

ON-SITE WASTEWATER SURVEY

Jurisdiction:	Lake County
Jurisdiction Contact:	Ray Ruminski
Contact Job Title:	Environmental Health Director
Contact Telephone/Email:	(707) 263-1164 / rayr@co.lake.us
Interviewer:	Brad Banner
Interview Date:	October 16, 2006

I. Permit Process and Design Requirements

A. Permits required for:

1. New Construction on Existing Parcels

a. Permit process

- [Are there separate site evaluation and system construction applications?](#)

There is one multi-use application form and separate permits for site evaluations and system construction. Typically, each of these two steps is done individually, although sometimes applications are submitted for both at the same time.

- [What are the steps through the process?](#)

(1) Site evaluation, (2) Staff look at soil and other site characteristics, three test holes minimum, (3) Staff determines vertical separation and soil type and decides whether standard or supplemental treatment system will be required, drainfield area is specified on map, (4) Construction permit, (5) Staff reviews design, (6) Final inspection by staff.

- [How long are site evaluations valid?](#)

Forever, provided the same site is used and site conditions haven't changed.

- [How long are construction permits valid?](#)

One year and renewable annually as often as needed.

b. Design Flow

- [What is used as the daily design flow per bedroom for single family residences?](#)

On-Site Wastewater Survey

150 gpd for first two bedrooms, then 75 gpd for each bedroom in addition to the first two; 300 gpd minimum.

- How are design flows determined for other types of development?

Table is used, but other sources are accepted if justified by the designer.

c. Septic Tank Sizing

- What are your septic tank sizing requirements per bedroom for single family residences?

1,000 gal for 1-2 bedrooms, 1,200 gal for 3-4 bedrooms, 1,500 for greater than 4 bedrooms.

- How is septic tank sizing determined for other types of development?

1 ½ daily design flow or 1,250 gal, whichever is greater.

- Are septic tanks inspected or certified for water tightness?

No.

d. Slope

- Is there a maximum slope? What is it?

Based on depth of useable soil, maximum slope is determined by a chart; 12% max when 30 inches of useable soil, 30% max when 48 inches of useable soil, and up to but no greater than 45% for when 60 inches of usable soil; there is also a "steep slope system"

e. Soil

- What is the range of allowable soil textures?

Group A are the sandy soils, Group B are the loamy soils, and Group C are the clayey soils. Pressure distribution is required for rapidly drained soils.

- What is the range of allowable percolation rates?

Percolation tests are not performed.

- Do you rely on textural classification, perc tests, or both?

Soil texturing only.

- Are perc tests optional or mandatory?

Not approved.

f. Vertical Separation or Total Effective Soil Depth

- Are your system design requirements based on soil maps, vertical separation, depth of effective soil, or a combination?

Based on vertical separation; soil maps are used as a general guide and for giving soil classifications a “reality check.”

- What are your vertical separation and/or effective soil requirements for gravity systems?

48 inches

- For supplemental treatment systems?

24 inches

- Do you distinguish between perched, seasonal water table in measuring vertical separation?

No. It was a past practice that has been stopped.

g. Groundwater

- Do you rely on evaluation of the soil profile or winter monitoring to determine presence of groundwater?

We predict groundwater level based on mottling; if applicant wants to challenge this, then they can request winter groundwater monitoring.

h. System Design

- Who determines Type of System, county staff, a consultant, both?

County staff provides the specifications for standard systems; if site conditions merit supplemental treatment, then the design consultant recommends the appropriate design.

2. Creating New Parcels through Subdivision Process

- Is minimum lot sized determined by wastewater requirements or by the General Plan and Zoning?

General plan

- Does your sewage regulation have minimum lot sizes? If so, how are they determined and what are they?

Minimum parcel size based solely on the area needed for drainfield placement and repair.

- Does your regulation have requirements for minimum useable drainfield areas?

No.

- Are there more stringent requirements for subdivisions than for existing parcels in the following areas:

- Allowable soil texture No
- Allowable percolation rate No
- Required vertical separation or total effective soil depth? No

- Maximum slope? No
- Use of supplemental treatment to allow creation of new parcels? No
- Required setbacks? No
- Are determinations of nitrogen or phosphorous loading required?

No

3. Repair

- Are system repairs brought up to code to the maximum extent allowed by the site?

Yes. There is a hierarchy. If possible the system is brought up to existing standards; if this is not possible it is brought up to the standards in effect at the time the original permit was issued; if this is not possible it must at least be designed so as to not create a public health hazard.

- Are there differences in site evaluation procedures?

Sometimes soil testing is waived when all remaining space is being used in the repair anyway; staff always inspects the site to confirm that the system is actually failing.

- Are there less stringent requirements for repairs than for existing parcels in the following areas:

- Allowable soil texture See above
- Allowable percolation rate See above
- Required vertical separation or total effective soil depth? See above
- Maximum slope? See above
- Use of supplemental treatment? Start out by requiring it but could be negotiated out of requiring it based on circumstances of the site and owner.

- Are there differences in who may design a repair system? No

II. Designer Certification

- Who can design standard, gravity systems?
 - Certified Engineering Geologist? Yes
 - Certified Professional Soil Scientist? Yes
 - Registered Civil Engineer? Yes
 - Registered Environmental Health Specialist? Yes
 - Registered Geologist? Yes

On-Site Wastewater Survey

- Other Consultant Certified by Environmental Health? Yes
- Contractor? Yes
- Homeowner? Yes
- County REHS staff? No

The exception is that one of the first five in the above list must design subsurface drip irrigation.

➤ Who can design supplemental treatment systems?

- Certified Engineering Geologist? Yes
- Certified Professional Soil Scientist? Yes
- Registered Civil Engineer? Yes
- Registered Environmental Health Specialist? Yes
- Registered Geologist? Yes
- Other Consultant Certified by Environmental Health? Yes
- Contractor? Yes
- Homeowner? Yes
- County REHS staff? No

The exception is that one of the first five in the above list are required for design of subsurface drip irrigation.

➤ How does County assure that someone submitting a design is qualified to design a specific type of system?

No system in place to certify competency.

➤ Will the County require certification of system construction by designer? No

➤ Will the County require inspection of system construction by designer? No

III. Installation Requirements

A. Installers

➤ Who may install standard and alternative systems?

Contractors licensed as installer and plumbers

➤ Is the homeowner allowed to install either or both of these types of systems?

Yes, if the designer is OK with it.

➤ Do you certify installers?

No.

B. Inspections

➤ Does County staff inspect all components of an installation?

On-Site Wastewater Survey

No, only the portion of the system visible prior to cover.

- Does County staff meet with the installer on the site or consult with the installer prior to initiation of the installation?

No.

- How many installation inspections by staff for installation of a standard, gravity system?

One.

- How many installation inspections by staff for installation of a sand filter?

3-4 inspections for sand filter, 2-3 for capping fill.

C. As-Built Requirements

- Does the installer provide an as-built drawing?
- Yes
- Who provides the as-built drawing for a supplemental treatment system?
- Installer

D. Certification of Completion

- How does the county provide final approval of the system and its installation?

County signs off the permit for an approved final inspection.

- Is the designer required to inspect and certify the installation as meeting the requirements of the design?

No, but wants to require this in the future.

- Does the installer certify the completion of the system per the design?

No, but wants to require this in the future.

IV. Renewable Operating Permits

- Are ROPs required for the following? No renewable operating permit.
 - Existing systems?
 - Standard gravity trench
 - Pump to gravity
 - Pressure dosed
 - Supplemental treatment

V. Operation and Maintenance Program

- Does your county have an O&M program? No O&M program.

On-Site Wastewater Survey

- Who performs the O&M inspections?
 - Service providers certified by the county?
 - Services provides certified by the proprietary manufacturer?
 - Septic tank pumpers?
 - Home owners?
 - Professional engineers?
 - Consultants other than engineers?
 - County staff primarily?
- What types of systems receive O&M inspections?
 - Existing systems?
 - Standard gravity trench
 - Pump to gravity
 - Pressure dosed
 - Supplemental treatment

VI. Appeal/Variance Process

- What are the major steps in your appeal/variance process?
- Who makes the final decision?

A variance must be requested in writing. Staff makes recommendation to EH Director and EH Director makes the decision. An appeal goes to the BOS.