riser.

Chapter 12. Pump System Requirements

A. General Statement

A pump system is utilized to enable the installation of a disposal field upslope of the structure to be served. The effluent is not distributed to the disposal field under pressure, but by gravity flow following pumping to a higher elevation.

B. Criteria for Approval

The criteria for approval as outlined in Chapter 8 shall be met.

C. Criteria for System Sizing

System sizing shall meet the provisions of Chapter 8.

D. Pump Requirements

The pump shall meet the minimum design, materials, and construction specifications in Chapter 32. Additionally, pumps shall meet total head requirements of the site encompassing elevation head, friction head, and pressure head.

E. Pump Tank Requirements

1. The pump tank shall have capacity sufficient to deliver the design dose and have a minimum additional storage capacity above the high level alarm of one day's design flow.

2. The high water alarm shall activate immediately when the remaining pump tank storage volume is equal to the daily design flow capacity.

3. Each tank shall be installed on a stable level base.

4. Construction of the tank shall comply with the standards in Chapter 31.

5. Each pump tank shall be provided with a watertight riser extending to the ground surface or above, with a minimum inside horizontal measurement equal to or greater than the tank access manhole. Provision shall be made for securely fastening the manhole cover.

6. Pump tanks in high groundwater areas shall be weighted or provided with an anti-buoyancy device to prevent flotation.

F. Installation Requirements

Unless otherwise indicated on the permit, installation requirements shall be as specified in Chapter 31 and Chapter 32 (with application as a pump tank, not dosing tank).

G. Required Inspections

Required inspections and finalization of permit shall be in conformance with Chapter 5. Additionally, an inspection of the system components and pump function may be made.

H. Specialized Use of Pump with Pump Basin

1. A specialized purpose for use of a pump and pump basin to address the issue of plumbing elevation for a portion of a residence, or a remote bathroom for out-buildings, being too low in elevation relative to the septic tank to allow gravity flow to the septic tank.

2. The pump for such applications must be capable of pumping two (2) inch solids and pump directly into the building sewer entering the septic tank.

3. A pump basin with pump may be utilized under the following circumstances:

a. The wastewater does not originate from a kitchen.

b. Any toilet being serviced, in the case of residential application, is not the sole toilet utilized by the residence.

c. The pump and pump basins are permitted and inspected by the Department.

I. Specialized Use of Septic Tank Second Compartment as a Dosing Tank

1. When utilizing a remote bathroom, such as those in a barn or pool house, etc., the second compartment of a septic tank may be utilized as a dosing tank under the following circumstances:

a. A minimum one thousand five hundred (1,500) gallon septic tank will be used.

b. In no event, shall the liquid portion be drawn down to within twelve (12) inches of the “T” fitting or baffle slot in the common compartment wall.

c. The wastewater does not originate from a kitchen.

d. Any toilet being serviced, in the case of residential application, is not the sole toilet utilized by the residence.

e. The pump and septic tank are permitted and inspected by the Department.

Chapter 13. Deep Trench System Requirements

A. General Statement

A deep trench system is a system with disposal trenches greater than thirty (30) inches deep. Trench depth should be kept as shallow as possible to take advantage of those soil horizons that best provide oxygen and promote microbiological activity.

EXCEPTION: The Department may allow the installation of a standard system where the trench depth is deeper than thirty (30) inches in order to mitigate for a shallow limiting layer such as a hard or clay pan, providing the vertical separation requirements for a standard system can be met.

B. Criteria for Approval

A deep trench system will only be permitted under the following conditions:

1. A lot or parcel is inadequate to accommodate a standard or pressure dosed system for the development proposed.

2. There are greater than forty-eight (48) inches of effective soil depth below the bottom of the proposed disposal trench in the disposal field and replacement area.

C. Design Criteria

1. Unless otherwise approved by the Department the disposal trench shall have a minimum depth of thirty-one (31) inches, and a maximum width of thirty-six (36) inches.

2. The deep trench system absorption area and septic tank liquid capacity required shall be calculated using the standard system criteria for system sizing in Chapter 8. For calculating lineal feet, the sidewall area (extending the entire gravel depth) shall be used except when using a thirty-six (36) inch wide trench, which shall be sized using the trench bottom.

3. The minimum disposal trench spacing (sidewall-to-sidewall) within a disposal field shall be two (2) times the depth of the filter material.

D. Installation Requirements

Unless otherwise indicated on the permit, or elsewhere in this Chapter, installation requirements shall be the same as for a standard system as stated in Chapter 8.

E. Required Inspections

Inspections and finalization of permit shall be in conformance with Chapter 5.

Chapter 14. Steep Slope System Requirements

A. General Statement

A steep slope system is a system installed on sites with slopes greater than thirty (30) percent.

B. Criteria for Approval

A steep slope system shall meet the following requirements:

1. Steep slope systems are not permitted for creating lots and parcels.

2. Steep slope systems for existing parcels may only be developed in conformance with the county General Plan, zoning restrictions, recorded restrictions and notes on the subdivision or parcel map, and any other applicable county requirements.

3. When a deep trench system is incorporated into a steep slope system, the following conditions shall be met:

a. Unless otherwise specified by the Department or hereunder, the provisions for deep trench system as indicated in Chapter 13 shall be met.

b. There shall be a minimum effective soil depth of seventy-nine (79) inches in the disposal area and replacement area. For purposes of determining effective soil depth and vertical separation, the depth of limiting layer shall be measured from the upslope side of the disposal trench bottom.

c. There shall be a minimum trench width of eighteen (18) inches and a maximum trench width of twenty-four (24) inches.

C. Soil Stability Report

The Department may require a geotechnical report by an engineering geologist or geotechnical engineer where the slope exceeds thirty (30) percent, or where there are indications of soil instability. The report shall discuss soil stability within the proposed disposal area and replacement area of the system and on the soil's stability with respect to the building foundation, surrounding terrain and adjacent properties. The report shall include, at a minimum:

1. A site plan drawn to scale, showing topography, locations of the proposed house, driveway or other structures.

2. Soil profile information as it relates to soil stability.

3. Discussion of the presence of groundwater, its seasonal variation (if any) and influence on the soil stability after disposal field construction.

4. Statement concerning the stability of the soil and bedrock that may specifically include an evaluation of soil creep and landslide potential at the disposal area and replacement area location and surrounding terrain due to the hydraulic load imposed by the system.

5. Recommendation for interceptor drains (if needed) that may render soil stable and prevent flooding of the disposal area and replacement area.

6. Recommendation of the best structure-driveway-disposal field location relationship as it relates to soil stability.

7. Recommendation of installation methods and procedures.

D. Installation Requirements

1. Unless otherwise indicated on the permit, or in this Chapter, installation requirements shall be the same as for a standard system as indicated in Chapter 8.

2. Trenches shall be installed with a minimum of twelve (12) inches of native soil cover as measured from the downhill side of the trench.

E. Required Inspections

Inspections and finalization of permit shall be in conformance with Chapter 5.

Chapter 15. Intermittent Sand Filter System Requirements

A. General Statement

An intermittent sand filter system consists of a septic tank, dosing tank, sand filter bed and a disposal field. Effluent from a structure is periodically dosed to a bed of sand media, bacteriologically and physically treated, and discharged into a disposal field via pressure distribution. This system may be an alternative for some sites to mitigate the limitations associated with shallow effective soil depth, soils with rapid permeability or very slow permeability.

B. Criteria for Approval

An intermittent sand filter system shall meet the following requirements:

1. Sand filter systems may be installed in Soil Groups A, B, C, D, and E (as identified in Chapter 8), or percolation rates of 1-240 minutes per inch for existing lots or parcels and 1-120 when creating lots or parcels.

2. The proposed disposal area and replacement area shall demonstrate a minimum of twenty four (24) inches of separation between the disposal trench bottom and fractured rock or groundwater.

3. Unless otherwise approved, a sand filter system shall only be considered for use for a single family dwelling.

C. Required Inspections

Inspections and finalization of permit shall be in conformance with Chapter 5.

Chapter 16. Mound System Requirements

A. General Statement

A mound system is an aboveground or at-grade absorption facility useful in mitigating some of the limitations associated with inadequate effective soil depth. The mound system consists of a distribution network that under pressure evenly delivers effluent from a septic tank to a "mounded" bed of filter material over sand media.

B. Criteria for Approval

The mound design and system shall meet the minimum requirements of the Department and the provisions of the State Water Resources Control Board, Guidelines for Mound Systems, most current version, and amendments thereto. The following provisions shall supersede any conflicting provisions of the Guidelines for Mound Systems that shall be met:

1. An absorption rate of 0.6 gallons per day per square foot (gpd/ft2) shall be used for calculating the mound sand bed area.

2. Sand media as described in the January 1996 version of the Yuba County Sand Filter Guidelines and Specifications, and subsequent modifications shall be used for the sand bed.

3. Gravel as identified in the Guideline shall be known as filter material, as defined in Chapter 37.

4. Unless otherwise approved, a mound system shall only be considered for use for a single-family dwelling.

5. System monitoring and maintenance requirements in conformance with Chapter 24.

C. Required Inspections

Inspections and finalization of permit shall be in conformance with Chapter 5.

Chapter 17. System Abandonment Requirements

A. Inspections and finalization of permit shall be in conformance with Chapter 5, System Abandonment Requirements.

B. A system must be abandoned under the following situations:

1. If the property has been connected to an approved sewer system.

2. If the system will no longer be used.

3. If the Department has issued a notice or order to abandon the system (for reasons such as: the system has failed & cannot be repaired, is an unpermitted system, etc.)

C. A system must be abandoned in the following manner:

1. A permit must be obtained before the system is abandoned. The application for abandoning the system will include:

a. A site plan showing where the septic tank and leach field are located.

b. A description of how the system will be abandoned.

2. The septic tank must be pumped by a licensed septic tank pumper (a list of licensed pumpers is available from the Department) to remove the contents. A receipt must be provided.

3. The septic tank must be abandoned as follows:

a. If possible, the septic tank cover will be collapsed and the bottom of the tank will be broken sufficiently to allow water to pass through, or

b. If the septic tank cover cannot be collapsed, the tank will be filled so that there is not a cave-in or other structural hazard, or,

c. The septic tank may be removed to an approved location, and;

d. The septic tank or excavation hole must be filled with clean earth, sand, gravel, or other material approved by the Department.

4. The building wastewater plumbing system, if not connected to an approved septic or sewer system, must be permanently capped.

5. Future construction in the abandoned system area may require special construction considerations.

6. Additional permit requirements may be necessary in order to mitigate unique problems associated with the abandonment of the system.

7. The abandoned tank and subsequent connection to a new tank or public sewer shall be inspected by the authority having jurisdiction, normally either the sewer utility or the Department.

D. Permit finalization

The Department will finalize the permit for the system abandonment upon satisfactory completion of the requirements of the permit and this Manual.

Chapter 18. Holding Tank Requirements

A. General Statement

A holding tank is a watertight container designed to receive and store sewage for disposal at another location.

B. Criteria for Approval

Permit shall be issued for holding tanks on sites that meet all of the following conditions:

1. The site cannot be approved for the installation of a standard system or alternative system.

2. No sanitary sewer system is legally and physically available.

3. The tank is intended to serve a small occasional use industrial, commercial, or recreational facility.

4. Unless otherwise approved by the Department, the projected daily sewage flow is not more than two hundred (200) gallons.

5. The setback requirements outlined in Table 1 (contained in Chapter 36) for a septic tank can be met.

6. The owner of the property shall record a deed restriction agreeing to be served by sanitary sewer system if at any time a connection becomes legally available within two hundred (200) feet of the building.

7. The owner shall provide the Department with:

a. A copy of a contract with a County permitted septage pumper that shows the tank shall be pumped at regular intervals or as needed to prevent use of greater than seventy-five (75) percent of the tank's capacity. The contents of the tank shall be disposed of at an approved septage receiving facility, in an approved manner; and

b. A record of pumping dates and amounts pumped shall be maintained by the property owner and made available to the Department upon request.

C. General Requirements

1. A holding tank does not have to be designed and installed under the inspection and approval of a consultant.

2. No building may be served by more than one (1) holding tank.

3. A single parcel or lot of record may be served by no more than one (1) holding tank.

4. Each tank shall have a minimum liquid capacity of one thousand five hundred (1,500) gallons.

5. Holding tanks shall not be used as a method for sewage disposal for creating lots and parcels.

D. Permit Requirement

A Renewable Operating Permit shall be obtained prior to finalization or construction permit.

E. Installation, Construction and Monitoring Requirements

All installations shall meet the following:

1. Be located and designed to facilitate visual inspection and removal of contents by pumping.

2. Be equipped with both an audible and visual alarm, placed in a location acceptable to the Department, to indicate when the tank is seventy-five (75) percent full. The audible alarm only may be user cancelable.

3. Have no overflow vent at an elevation lower than the overflow level of the lowest fixture served.

4. The holding tank construction and installation shall comply with the requirements specified in Chapter 28.

F. Inspections Required

Each holding tank, installed under this Chapter, shall be inspected annually by a licensed operator and periodically, but no less than every three years, by the Department. A fee may be charged by the Department for this service.

Chapter 19. Vault Privy Requirements

A. General Statement

A vault privy is a structure used for disposal of human waste without the aid of water. It consists of a shelter built above a subsurface vault into which human waste falls. The vault privy has no water connection.

B. Criteria for Approval

Vault privies may be allowed for temporary or limited use areas, where primitive type picnic grounds, campsites, camps and recreation areas are to be maintained, when a septic tank and leach field are not practicable as determined by the Department. The separation distances specified in Table 1 (contained in Chapter 36) shall be met. Vault privies shall not be used for seasonal dwellings, commercial facilities, or single-family dwellings.

As a condition of approval, monitoring to ensure protection of water quality may be required. A construction permit shall be obtained for a vault privy as required by this Chapter.

C. Materials and Construction Requirements

Vault privy (shelters and facilities) shall be constructed in accordance with the minimum requirements contained in Chapter 34.

D. Maintenance Requirement

Vault privies shall be maintained to prevent health hazards and pollution of public waters. The privy vault shall not be allowed to become filled with excreta to a point within two (2) feet of the ground surface. The excreta in the vault shall be pumped out by a licensed septage pumper as necessary to fulfill these requirements. The property owner or septage pumper shall submit the septage pumper's receipt to the Department within thirty (30) days of its pumping. The privy shall be maintained in a sanitary condition and in good repair.

E. General Requirement

No water-carried sewage shall be placed in vault privies. Contents of vault privies shall not be discharged into storm sewers, on the surface of the ground or into public waters.

Chapter 20. Portable Toilet Requirements

A. General Statement

A portable toilet is any self-contained chemical toilet facility that is housed within a portable toilet shelter. The portable toilet has no direct water connection.

B. Criteria for Approval

Portable toilets may be approved for temporary or limited use areas, such as construction sites (for use by on-site employees), recreation parks, campsites, and special events, provided that the separation distances in Table 1 (for septic tanks) can be met. Portable toilets shall not be allowed for seasonal dwellings, commercial facilities or single-family dwellings.

C. Materials and Construction Requirements

Portable toilet (shelters and facilities) shall be constructed in accordance with the minimum requirements contained in Chapter 34.

D. Maintenance Requirement

Portable toilets shall be maintained to prevent health hazards and pollution of protected waters.

E. General Requirement

No water-carried sewage shall be placed in portable toilets. Contents of portable toilets shall not be discharged into storm sewers, on the surface of the ground or into protected waters.

Chapter 21. Seepage Pit Requirements

A. General Statement

Seepage pit systems are systems designed to be used in areas of Yuba County, predominately the southwest and west, where subsoils are clay, clay pan, fragipan, hard pan and do not offer opportunities to install typical leach field type of systems. It is generally acknowledged that the use of these systems addresses only disposal requirements as opposed to treatment and disposal. To mitigate the lack of treatment all systems using seepage pits shall employ nitrate reducing pre-treatment units.

B. Test Pit Requirements

At least one (1) test boring to groundwater or ten (10) feet below the proposed design depth of the pits shall be made in the lowest area of the proposed disposal area to evaluate soils. Additional test pits may be required at the discretion of the Department to determine the suitability of the site for on-site sewage disposal.

C. Criteria for Use of Seepage Pit Systems

1. Seepage pits shall be used only to service a single-family residence and only when the site is not approved for installation of a standard or other advanced standard or advanced alternative system.

2. Seepage pits shall not be used to create lots and parcels and shall not be approved for use when sewers are physically and legally available to serve the structure.

D. Criteria for Design and Installation

1. The seepage pit system shall meet the minimum setback requirements as specified in Table 1 in Chapter 36.

2. In the initial and replacement disposal areas, there shall be ten (10) feet of vertical separation between the bottom of the disposal pit and groundwater.

3. The depth of the seepage pit shall be a minimum of fifteen (15) feet and a maximum of thirty-five (35) feet below the ground surface.

4. Effective soil type shall be limited to sand or loamy sand, with or without gravel.

5. An acceptable test boring shall have a minimum three (3) foot column of effective soil and a ten (10) foot vertical separation to groundwater from the design depth of the seepage pits.

6. Seepage pit sizing shall be based upon the area of the effective soil and an application rate of 2.24 gal/day/sqft. 5/√ t), where t = assumed percolation rate of 5 mpi

(2.24) dhπ= gal/day/pit, where d= diameter of pit, and h= height of effective soil column

7. Seepage pit system sizing shall be based on the following table:

Feet of Effective Soil Sidewall in 3-Ft Diameter Pit	Number of Required Pits Per Bedroom
3	2.4
4	1.8
5	1.4
6	1.2
≥ 7ft	1.0

Note: The number of pits/bedroom shall be multiplied by the number of bedrooms, then rounded to the nearest whole number

8. Seepage pits shall be a minimum of thirty-six (36) inches in diameter.

9. The seepage pit shall be filled up to the concrete collar with cobbles that are a minimum of three (3) inches in diameter in any dimension or with other filter material approved by the Department. The cobbles or filter material shall be washed clean so as to be free of debris and dirt. The concrete collar shall be five (5) feet below ground surface. The remaining space shall be backfilled with soil.

10. A system with multiple pits shall be designed so the pits receive equal quantities of sewage flow via distributions boxes.

11. Seepage pit header pipe inlets, risers, and collars shall be watertight.

12. A minimum distance of twelve (12) feet of undisturbed soil shall separate seepage pits from each other.

13. When the Department requires the applicant to obtain the design services of a consultant, the consultant shall certify the system installation prior to the Department issuing final approval of the permit.

E. Exception for Repair

In the interest of public health, the Director may approve a seepage pit septic system based upon a test boring with less than a three (3) foot column of effective soil.

F. Required Inspections

Inspections and finalization of permit shall be in conformance with Chapter 5.

Chapter 22. Cluster Systems

A. General Statement

Cluster systems, also known as community systems, are typically utilized in Planned Developments, apartment buildings, schools, etc. The Department will evaluate, on a case-by-case basis, appropriate proposals that incorporate sound engineering principals. The Department may propose/require specific regulations to address these systems, including but not limited to operation permits, maintenance and operations contracts, etc.

Chapter 23. Seasonal Wet Weather Testing

A. General Statement

Some locations of Yuba County are subject to high seasonal ground water or perched groundwater that can have an adverse impact on the performance of on-site systems by eliminating or minimizing the zone of aeration in soils that is critical for optimal sewage treatment. In known or suspected areas of high seasonal ground or perched water the Department will require that soil profiling be performed during the wettest time of the year to evaluate conditions that could adversely impact system performance.

B. Procedure

The Department will make a determination annually concerning the validity of seasonal wet weather testing data based on the amount of rainfall in a given year. Generally this testing period will be allowed between the date fifty (50) percent of the annual rainfall has occurred and the close of the rainy season.

Chapter 24. Operation, Maintenance and Monitoring

A. Background

1. Yuba County has a high priority need at this time for an on-site sewage OM&M program because:

a. The county is experiencing development and growth.

b. Available land with suitable soil for standard septic systems (septic tank to gravity drain field) is becoming increasingly rare with remaining sites increasingly environmentally sensitive.

c. Demanding site conditions place greater demands on septic systems to provide enhanced treatment prior to discharge into shallow, poorly drained soils.

d. Enhanced treatment and disposal systems need OM&M to assure they continue to function as designed, both to prevent system failure and to protect public health and the environment.

e. Enhanced treatment and disposal systems are costly investments for the homeowners that need to be protected through routine OM&M.

2. The purpose of this program is to assure on-site sewage systems continue over time to operate as designed, protect the environment, and provide economical, dependable, long-term service to their owners.

3. The program addresses these issues by laying out OM&M requirements that are appropriate for the complexity of the on-site system and the environmental sensitivity of the site. The program stresses homeowner education and participation, and utilizes the private sector for performing required inspections. The program recognizes the Department's current role for record keeping and quality assurance, but does not preclude a more active role under special circumstances or in response to future needs.

4. The program goals are to assure:

a. Long-term viability for on-site sewage disposal systems.

b. Protection of public health and environmental quality.

c. Provide alternative on-site sewage disposal solutions for environmentally sensitive properties.

d. Protection of the customer's investment in their on-site sewage system and property value.

e. Compliance with State and Regional Board mandates and agreements.

f. Consistency and compatibility with the County's General Plan, community plans, and County and State ordinances and regulations.

g. Consistency with EPA Guidelines for On-Site Sewage Operation and Maintenance and with the direction taken in development of a statewide on-site sewage regulation as directed by California State Assembly Bill (AB) 885.

B. Applicability

1. The program will apply to all advanced alternative onsite sewage disposal system construction permits.

C. Administration

1. Administrative Overview

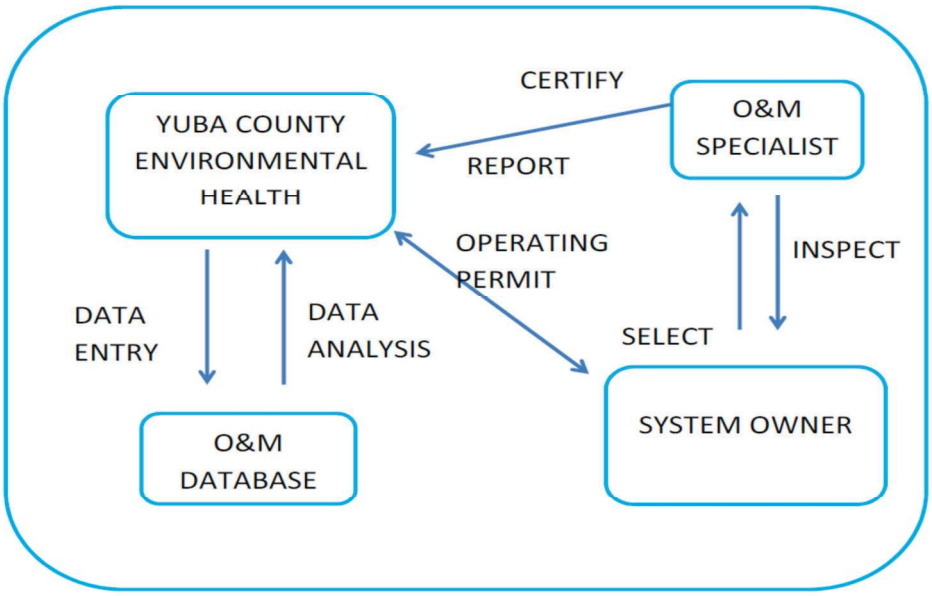
a. Administered county-wide by the Department.

b. Required OM&M inspections performed by qualified OM&M Specialists.

c. OM&M Specialists are individuals or corporations who are trained as described in item O. of this Chapter.

d. The Department staff may perform OM&M inspections for quality assurance surveys, and investigations.

e. The following diagram shows the relationship between the parties involved in the program as described:



2. Roles and Responsibilities

a. Yuba County Environmental Health:

i. Develop and administer the OM&M program in consultation with the Yuba County On-Site Wastewater Advisory Committee.

ii. Establish a record keeping and reporting system to ensure that up-to-date records are kept of location, ownership, site evaluation, design, and compliance reports are maintained and performance of systems is monitored.

iii. Develop and enter into agreements with qualified OM&M Specialists and system owners where warranted to assure the successful operation of the OM&M program.

iv. Assure implementation and operational quality of the program and program staff as described in item F of this Chapter.

v. Monitor and analyze the performance of on-site systems within the County by reviewing OM&M data in relationship to written performance standards

vi. Assure timely follow up, including enforcement actions when necessary as described in item F of this Chapter for identified problems associated with individual on-site systems and on-site treatment and disposal technologies.

b. System Owner

i. Operate on-site system in conformance with its design parameters.

ii. Participate in the OM&M program as outlined in this Manual.

iii. Operate and maintain their on-site system consistent with the Yuba County Sewage Ordinance.

iv. Obtain permits, procure services, and pay fees as may be necessary to correct deficiencies identified by the Department or the OM&M Specialist.

c. System Designer

i. Design systems that meet state and local requirements, assuring protection of public health and the environment.

ii. Design systems that, to as great an extent possible, are cost effective and reliable, and consistent with “best engineering practices”.

iii. Report system malfunctions that result in surfacing sewage or that require major system repair to the Department within 24 hours of system malfunction.

iv. Develop and provide a system manual and maintenance schedule for each system designed.

d. Proprietary System Authorized Agent

i. Provide instruction regarding proper operation and maintenance of the system/device is provided to the owner of the residence or facility, the designer, and the Department.

ii. Provide instruction in sufficient detail for maintenance to be achieved through certified OM&M Specialists.

e. OM&M Specialist

i. Meet and maintain the requirements for certification outlined in this program.

ii. Provide all required maintenance and monitoring reports to The Department within thirty (30) days of service.

iii. Report system malfunctions that result in surfacing sewage or that require major system repair to the Department within 24 hours of system malfunction.

f. On-Site Wastewater Advisory Committee

Assist the Department in the development, adoption, over-sight, evaluation, and improvement of this OM&M program.

D. Summary

The following table summarizes OM&M requirements based on site and system variables:

Site or System Variable	Requirement
Septic tank to gravity drain field	Homeowner education *(see subsection E)*

	OM&M database registry *(see subsection F)*
Septic tank to pressure distribution drain field	Homeowner education OM&M database registry Homeowner's manual *(see subsection G)*
Enhanced treatment (ie. Septic tank to treatment unit, aerobic treatment unit, etc.)	Homeowner education OM&M database tracking Homeowner's manual Renewable operating permits *(see subsection H)* Notice on property deed *(see subsection I)* Inspection by Certified OM&M Specialist in first three months of operation and annually thereafter *(see subsection J)*
Advanced Alternative system	Any combination of the above *(see subsection K)*
System located within designated area of environmental sensitivity	Any combination of the above *(see subsection L)*

E. Homeowner Education

1. The Department will establish methods for increasing public understanding about the proper use and care of onsite systems. The program goal is to provide system owners with the information they need to properly operate and maintain their systems.

2. At a minimum, the education program should include two components:

a. Distribution of packets of information that include brochures, an operating manual for each type of system, a copy of the final as-built drawing, a routine maintenance schedule, and forms for record keeping. These packets can be distributed at the time of application processing and will be through a combined collection of specific system information from the Department, the design consultant, and the installer.

b. Provide ongoing community education and outreach programs. Activities should include presentations to homeowner associations, civic groups, and other community organizations, and articles, press releases, and public service announcements distributed to newspapers, radio, and television.

F. OM&M Data Management

1. Database Registry-Only

The Department will register in the OM&M database standard septic tank to gravity or pressure distribution systems. Registered systems will not be tracked for maintenance or performance using the database.

2. Database Performance Tracking

The Department will track the following information in the OM&M database for all systems utilizing advanced treatment. The database will include:

a. Owner of record

b. System type

c. System location

d. Date of installation

e. GIS linkage

In addition The Department will track in the OM&M database the maintenance and performance of all systems utilizing advanced alternative treatment. The database will include:

f. Permitting fee collection mechanism

g. Monitoring frequency schedule for each system

h. Results of maintenance and monitoring reports

i. Identification of OM&M specialist (copy of contract)

j. Collection and prioritization of monitoring results and other mechanisms to verify compliance

k. Summary of corrective and compliance actions

G. Homeowner's Manual

System designers will provide homeowner's manuals to the owners of systems that are more complex in nature than the standard septic tank to gravity distribution system. The manuals will include the following elements:

1. Diagrams of the system components.

2. Explanation of general system function, operational expectations, owner responsibility, etc.

3. Routine maintenance schedule.

4. Names and telephone numbers of the system designer, local health authority, component manufacturer, supplier/installer, and/or the management entity to be contacted in the event of a failure.

5. Information on “trouble-shooting” common operational problems that might occur.

Note: This information should be as detailed and complete as needed to assist the system owner to make accurate decisions about when and how to attempt corrections of operational problems, and when to call for professional assistance.

H. Renewable Operating Permit (ROP)

1. Conditions for Approval

a. System installation has received Final Approval by the Department.

b. The homeowner’s manual has been provided by the system designer.

c. The system owner has signed a maintenance agreement with an approved OM&M provider.

d. An As-Built plot map of the system submitted by the system designer or contractor has been received and approved by the Department.

e. Certification from the consultant.

2. Operating Permit Renewal Frequency

Operating permits need to be renewed on an annual basis. However, the Department may reduce renewal frequency from annual up to triennial based on a case-by-case analysis of the history of the system’s reliability and compliance.

3. Renewal Procedures

a. The Department or the TPPE will notify the system owner of the need to renew their system’s operating permit. The notice will list the renewal fee.

b. Compliance with OM&M requirements will be verified by the Department using the OM&M database.

c. The Department will renew the operating permit upon receipt of the appropriate fee and verification of compliance with OM&M requirements.

4. Change of Ownership

a. ROPs are issued to the system owner and are non-transferable when ownership changes.

b. As part of the review process associated with issuance of a ROP, the Department or a designated representative may:

i. Review the OM&M database and other records deemed appropriate to assure the system is in compliance with the OM&M program requirements.

ii. Make an onsite inspection of the system.

iii. Provide information to the new system owner concerning the design, intended use, and performance history of the system.

I. Notice on Property Deed

Owners of systems requiring ROPs and OM&M inspections and database tracking will record appropriate notice of these requirements with the property deed for the benefit of future owners and successors.

J. OM&M Specialist Inspections

1. Inspection by a OM&M Specialist is required for all advanced/alternative systems.

2. Complexity of inspection will be related to the complexity and maintenance requirements of the system components.

3. Initial inspection within three (3) months of system operation is required for all systems utilizing enhanced treatment.

4. Inspection frequency required by the Department will vary in accordance with the maintenance needs of the system components, based on consideration of:

a. Recommendations of the On-Site Wastewater Advisory Committee.

b. Recommendations of the manufacturer.

c. Industry standards of practice.

K. Advanced Alternative Systems

Yuba County's Advanced Alternative System Program (see Chapter 25) reviews proposals for the use of new sewage treatment and disposal technology. Where there is determined to be adequate technical, scientific, and engineering support for the viability of a proposed technology, the system is approved and permitted under the OM&M program and are tracked as Advanced Alternative systems. The degree of monitoring may be specific to the advanced technology utilized.

L. Systems within Designated Environmentally Sensitive Areas

1. The OM&M program envisions the potential for designation of an individual system, group of systems, subdivision development, or geographical area as an Environmentally Sensitive Area for purposes of OM&M.

2. Proposals for an Environmentally Sensitive Area may be made by individuals, groups, or agencies within Yuba County.

3. OM&M requirements appropriate for the designated area would be developed by the Department and shared at public workshops with individuals and groups affected by the requirements including, but not limited to, property owners, developers, realtors, surveyors, engineers, recreational groups, and environmental groups.

4. Designation of an Environmentally Sensitive Area and approval of OM&M requirements would be made by the Board.

M. Yuba County Environmental Health Quality Assurance

1. Registration

All program staff conducting Soil Mantle Observations or approving designs for new systems or repairs are required to be Registered Environmental Health Specialists (or a trainee) in the State of California. This registration assures that each staff has a four-year degree with a scientific emphasis and has passed a rigorous written examination.

2. Performance Review

Performance reviews are conducted of all Yuba County Environmental Health program staff using the forms and procedures adopted by Yuba County to evaluate competencies and provide additional training as identified during the review process.

3. Continuing Education

Yuba County Environmental Health program staff is required to maintain twenty-four (24) hours of continuing education every two years and are encouraged to attend any pertinent training available to stay current on issues related to onsite sewage treatment and system operation and maintenance.

N. Requirements for OM&M Specialists

1. Specialized Training

OM&M Specialists will need to be trained by product specialists.

2. Experience

OM&M Specialists need adequate experienceperforming on-site sewage OM&M, system design, system installation, or septic tank pumping to assure familiarity with onsite systems and technology.

3. Continuing Education

OM&M Specialists are expected to stay current on issues related to onsite sewage treatment and system operation and maintenance through continuing education.

Chapter 25. Advanced Alternative System Requirements

A. Purpose

The purpose of this program is to allow new onsite sewage conveyance, treatment, and disposal technology to be introduced into Yuba County in a methodical and monitored manner after review by a multi-disciplinary advisory committee.

B. Homeowner Responsibility

1. It is the responsibility of homeowners to properly operate their system and ensure that it is maintained in accordance with the provisions stipulated at the time of permit issuance. Homeowners, after being informed of their responsibilities in the recorded Right of Entry and Monitoring and Maintenance Agreement and the certified Advanced Alternative Onsite Waste Water Acknowledgement Document shall be held accountable by the Department for the adequate functioning of their system and repair or replacement of the system should it fail.

2. It is the responsibility of the homeowner to consult with their own legal counsel about the adequacy of protection afforded to them by warranties and service agreements provided by onsite sewage system designers, installers, maintenance professionals, and manufacturers and distributors of proprietary devices. Yuba County makes no representation or assurance concerning the adequacy of protection afforded the homeowner from said warrantees and service agreements.

3. The following disclosure statements will be included in recorded license agreements to inform customers of potential risks involved in utilization of an Advanced Alternative system:

a. Yuba County has made every effort to assure success by implementing an Advanced Alternative System Review Process. This system may or may not perform in the manner intended.

b. Yuba County is not responsible for any damages you may incur as a result of a defective installation or operation of system.

c. For your own protection, consult with an attorney before signing any contracts, agreements, warranties or guarantees related to the product and its installation.

d. If you intend to transfer your property while the system is still considered an Advanced Alternative system, you are obligated to notify any potential owner of this system's designation as such and of all owner responsibilities.

e. If the system failed and is removed from a qualified Advanced Alternative system under this program, the property owner may be required to abandon the system and replace it with a system approved by Yuba County.

f. The requirements developed for permitting and monitoring the specific type of Advanced Alternative system utilized will be a recorded Right of Entry and Monitoring snd Maintenance Agreement and a certified Advanced Alternative Onsite Waste Water Acknowledgement Document.

C. Quality Assurance

1. A treatment system may be considered to “fail” when the Department determines it cannot reliably perform the conveyance, treatment, and/or dispersal function for which it was designed and approved. Causative problems with the treatment system may include mechanical malfunction, structural problems, reliability issues, maintenance deficiencies, or non-compliance with the effluent specifications contained in the review package.

2. If an individual treatment system “fails” as described above, the Department will consider the homeowner to be the responsible party for system repair or replacement. However, nothing here prevents the homeowner from seeking recourse through service agreements and warranties with the manufacturer, distributor, designer, or contractor.

3. When, in the opinion of the Director, the nature, number, or frequency of product failure is such that reconsideration of the treatment system by the advisory committee for continued inclusion in the Advanced Alternative System Program is warranted, the Director will request that the committee review the data and make recommendations. Recommendations could include modified or additional conditions for approval, extension of the monitoring period, and removal of the product from the Advanced Alternative System Program.

4. Noncompliance with the conditions of the Advanced Alternative System approval, including failure to report or notify the Department as stipulated within the conditions of approval, will be considered grounds for reconsideration of the treatment system for continued inclusion in the Program.

D. Advanced Alternative System Review Process

1. The review process steps are as follows:

a. OWTS with certification from third party testing (such as National Science Foundation (NSF)) meeting the requirements for site conditions can be approved by the director on a case by case basis.

b. The applicant will submit a preliminary treatment system proposal to the Department staff. A fee to cover a portion of review costs will be assessed at this point in the review process.

c. Staff will review the proposal for technical feasibility.

d. If the proposal is determined by staff to be feasible the applicant will prepare the Review Package and submit it to staff.

e. Staff will review the Review Package and, if the packet is complete, distribute it to committee members at least two weeks prior to the next regularly scheduled Wastewater Advisory Committee (Committee) meeting.

f. The Committee will study the Review Package and approve the system for inclusion in the Adavanced Alternative System Program, request additional information, or determine that the proposal is not acceptable.

g. If the Committee recommends approval of the system for inclusion in the Advanced Alternative System Program, staff will prepare a set of conditions of approval for review by the Committee.

h. The Committee will review the conditions prepared by staff and either suggest modification of the conditions or approval of the conditions.

i. If the Committee recommends approval of the conditions, staff will forward the Committee's recommendation to the Regional Board and allow thirty (30) days for review and comment by the Regional Board.

j. At the conclusion of the thirty (30) days, the Director will either authorize staff to approve the treatment system under specified conditions, based upon Committee recommendations, or refer the Regional Board comments back to the Committee for further review.

k. If the Director authorizes staff to approve the treatment system under specified conditions, the review period will commence. A treatment system will be considered "utilized" when it is properly designed, installed, and receiving wastewater in accordance with its designed wastewater loading. Influent and effluent sampling and analysis requirements for each experimental treatment system will generally take place a minimum of two (2) years from the time the treatment system is first utilized. All utilized treatment systems will continue to be designated as experimental systems until the total number of systems stipulated in the Conditions for Approval have been utilized for a minimum of two (2) years.

l. During or at the conclusion of the review period, either the applicant or the Director may request review of the system and its performance by the Committee.

m. The Committee may recommend the system be taken out of the Experimental System Program or that the conditions of approval be modified due to factors outlined in the preceding Chapter, or approval of the system as an Alternative System if all time, numerical, and performance conditions are met.

n. If the Committee recommends the system be approved as an Alternative System, staff will prepare a set of conditions of approval for review by the Committee.

o. The Committee will review the conditions prepared by staff and either suggest modification of the conditions or approval of the conditions.

p. If the Committee recommends approval of the conditions, staff will forward the Committee's recommendation to the Regional Board and allow thirty (30) days for review and comment by the Regional Board.

q. At the conclusion of the thirty (30) days, the Director will either authorize staff to approve the treatment system as an Alternative System under specified conditions, based upon Committee recommendations, or refer the Regional Board comments back to the Committee for further review.

Chapter 26. Off-Site Sewage Easements

A. General Statement

Per California Plumbing Code, each parcel will be self-sufficient, therefore off-site sewage easements will not be allowed.

Chapter 27. Large System Requirements

A. General Statement

A large system is a system with a projected daily sewage flow greater than two thousand five hundred (2,500) gallons from one (1) residential or commercial facility.

B. Permit Application Procedures

Application shall be made to the Department on forms provided by the Department. Each application must be completed in full, signed by the applicant, and accompanied by the following:

1. The appropriate filing fee.

2. A narrative describing the details of the proposed project.

3. A site approval report.

4. A site development plan prepared by a consultant. Requirements of Chapter 3 shall apply to large system plans.

5. A written assessment of the impact of the proposed system upon the quality of public waters and public health, (e.g. a groundwater mounding analysis and/or a nitrate study, etc.).

C. Alternative Design Requirements

Unless otherwise authorized by the Department, designs for large systems shall at a minimum meet all of the following:

1. Large systems shall be designed utilizing a pressurized distribution system in accordance with Chapter 11.

2. The disposal fields shall be divided into relatively small, approximately equal sized units, which are dosed alternately.

3. The system shall have at least two (2) alternating pumps.

4. Unless otherwise specified, septic tank design, materials, and construction shall conform to the provisions of Chapter 28. The Department shall review proposed tank designs and may impose certain standards to carry out the purposes of this Manual.

5. The project shall comply with all other Department requirements.

6. The Department may require review by the Regional Board.

D. Installation Requirements

Construction shall be in conformance with the permit.

E. Inspection Requirements

Unless otherwise indicated, inspections and finalization of permit shall be in conformance with Chapter 5.

Chapter 28. Septic Tank Materials and Construction

A. General Statement

The requirements of this Chapter shall apply to all septic tanks manufactured for use in Yuba County unless otherwise indicated in this Manual.

B. Materials

Septic tanks shall be precast reinforced concrete or other material approved by the Department. Wood, metal, and cast-in-place septic tanks are prohibited. Polyethylene and fiberglass tanks may be considered on a case-by-case basis; at a minimum must be IAPMO (International Association of Plumbing and Mechanical Officials) certified or equivalent.

C. Tank Construction/Design Specifications

1. Precast concrete tanks shall have a minimum wall, compartment and bottom thickness of two and one-half (2-1/2) inches, and shall be adequately reinforced. The top shall be at least four (4) inches thick.

2. Septic tanks shall have a minimum of two compartments. Installation of multiple single compartment tanks in a series is not acceptable, unless approved by the Department prior to installation. The first compartment shall have a liquid capacity of two-thirds (2/3) of the total required liquid capacity, as measured from the invert of the outlet fitting.

3. Each compartment shall have access provided by a manhole having not less than eighteen (18) inches across its shortest dimension unless otherwise approved by the Department.

4. Each compartment shall be provided with an approved watertight riser, extending to the ground surface or above, with a minimum inside horizontal measurement equal to or greater than the access man-hole. All joints shall be properly sealed with a sealant and/or an interlocking mechanism approved by the Department. Cement grout sealing alone is not an acceptable method of sealing joints. Surface water shall be diverted away from the riser cover by creating a sloping surface away from the riser, or extending the riser three (3) inches above ground surface. The cover shall be securely fastened with stainless steel or other corrosion resistant fasteners to make the riser vandal, tamper, and child resistant. No cover shall exceed seventy-five (75) pounds.

5. No riser shall have an inside horizontal dimension of less than twenty-four (24) inches. The liquid depth of any compartment shall be at least thirty (30) inches. Liquid depths greater than seventy-two (72) inches shall not be considered in determining the working liquid capacity.

6. Septic tanks shall be watertight. They shall be built such that any construction joints will be above the effluent level. An in-situ watertight test may be required of any septic or pump tank.

Testing may require that the tank be filled with water one (1) inch into the riser or that a Department approved vacuum test be performed.

7. Septic tanks shall be capable of supporting an earth load of at least three hundred (300) pounds per square foot when the maximum coverage does not exceed three (3) feet. Tanks installed with more than three (3) feet of cover shall be reinforced to support the additional load. Tanks, risers, and riser covers installed beneath paved surfaces subject to vehicular traffic (e.g., driveways) shall be engineered to support the additional load.

8. At least ten (10) percent of the inside volume of the tank shall be above liquid level to provide scum storage.

D. Size

1. Septic tank size shall be determined in accordance with Chapter 8 for single-family dwellings or Chapter 9 for commercial facilities.

2. The liquid depth of any compartment shall be at least thirty (30) inches. Liquid depths greater than seventy-two (72) inches shall not be considered in determining the working liquid capacity.

E. Fittings

1. The inlet and outlet fittings shall be Schedule 40 PVC, Schedule 40 ABS, or other materials approved by the Department, with a minimum diameter of three (3) inches.

2. The distance between the inlet and outlet fittings shall be equal to, or greater than, the liquid depth of the tank.

3. All fittings shall be secured with a sealant approved by the Department and shall be constructed so as to be watertight. Tank fitting locations shall be properly engineered to ensure the structural integrity of the tank.

4. The inlet fitting shall be a "sanitary tee" with minimum pipe diameter no less than the connecting building sewer or less than three (3) inches. It shall extend at least four (4) inches above and twelve (12) inches below the liquid level.

5. The outlet fitting shall be a "sanitary tee" with minimum pipe diameter no less than the connecting effluent sewer pipe nor less than four (4) inches in order to accommodate an effluent filter. The outlet fitting shall extend at least four (4) inches above liquid level and below liquid level a distance approximately equal to the flow level through the baffle. The diameter of the vertical leg extending below the liquid level shall not be less in size than the building sewer nor less than four (4) inches.

6. An effluent filter may be required prior to discharge of the effluent to the effluent sewer. It shall be commercially designed and manufactured, intended for effluent filtration, and be readily accessible for inspection and cleaning.

7. The invert of the inlet fitting shall not be less than one (1) inch and preferably three (3) inches above the invert of the outlet fitting.

8. “Sanitary tees” shall be accessible through the manhole access riser.

F. Baffles

A minimum three (3) inch diameter "tee" fitting or baffle slot (with the same opening area as the fitting) shall be placed in the common compartment (baffle) wall, using the same materials specifications as required for the outlet fitting. The invert of the "tee" fitting or baffle slot shall be located approximately at fifty (50) percent of the liquid depth. There shall be a minimum two (2) inch vent opening in the baffle above the liquid level. The baffle shall be constructed of the same material as the tank and extend a minimum of four (4) inches above the liquid level.

G. Markings

All septic tanks shall be marked on the uppermost tank surface with the liquid capacity of the tank and the manufacturer’s business name.

H. Tank Documentation

For septic tanks proposed for use in Yuba County, or when a revised tank design is proposed the commercial manufacturer of the septic tank shall provide the Department with written documentation that the septic tank design, materials and construction comply with all requirements of this Manual. The manufacturer shall provide a set of plans and specifications prepared by a California registered professional engineer, for each tank design and a set reflecting any subsequent revisions. Plans shall include at a minimum: dimensions, reinforcing, structural calculations, materials specifications and the appropriate fee. The Department may conduct periodic manufacturer's facility inspections to verify compliance with this Manual.

Chapter 29. Distribution Box Materials and Construction

A. Distribution boxes shall be constructed of concrete or other materials acceptable to the Department.

B. Distribution boxes shall be watertight, and designed to accommodate the necessary distribution laterals and expected flows. The top, walls, and bottom of concrete distribution boxes shall be at least one and one-half (1-1/2) inches thick.

C. For level sites, the distribution boxes shall be installed for parallel (equal) distribution to the disposal trenches. For sloping sites, the distribution boxes shall be installed so that the uppermost disposal trench receives effluent prior to the effluent being discharged to the subsequent, lower disposal trenches.

D. Each distribution box shall be provided with a sump extending at least two (2) inches below the invert of the outlets.

E. For initial use of a manufacturer's distribution box design proposed for use in Yuba County, or when a revised box design is proposed for same, the commercial manufacturer of the prefabricated box shall provide the Department with written documentation that the box design, materials and construction comply with all requirements of this Manual.

F. All distribution boxes shall be level, bedded on undisturbed soil, aggregate with a minimum of ninety (90) percent compaction, or on concrete.

Chapter 30. Diversion Valve Materials and Construction

A. Diversion valves shall be constructed of durable material and be of a design approved by the Department. They shall be corrosion-resistant, watertight, and designed to accommodate the inlet and outlet pipes.

B. Each diversion valve shall have a positive stop.

C. The manufacturer's name shall be marked on the cover.

D. For initial use of a manufacturer's diversion valve design proposed for use in Yuba County, or when a revised valve design is proposed for same, the commercial manufacturer of the prefabricated valves shall provide the Department with written documentation verifying that the valve design, materials and construction comply with all requirements of this Manual.

Chapter 31. Dosing/Pump Tank Materials and Construction

A. Dosing tanks shall be constructed in accordance with the minimum standards of Chapter 28 with the exception that the access manhole for the dosing tank shall be a minimum twenty (20) inches in diameter.

B. Each dosing tank employing one (1) or more pumps shall have a liquid capacity sufficient to deliver the design dose, and have a minimum additional capacity of one (1) day's design flow above the high level alarm.

C. Each dosing tank shall be marked on the uppermost surface with the liquid capacity and the manufacturer's business name, or a number assigned by the Department.

D. For dosing tanks proposed for use in Yuba County, or when a revised tank design is proposed, manufacturer of the tank shall provide the Department with written documentation that the tank design, materials and construction comply with all requirements of this Manual. The manufacturer shall provide a set of plans and specifications prepared by a registered professional engineer for each tank design and a set reflecting any subsequent revisions. The appropriate fee shall accompany plans.

Chapter 32. Effluent Pump, Control, And Alarm Materials And Construction

A. General Statement

Unless otherwise specified, effluent pump, control box, and alarm materials and construction shall at a minimum be in conformance with this Chapter.

B. Pumps, Controls, and Alarms

Electrical components used in systems shall comply with the California Electrical Code, and the following provisions:

1. Motors shall be continuous-duty, with overload protection.

2. Pumps shall have durable impellers of bronze, cast iron, or other materials approved by the Department.

3. Submersible pumps shall be provided with an easy, readily accessible means of electrical and plumbing disconnect, and a non-corrosive lifting device as a means of removal for servicing.

4. For pressure distribution systems, a corrosion-resistant screen or other filter device shall protect the pump. The screen shall have at least twelve (12) square feet of surface area, with one-eighth (1/8) inch openings. The use of a screen is not required if the pump does not discharge into a pressurized distribution system, and the pump has a non-clog impeller capable of passing a three-quarter (3/4) inch diameter solid sphere.

5. Pumps shall be automatically controlled by float switches with a minimum rating of twelve (12) amps at one hundred fifteen (115) volts AC or by a Department approved equivalent.

6. Pumps shall have automatically resetting audible and visual high water level alarms with manual silence switch that is located in or near the building served by the pump. The audible alarm only may be user cancelable. The electrical box for the pump and alarm system shall not be located in an environment that may damage the components.

7. Wiring must be of proper construction and gauge and permanently fixed to a supporting structure under permit from the local Building Department, unless such permit is waived by the Building Department.

8. The pump and alarm must be connected to separate circuits.

9. There shall be a non-resettable digital pump cycle counter in the electrical box.

10. There shall be a manual override switch in the electrical box to facilitate dosing control during inspections.

Chapter 33. Pipe Materials and Construction

A. General Statements

Unless otherwise specified, piping shall consist of materials and be constructed in conformance with the standards of this Chapter. All piping shall be free of defects or damage. All connection of pipes of different diameters shall be made with the proper fittings.

B. Building Sewer Pipe

The building sewer pipe is within the jurisdiction of the Building Department and shall be constructed with materials in conformance to building sewer standards, as identified in the California Plumbing Code.

C. Effluent Sewer Pipe, Header Pipe, and Fittings

Tightline pipe shall extend a minimum of five (5) feet out of the distribution box. Effluent sewer, header pipe and fittings shall be a minimum three (3) inch diameter, watertight and one of the following:

1. Schedule 40 Polyvinyl Chloride (PVC) that meets the most current ASTM D-1785 for three (3) inch pipe and D-2672 for minimum four (4) inch pipe.

2. Schedule 40 Acrylonitrile-Butadiene-Styrene (ABS) that meets the most current ASTM Specification D-2468.

3. ASTM SDR 35 with solvent-welded or rubber-gasketed joints.

4. Other material approved by the Department.

NOTE: The first ten (10) feet of effluent sewer pipe extending from the septic tank outlet shall be either "(1)" or "(2)". When the first distribution box is less than ten (10) feet from the septic tank the effluent sewer pipe shall extend to the first distribution box.

All pipe and fittings shall be capable of passing a deflection test withstanding three hundred fifty (350) pounds per foot without cracking or collapsing by using the method described in ASTM D-2412. Markings shall meet requirements established in ASTM Specification D-2719, subsections 9.1.1, 9.1.2 and 9.1.4. The manufacturer of PVC pipe may be required to certify in writing to the Department, that pipe and fittings provided for use in absorption facilities within the County comply with all requirements of this Chapter.

D. Distribution Piping

Distribution piping for gravity flow systems shall be a minimum three (3) inches diameter Polyethylene (PE) pipe that meets the most current ASTM Specifications F-810, or other material approved by the Department. The pipe described above shall have two (2) rows of holes spaced one hundred-twenty (120) degrees apart and sixty (60) degrees on either side of a centerline. For distribution pipe, a line of contrasting color shall be provided on the outside of the pipe along the line furthest away and parallel to

the two (2) rows of perforations. Markings, consisting of durable ink, shall cover at least fifty (50) percent of the length of the pipe. Markings may consist of a solid line, letters, or a combination of the two. Intervals between markings shall not exceed twelve (12) inches. The holes of each row shall not be more than five (5) inches on center and shall have a minimum diameter of one-half (1/2) inch.

E. Pressure Transport Pipe, Pressure Distribution Manifolds, and Pressure Distribution Laterals

Pressure transport pipe, pressure distribution manifolds, and pressure distribution lateral (piping and fittings), shall meet the most current requirements for Schedule 40 PVC pressure pipe as identified in ASTM Specifications D-1785, or other material approved by the Department. All pressure distribution laterals and all pressure transport and manifold piping shall be adequately sized for the design flow.