SANTA CLARA COUNTY ONSITE SYSTEMS MANUAL

PART 5

OPERATION, MONITORING AND MAINTENANCE

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CONTENTS

1. OWTS PERFORMANCE REQUIREMENTS

A. GENERAL PERFORMANCE CRITERIA

1. All onsite wastewater treatment systems (OWTS) shall function in such a manner as to:

   a) Be sanitary and not create a health hazard or nuisance;

   b) Prevent backup or release of wastewater or wastewater effluent into the structure(s) being served by the OWTS; and

   c) Not discharge wastewater or wastewater effluent onto the ground surface or into surface water, or in such a manner that groundwater may be adversely impacted.

2. All OWTS and the individual components shall meet the performance requirements for the specific site conditions and application for which they are approved.

3. All OWTS shall be operated in compliance with applicable performance requirements particular to the type of system, the facility served, and the site conditions.

B. CONVENTIONAL SYSTEMS

1. All septic tanks shall be structurally sound, watertight, provide clarified effluent, have adequate space available for sludge and scum storage, operate in such a manner as to not create odors or vector attraction, be properly vented, and have a functional baffle(s).

2. Dispersal systems shall: (a) have adequate dispersal capacity for the structures and/or uses served; (b) not result in seepage or saturated soil conditions within 12 inches of ground surface in or adjacent to the dispersal field; and (c) be free from soil erosion or instability.

3. Effluent shall not continuously pond at a level above the invert (bottom) of the perforated distribution pipe in the dispersal trench or serial distribution overflow line, as applicable.

4. All components of the OWTS shall be functional and in proper working order.

C. SUPPLEMENTAL TREATMENT

In addition to meeting criteria in A and B above, supplemental treatment systems shall comply with the following performance requirements.

1. **Effluent Quality**. Effluent produced by all supplemental treatment systems shall comply with the following minimum constituent limitations:

Constituent	(1) For Use with Trenches and At-grade Systems	(2) For Use with Drip Dispersal Systems	(3) Where Pathogen Removal Required*
Biochemical Oxygen Demand (BOD), mg/L	30	20	Per (1) or (2), as applicable
Total Suspended Solids (TSS), mg/L	30	20	Per (1) or (2), as applicable
Fecal Coliform, MPN/100 ml	N/A	N/A	200

*Due to proximity to public water supply well or surface water intake per SWRCB OWTS Policy and Section B11-67(i)(6), Santa Clara County Code; where applicable, additional requirements include: (a) minimum 3-ft separation to groundwater below dispersal field; and (b) minimum 12 inches of soil cover over dispersal piping.

2. **Sand Filters.** Sand filters shall:

    a. be operated to maintain uniform effluent distribution throughout the sand filter bed;

    b. not result in continuously ponded effluent on the distribution bed infiltrative surface;

    c. be operated and maintained to prevent channeling of flow, erosion of the sand media or other conditions that allow short-circuiting of effluent through the system;

    d. not result in leakage of effluent through the sand filter liner or supporting structure; and

    e. conform to applicable requirements for pressure distribution in D.1 below.

3. **Proprietary Treatment Units.** Proprietary treatment units shall comply with the following:

    a. The unit and its components shall be structurally sound, free from defects, be watertight, and not create odor or vector attraction nuisance.

    b. The unit shall be operated in accordance with the approved manufacturer and certification/listing organization standards.

D. ALTERNATIVE DISPERSAL SYSTEMS

In addition to the requirements in A and B above, alternative dispersal systems shall also comply with the following.

1. **Pressure Distribution Systems.**

    a) Pump tanks, risers and lids shall be structurally sound, watertight and store wastewater effluent in such a manner as to not create odors or vector attraction.

    b) Pumps, floats, alarms and associated controls shall be in good condition and operate in accordance with design specifications.

    c) Dispersal field and components shall:

        1) be operable and in good condition;

        2) maintain uniform distribution of effluent throughout the dispersal field;

        3) not result in continuously ponded effluent in the dispersal trench (or bed) to a level above the invert (bottom) of the distribution pipe; and

        4) in the case of pressure-dosed sand trenches, not result in continuously ponded effluent above the sand interface.

2. **Mound, At-Grade and Raised Sand Bed Systems**. Mound, at-grade and raised sand bed systems shall:

    a) not result in seepage or saturated soil conditions within 12 inches of ground surface anywhere along the perimeter toe or edge of the system;

b) be free from erosion, slumping or damage to the soil cover;

c) not result in continuously ponded effluent within the gravel distribution bed or in the sand fill (for mounds and raised sand bed systems); and

d) conform to applicable requirements for pressure distribution in D.1 above.

3. **Subsurface Drip Dispersal Systems**. Subsurface drip dispersal systems and components shall:

a) not result in seepage or saturated soil conditions above the depth of the dripline within or anywhere along the perimeter of the dripfield;

b) be free from erosion, slumping or other soil disturbance that threatens to expose or cause damage to drip dispersal tubing or appurtenances;

c) conform to applicable requirements for pressure distribution in D.1 above; and

d) be operated and maintained in accordance with manufacturer recommendations.

2. OWTS MONITORING REQUIREMENTS

A. GENERAL

A monitoring program will be established for each alternative OWTS as a condition of the operating permit at the time of permit issuance, and may be amended at the time of permit renewal. Said monitoring shall be performed to ensure that the alternative OWTS is functioning satisfactorily to protect water quality and public health and safety.

B. MONITORING ELEMENTS

The monitoring requirements will vary depending on the specific type of alternative system, typically including the following:

1. Recoding of wastewater flow based on water meter readings, pump event counter, elapsed time meter, in-line flow meter, or other approved methods;

2. Measurement and recording of water levels in inspection/monitoring wells in the dispersal field;

3. Inspection and observation of pump operation and other mechanical equipment;

4. Water quality of selected water samples taken from points in the treatment process, from groundwater monitoring wells, or from surface streams or drainages; typical water quality parameters include total and fecal coliform, nitrate, BOD, and suspended solids;

5. General review and inspection of treatment and dispersal area for evidence of seepage, effluent surfacing, erosion or other indicators of system malfunction; and

6. Other monitoring as recommended by the system designer or equipment manufacturer.

C. MONITORING FREQUENCY

The required frequency of monitoring for each installation will be established in the operation permit, generally in accordance with the following minimum schedule:

- Years 1 through 4 of operation: semi-annual monitoring
- Years 5 and beyond: annual monitoring

Monitoring frequency may be increased for larger flow OWTS (e.g., >2,500 gpd) or where warranted because of the complexity of the design or sensitive nature of the site. Monitoring frequency may be increased for any system if problems are experienced.

D. MONITORING RESPONSIBILITY

Monitoring of alternative OWTS shall be conducted by or under the supervision of one of the following:

1. Registered Civil Engineer;
2. Professional Geologist;
3. Registered Environmental Health Specialist; or
4. Other onsite wastewater maintenance provider registered with the Department of Environmental Health and meeting qualifications as established in this Manual. Registration shall entail: (a) documentation of required qualifications; (b) participation in annual training/review conducted by the director; and (c) payment of an annual fee established by the Board of Supervisors.

Additionally, the director may require third-party or County inspection and monitoring of any alternative OWTS where deemed necessary because of special circumstances, such as the complexity of the system or the sensitive nature of the site. The costs for such additional monitoring would be the responsibility of the owner.

E. REPORTING

Monitoring results shall be submitted to the director in accordance with reporting guidelines provided in this Manual and as specified in the operating permit. The monitoring report shall be signed by the party responsible for the monitoring. Notwithstanding formal monitoring reports, the director shall be notified immediately of any system problems observed during system inspection and monitoring that threaten public health or water quality.

F. POST-SEISMIC INSPECTIONS

In addition to regular inspection and monitoring activities, post-seismic inspection and evaluation of alternative OWTS located in high-risk seismic areas will be required in the event of an earthquake causing significant ground shaking in the region, as determined by the director in consultation with the County geologist. The director will be responsible for

issuing appropriate notices when such inspections are required; those conducting the inspections will be required to report the inspection results to the director. The purpose of such inspections will be to assess and document any damage to the OWTS and to implement corrective measures, as needed, in a timely manner. Post-seismic inspection shall be in accordance with the standard inspection requirements specified in the applicable operating permit for each OWTS, along with any additional requirements that may be prescribed by the director, in consultation with the County geologist, based on the intensity, location and other aspects of the particular seismic event.

G. DATA REVIEW

The director will, from time-to-time, compile and review monitoring and inspection results for alternative OWTS and will provide a summary of results to the San Francisco Bay and Central Coast Regional Water Quality Control Boards at least once every five (5) years. Based on this review, the director may require corrective action for specific properties or certain types of alternative OWTS, or general changes in monitoring and inspection requirements.

3. OWTS PERFORMANCE EVALUATION GUIDELINES

A. PURPOSE AND PERFORMANCE CRITERIA

Santa Clara County Code section B11-84 (Life extending construction) requires the completion of an OWTS inspection and performance evaluation in connection with certain types or level of changes or additions to an existing building served by an OWTS. The guidelines to be followed for such inspections are prescribed below. These guidelines may also be useful and employed for other circumstances, such as OWTS inspections in connection with property transfers, for lending institutions, etc.

The purpose of these inspections is to determine, on an individual basis, whether an existing OWTS is functional and meets minimum standards of performance established by the County of Santa Clara Department of Environmental Health (DEH). The following performance criteria are established as minimum requirements:

1. There is no surfacing effluent at any time.

2. The effluent is not discharged directly to groundwater; i.e., the dispersal trenches do not extend to or below the seasonal high groundwater level.

3. There is always positive flow to the dispersal field from the septic tank, with no backup to the tank or house plumbing during high groundwater conditions.

4. There is an adequately sized septic tank for the structure being served and it must be serviceable - e.g. access risers for maintenance. The septic tank must be water tight and constructed of approved materials.

5. There is no indication that the existing OWTS is adversely affecting any beneficial uses of surface water or groundwater.

The following sets forth procedures for conducting performance evaluations, to assure consistency and thoroughness in verifying the functioning status of existing OWTS.

B. INSPECTION RESPONSIBILITY

The inspections shall be carried out by any of the following:

1. Registered Civil Engineer

2. Professional Geologist (also meeting the requirements of 4a or 4b below)

3. Registered Environmental Health Specialist

4. Other onsite wastewater maintenance providers registered with DEH and having experience in the construction and/or operation of OWTS as evidenced by either of the following:

   (a) possession of a valid contractor's license (A, C-36 or C-42);

   (b) completion of an onsite wastewater certification training course by a third party entity, such as the California Onsite Wastewater Association (COWA), National Association of Waste Transporters (NAWT), National Sanitation Foundation (NSF), or other acceptable training program as determined by the director.

   Registration shall require completion of an application form, demonstrated minimum qualifications, participation in an annual review/ training session conducted by the director, and payment of an annual fee. Registration shall require annual renewal.

The individual conducting the field inspection work shall be qualified in the operation and maintenance of OWTS and trained specifically in the testing and inspection procedures outlined in this document.

C. BACKGROUND DATA

Prior to conducting the onsite performance inspection available background information pertaining to the property, structures and septic system should be compiled and reviewed. This should include permit information, site plan, "As Built" drawings of the OWTS, prior inspection results, etc.

The site plan should show the location of the septic tank and dispersal field, the locations of all buildings, decks, cutbanks, creeks, wells, reserve or failsafe area, direction and percentage of slope, or any other items which may affect the OWTS. The reserve dispersal field area(s) should be identified and evaluated for any conflicting encroachment by buildings or other site development.

D. INITIAL SITE RECONNAISSANCE

Initially, the inspector should walk the property to confirm the location of the septic tank, dispersal field, and other pertinent features of the system. In verifying the dispersal field location, the length of each line and the depth of the drainpipe (below ground surface) should

also be determined for comparison with observed groundwater conditions. This may require probing with a metal rod or actual excavation to locate the pipe.

Site reconnaissance should also include a check of setbacks between the existing dispersal field and expansion areas and any man-made structures, e.g., to confirm no building foundations recently added within or too close to the existing dispersal field or expansion areas.

The septic tank and dispersal field areas should be checked for any obvious signs of existing system problems such a surfacing effluent, odors, greywater bypasses, selective fertility (i.e., lush vegetation in the dispersal field area) or any other condition that may suggest an existing or impending problem. The inspector should determine if the system has dual dispersal fields and, if so, locate and check the diversion valve: (a) to see that it is functional; and (b) to determine which field is in service. All observations should be noted.

As part of the initial site reconnaissance a hand-augured boring (3-inch minimum) should also be made within or adjacent to the dispersal field for observation of soils and groundwater conditions. An initial reading (i.e., depth to groundwater from ground surface) should be taken when the boring is made. The boring should then be left open for the remainder of the performance inspection so that a final reading may be taken after the water level has been allowed to stabilize for about 1 hour. The boring should be backfilled before leaving the site. If a hand-auger boring is not feasible and the area is known or estimated to have high groundwater conditions, a motorized drill rig or excavator may be necessary.

E. SEPTIC TANK INSPECTION

After the initial site reconnaissance has been conducted, the detailed inspection of the system should commence.

1. **Access Risers**

   First, locate the septic tank and determine if permanent access risers have been installed on the septic tank. If the tank is equipped with risers, check their general condition. Ideally, the risers should be properly grouted or sealed to the top of the septic tank to prevent groundwater and/or surface water intrusion. The lids of the risers should also be properly sealed to prevent odors or the entry of insects, (e.g., flies, mosquitoes, etc.). Any observed defects in the access risers should be noted. If the tank lacks access risers, this information should be so noted; and the property owner should be provided information about access risers and advised to have them installed.

2. **Opening the Tank**

After inspecting the access risers the septic tank lids should be carefully removed. Care must be taken if gardens and shrubs are near to prevent damage and to disturb the yard area as little as possible. Concrete lids are heavy and may be "cemented" in place by silt. A steel bar or other suitable tool may be needed to assist in opening the lids. During the tank inspection process, personnel should wear protective boots and gloves (neoprene) to guard against infection from pathogenic organisms.

3. **Structural Condition**

Once the tank is open, the inspector should observe and probe the structural condition of the septic tank to check for any obvious signs of cracking or other structural defects in the tank.

A steel rod is used to probe the walls and bottom of the tank. Normally, the tank will not need to be pumped-out to perform this procedure. The inlet and outlet sanitary "tees" should also be inspected to assure that they are in satisfactory condition, properly positioned, and free of scum accumulation, rocks, root matter or other obstructions. Any problems should be noted and the inspector should assess whether or not additional tests or observations are necessary to verify the structural integrity of the septic tank.

4. **Liquid Level**

The liquid level in the tank should be measured with respect to the outlet pipe. In a properly functioning system, the level in the tank should be even with the invert (i.e., bottom) of the outlet pipe. If the liquid level is below the outlet pipe, the tank is probably leaking. If the liquid is above the pipe, the dispersal field is either flooded or the line to the field is obstructed or possibly set with an improper grade. The depth of water above or below the outlet pipe should be measured and noted.

5. **Tank Capacity**

The capacity of the septic tank (in gallons) should be determined from as-built plans or from measurements of the width, length and depth (below outlet pipe) of the tank. The capacity can then be compared with the established water use/wastewater flow rates for the property.

F. HYDRAULIC LOAD TEST

1. **General**

The inspector should then proceed with the hydraulic load test of the septic tank and dispersal field. The test, as described here, is conducted only for conventional gravity-fed dispersal trench systems, and does not apply if the system utilizes a pump. A separate test to be conducted for pump systems is described in the next section. The hydraulic load test is conducted by surcharging the septic tank with about 150 gallons of water over a 20 to 30-minute period, and then observing the rise of water in the tank and the subsequent draining process. Although not always conclusive, tracer dye, added to the tank, may be used to assist in investigating the possible contribution of effluent where surface wetness/seepage is suspected or observed. A garden hose discharging into the outlet side of the tank can be used to surcharge the tank. The hose outlet should remain at least 12 inches above the water level in the tank to prevent cross-contamination. Before starting the test, the flow rate from the hose should be determined (i.e., with 5-gallon bucket and stop watch) to properly gauge the amount of surcharge water added to the tank. Alternatively, a portable water meter can be installed between the house faucet and the hose to directly measure the water volume added.

2. **Test Procedures**

The step-by step procedures for the hydraulic load test are then as follows:

- Measure the location of the static water line in the septic tank (at the outlet side) as an initial reference point.

- Begin surcharging the tank with water to start the hydraulic load test.

- Observe any rise in the liquid level at the outlet pipe and measure the final level at the end of filling. Typically, the liquid level will rise from an inch or two, at which point the liquid level should stabilize for the reminder of filling, and then return to the initial level in a matter of minutes after filling is stopped.

- After the filling cycle is finished, the water level decline in the septic tank is observed until the initial level is reached; and the time to achieve this is recorded. If the initial level is not attained within 30 minutes, the test is terminated and the final water level is noted.

3. **System Rating**

   Based upon the water level readings during the test, a hydraulic performance rating is then assigned to the system in accordance with the guidelines provided in **Table 1**. It should be emphasized that these are guidelines only; and special circumstances may be cause for modifying the evaluation and rating of a particular system. A system receiving a "Failed" rating will likely require upgrading and/or additional investigation to determine the underlying cause(s).

G. FINAL LEACHFIELD INSPECTION

At the completion of the hydraulic load test, the dispersal field area and downslope areas should be checked again for indications of surfacing effluent, wetness, or odors. If any of these conditions exist as a result of the hydraulic load test, this would likely be considered evidence of system failure. If the field observations of wetness are not obviously the result of the hydraulic load test, further investigation may be necessary to determine if the dispersal field is failing and the cause of the failure. Additional investigative work may include water quality sampling (for total and fecal coliform, ammonia and nitrate) or dye testing. The cause of seepage could be related to gopher holes, site drainage or erosion problems, excessive water use or simply the age of the system.

TABLE 1
HYDRAULIC LOAD TEST RATING GUIDELINES

RATING	SEPTIC TANK RESPONSE TO HYDRAULIC LOADING
EXCELLENT	No noticeable rise in water level during filling.
SATISFACTORY	Maximum water level rise of about 2 inches, with decline to initial level within about 15 minutes after end of filling.
MARGINAL	Maximum water level rise of about 3 inches, with decline to initial level within about 30 minutes after end of filling.
POOR	Water level rise of more than 3 inches, with decline not reaching initial level within 30 minutes after end of filling.
FAILED	Water level rise of more than 3 inches, with no noticeable decline within 30 minutes after end of filling.

H. PUMP SYSTEMS

For systems equipped with an effluent pump, the following inspection procedures should be followed. This is in addition to inspection of the septic tank as described under "E. Septic Tank Inspection".

1. **General**

   Remove the pump access cover and basin lid, taking care that no soil or other material enters the basin. Note any signs of scum or sludge buildup, indications of previous pump failure (such as scum line above the high water alarm switch), or evidence of soil or roots entering the basin. Look for any signs of groundwater infiltration or surface water inflow to the basin. Also, inspect the float controls to see that they have free movement, and check the electrical junction box (if located in the basin or access riser) for any obvious signs of corrosion. Measure the dimensions of the pump basin and determine the amount of emergency storage capacity for comparison with the system design and County guidelines (1.5 times the daily sewage flow volume). If the water level in the basin is normal (i.e., between the high and low water controls) proceed with testing of the pump system.

2. **Pump Test**

   The pump test is conducted by adding sufficient water to the basin to activate the pump "ON" control, and observing the performance of the system over at least one pumping cycle. The total amount of water added should be about 150 gallons, to approximate the same hydraulic loading of the dispersal field as for gravity systems. Using a garden hose, the water may be added to the outlet side of the septic tank, or directly to the pump basin. If filling the basin directly, care should be taken to minimize turbulence and disturbance of sediment or sludge that may have collected in the basin. This can be best accomplished by directing the stream of water against the interior side of the chamber, rather than directly toward the bottom of the pump chamber.

   Observe the filling of the basin, and note and measure the point at which the pump is activated. Immediately stop the filling operation and observe the pumping cycle until the pump shuts off. While the pump is discharging, examine the piping system (where exposed) for any leaks. Even small leaks could be a forewarning of possible breaks in the pressure line at some point in the future; and these should be corrected as soon as possible. Note and measure the depth at which the pump shuts off, and calculate the volume of water between the "ON" and "OFF" measurements. Compare this dose with the design dose volume specified for the system. If the dose is too high or too low, float controls should be

readjusted to correct the dose. Any adjustments to the pump system should be done by a licensed and properly qualified contractor (not by the inspector, unless so qualified).

The pumping cycle (from "ON" to "OFF') level should be timed and the results recorded on the inspection form. Typically, if the pump is sized and operating properly, pump operation lasts about 1 to 5 minutes per dose. Pump cycles lasting longer than this may indicate a flooded dispersal field and/or pump or piping deficiencies. If this is observed, it should be noted and further investigation of the pump and dispersal field should be conducted to determine the specific cause. Dividing the pump volume (in gallons) by the pump cycle time (in minutes) will give an approximate pump discharge rate (in gpm). The observed pump rate should be checked against the design requirement for the system, and any discrepancy noted.

If during filling of the pump basin, the pump does not activate when the water reaches the high liquid level control (i.e., "ON" float), discontinue the pump test. This indicates a pump failure, defective float switch or wiring problems and will require the repair service of a competent contractor familiar with these types of systems. The pump system failure should be noted, communicated immediately to the resident/owner, and followed up with prompt corrective action.

3. **Dispersal Field Inspection**

At the completion of the pump test, the dispersal field area should be checked for signs of seepage in the same manner as previously described for gravity-fed systems following hydraulic loading.

4. **Audio and Visual Alarm**

Test the pump system audio and visual alarm to confirm that it can be heard at the house if mounted at the pump tank.

I. CLEAN UP

At the completion of the OWTS inspection and testing, replace all access lids and clean all tools before leaving the site. All tools and equipment that come into contact with wastewater should be cleaned and disinfected with a 1:5 bleach solution, then rinsed with fresh water; and all contaminated rinse water should be disposed of in the septic tank.

AFTER THE FLOOD:
Septic Tank Failure

During a flood or heavy rainstorm, excessive water can accumulate in leach field, leach line, or seepage pit areas causing the septic system to become sluggish, to back up, or to stop functioning when toilets are flushed or when other plumbing fixtures are used. ***If the septic system was operating properly prior to flooding, household waste water should not overflow onto the surface of the ground.***

If a sewage backup occurs:

When a sewage backup occurs in your residence or business, or when sewage overflows onto the surface of the ground, ***the following must be done until the flooding or ground saturation dissipates:***

- if there is a backup or visible overflow of sewage onto the ground, ***immediately stop all water usage***. Once the flooding and groundwater saturation diminishes, the septic system should again operate normally.
- if the system is slow or sluggish, ***but still operating***, minimize the amount of liquids and solids put into the system.

If you operate a food facility and experience a septic system failure: immediately contact the Department of Environmental Health at 408 918-3400 for cleanup instructions.

If the septic tank is above the flood point:

✓ The tank can be ***pumped*** by a permitted liquid waste hauler/pumper *(see Yellow Pages under "Septic Tanks and Systems").*

✓ The septic system can be used as a ***holding tank*** and will continue to accept household waste water and not overflow into leach lines unless the tank is full — most septic tanks will hold up to 1,000 gallons or more *(the amount of waste water per person per day from showers, dishwashing, laundry, etc., averages 50-100 gallons every 24 hours–a family of four would, therefore, produce 200-400 gallons each day).*

What if sewage has overflowed in my house?

- Wash all contaminated areas with detergent and water, then rinse with a sanitizing solution made from ***one tablespoon household bleach*** *(5.25% sodium hypochlorite)* ***to each gallon of water.*** ***(1 tablespoon = 3 teaspoons or ½ fluid ounce)***
- Be sure to clean and sanitize all contaminated areas — pay special attention to cooking utensils, work surfaces, children's toys, and surface areas such as floors and walls which family and pets may come in contact

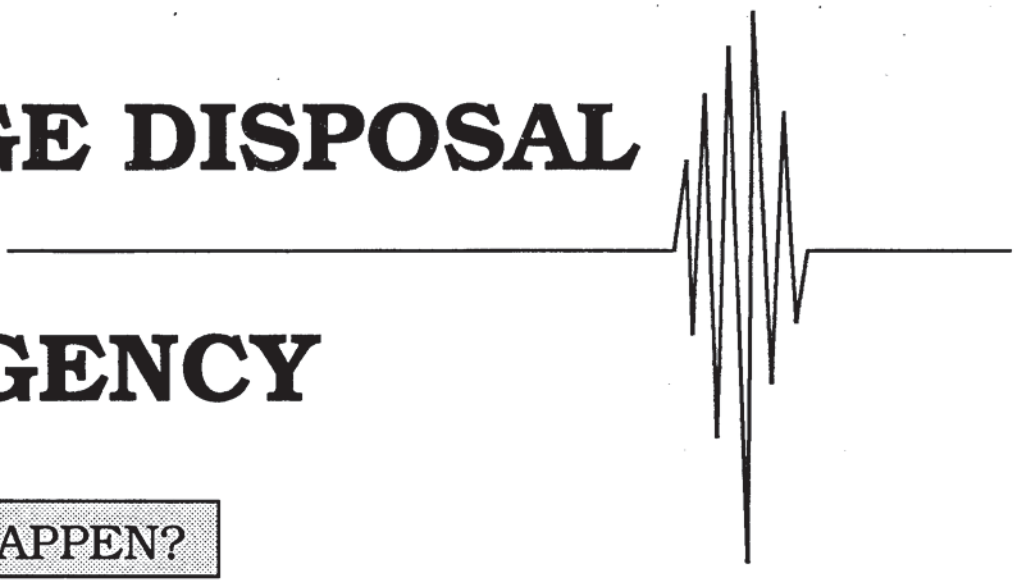
If the septic system is flooded or the ground is saturated so that waste water is not accepted:

✓ ***Pumping*** the tank ***will not be effective*** since the flooding/saturation will fill the tank as quickly as it is pumped.

✓ Use a ***portable chemical toilet*** — small units are available from camping, RV, and hardware stores. Larger chemical toilets, such as those used at construction sites and festivals may be rented; these units are recommended for apartments, condos, and office buildings *(see Yellow Pages under "Toilets-Portable").* The functioning toilet facilities of a motorhome, travel trailer, or a neighboring home can also be used.

✓ If portable chemical toilets are ***unavailable***, use large extra-strength trash bags *(double bagged)* as liners in toilets, or contain waste in water tight plastic or metal containers with tight fitting lids. Use household disinfectant *(such as bleach)* for odor control. Final disposal can be by sanitary sewer *(when notified by public officials)* or by burial once flood waters have receded.

SEWAGE DISPOSAL IN AN EMERGENCY



WHAT WILL HAPPEN?

In an emergency such as a large magnitude earthquake, sewer lines will probably be damaged and become inoperable. Sewage may back up and broken water lines may become contaminated by sewage.

WHAT SHOULD I DO?

If stoppage in sewer lines is suspected or obvious, discontinue discharge of wastewater in house or building sinks and drains, and stop flushing toilets. Avoid contact with any overflowing waste water or sewage.

IF I CAN'T FLUSH THE TOILET, WHAT CAN I USE?

- Large extra-strength trash bags (double bagged) may be placed in water tight plastic or metal containers, with tight fitting lids, or used as liners in toilets. Household disinfectant can be used for odor control. Final disposal can be by burying or by sanitary sewer when notified by public officials.
- A dug latrine or trench 2' to 3' deep can be used to bury human waste. Spread a thin layer of powdered lime or dry chlorine bleach and a layer of earth each time it is used.
- Portable camp toilets, RV toilets, porta-potties, etc. may also be used.
- High occupancy complexes such as apartments, condominiums, and office buildings should consider making arrangements to obtain commercial chemical toilets.

WHAT ABOUT A SEWAGE OVERFLOW IN MY HOUSE?

- Wash all contaminated areas with detergent and water, then rinse with a sanitizing solution of one tablespoon household bleach (5.25% sodium hypochlorite) to each gallon of water.
- Be sure to clean and sanitize all contaminated areas — pay special attention to cooking utensils, work surfaces, and other surface areas such as floors and walls with which your family and pets may come in contact.

County of Santa Clara
Department of Environmental Health
408-918-3400

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