California Regional Water Quality Control Board
Lahontan Region

Winston H. Hickox
Secretary for Environmental Protection

Internet Address: http://www.mscomm.com/~rwqcb6
2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150
Phone (530) 542-5400 • FAX (530) 544-2271

Gray Davis
Governor

January 6, 2000

Dennis Lampson
Mono County Sanitarian
P.O. Box 476
Bridgeport, CA 93517

Jim Goodloe
Alpine County Sanitarian
P.O. Box 206
Markleeville, CA 96120

TRANSMITTAL OF INFORMATION CONCERNING THE EFFECTS OF SEPTIC TANK ADDITIVES, RV HOLDING TANK DEODORIZERS, AND DEGREASERS AT SELF-SERVICE CAR WASH FACILITIES ON SEPTIC TANK DISCHARGES

I have enclosed information on the above-mentioned subject for your consideration in implementing septic system requirements under the Memorandum of Agreement between our respective agencies.

If you have any questions or wish to discuss the information, you may contact me at (530) 542-5430.

Sincerely,

Alan Miller

Alan Miller, P.E.
Chief, Carson/Walker Watersheds Unit

Enclosures

AEM/shT:septicinfo.doc
Septic System MOU General File, Alpine County, Mono County

STAFF REPORT

DATE: September 14, 1999

BY: Charles Springer

SUBJECT: Staff Report to the Board Regarding Septic Tank Additives, RV Holding Tank Deodorizers and Prevention of the Use of Degreasers at Self-Service Car Wash Facilities

Septic Tank Additives

Regional Board staff has received an alarming number of monitoring reports for mobile home and RV parks revealing excessive levels of total nitrogen (TKN) during the past five years since monitoring of wastewater discharges from septic tanks has been required. Upon investigation to determine the cause of these excessive amounts of TKN, one of the most common reasons discovered was the use of septic tank additives containing either sulfuric acid or caustic soda. Staff conducted field testing and sampling at some of these facilities and found pH levels less than 4.0 and higher than 12.0. Wastewater with a pH reading of less than 2.0 and higher than 12.0 is a hazardous waste. Staff has issued many enforcement orders requiring cleanup and resampling. Staff also informed the dischargers in noncompliance that use of chemical septic tank additives resulting in a hazardous waste is a violation of Prohibition A. 5 of Board Order No. 97-500, General Waste Discharge Requirements for Mobile Home and RV Parks. Staff also notified Elizabeth Janes of United States Environmental Protection Agency (USEPA) of the widespread use of these chemical additives. Staff also discovered that many of the local septic tank pumpers have been using these chemicals regularly. As a result of this information, USEPA sent a letter (draft copy attached) to Wayne Hoy of the Riverside County District Attorney's Office. Upon receipt, Mr. Hoy began a criminal investigation of companies using these chemicals. His office informed Vince Sternjacob of Riverside County Department of Environmental Health, Hazardous Materials Management Division of this problem. Mr. Sternjacob then issued a letter warning all Riverside County dischargers with general permits from our region, all intersted agencies and all companies involved in septic tank maintenance that use of chemical additives resulting in the discharge of pollutants is considered a felony. A copy of one of these letters is also attached.

RV Holding Tank Deodorizers

Board staff has also been concerned with the excessive amounts of TKN reported every year in the annual monitoring reports for most of the RV Parks. To determine the possible cause, staff conducted a survey of the use of deodorizers containing formaldehyde in RV holding tanks. Most recreational vehicle owners are using formaldehyde deodorizers since they are the least expensive. At a concentration exceeding 100 parts-per-billion (ppb) formaldehyde is known to destroy all the bacteria in a septic tank that digest the solid wastes. The tank then produces an effluent that contains a very high content of suspended solids resulting in an excessive amount of TKN in the leachate that infiltrates into ground water causing nitrate pollution. The average RV holding tank was found to have a concentration exceeding 3,000 ppb. California Proposition 65 Regulatory Level for formaldehyde is 20 ppb. After staff notified USEPA of these findings, USEPA issued an alert notice (also attached) to RV, boat and mobile home owners and park operators warning that discharge of formaldehyde into septic tank systems may clog the absorption field and cause pollution of ground water.

Prevention of Use of Degreasers at Self-Service Car Wash Facilities

In cooperation with USEPA, Regional Board staff recently conducted a survey of self-service car wash

facilities. Staff observed at nearly every facility an engine degreaser is available as part of the wash cycle, and signs are posted encouraging the use of degreasers for engine cleaning. Staff also sampled the wastewater from seepage pits at two of the facilities. The laboratory results revealed excessive levels of the following contaminants at both facilities: Methyl tert-Butyl Ether (MTBE), Dichloroethylene and Naphthalene. Since the general permit for car wash facilities was adopted in 1993, every year almost all of the facilities have reported in the annual monitoring reports excessive amounts of contaminants. Degreasers and cleaning solvents typically used in the process of cleaning engines contain volatile organic compounds (VOCs) that are considered hazardous waste at low concentrations. Most of these degreasers contain trichloroethylene (TCE) or perchloroethylene (PCE). Frequently excessive levels over 1,000 parts-per-billion (ppb) have been reported in the annual reports for these car wash facilities. The maximum contaminant level (MCL) for these contaminants listed in the California Drinking Water Standards is only 5 ppb. Both are on USEPA's Priority Pollutants List. Board staff and USEPA have recently sent letters to the owners of the self-service car wash facilities under this region's general permit warning of possible discharge of hazardous wastes resulting from allowing the use of degreasers for engine cleaning. Staff has requested that signs be posted at these facilities notifying the patrons that use of degreasers containing hazardous chemicals is a violation of regulations in the California Water Code and the California Code of Regulations. A copy of one of these letters is also attached.

Attachments: As noted above

COUNTY OF RIVERSIDE • HEALTH SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

August 25, 1999 **Certified Mail**

Riverside County Waste Mgmt. Div.- West Cnty
1995 Market St.
Riverside, CA 92501

RE: Treatment of Septic Systems with Chemical Additives

Dear Riverside Co. Waste Mgmt Div.,

This Department has received complaints regarding the use and sale by CHEMOTION INC. of illegal septic tank additives and absorption field declogging agents. The complaints allege that the use of these products is impairing septic treatment, particularly at facilities receiving waste from recreational vehicles and multiple mobile homes, and that sewage from impaired systems is being discharged to the subsurface with inadequate or no treatment, endangering water quality and public health.

A typical septic system contains two major components: a septic tank and an absorption field, also known as a drainfield or leachfield. Some systems utilize a septic tank connected to a drywell, also called a seepage pit. Treatment in the septic tank is dependent on natural processes. The purpose of the septic tank is to separate solids from liquid waste, and to promote breakdown of contaminants by microorganisms naturally present in wastewater. The absorption field also treats the wastewater through physical, biological and chemical processes in the soil.

The use of chemical additives, including extreme acids (such as sulfuric acid) and bases (such as caustic soda), impair or destroy the treatment capacity of septic tanks and soils below absorption fields. When chemicals are added to septic systems in amounts sufficient to liquefy sludge, any contaminants suspended in that sludge will be released to the environment. Beneficial bacteria in the septic system dies, disabling treatment. Soil bacteria below the absorption fields may die, decreasing treatment capacity and destroying soil structure.

The treatment of septic systems with corrosive additives as described above can result in the discharge of effluent with a pH of less than 2 or greater than 12.5. Such a discharge is a hazardous waste and a violation of section 25189.5 of the Health & Safety Code, a felony.

The use of such additives can also result in the discharge of effluent with levels of total dissolved solids, pH and nitrates that violate the Colorado River Basin Regional Water Quality Control Board, Order #97-500, "General Waste Discharge Requirements for On-Site Subsurface Wastewater Disposal Systems for Mobile Home and Recreational Vehicle Parks". The discharge of pollutants in violation of "Waste Discharge Requirements" is a violation of section 13387 of the Water Code, a felony.

If you are contacted by CHEMOTION, Inc. or are considering this type of treatment in your septic system, you are hereby directed to cease or avoid this cause of action with chemical additives, such as sulfuric acid or caustic soda, in a manner that may result in the discharge of hazardous waste or pollutants in violation of California Law. Your continued use of such additives will result in further enforcement action by this Department, including the referral of this information to the District Attorney's office with a request for prosecution.

If you have any questions regarding this matter, please contact me at (909) 358-5055.

Sincerely,

Vince Sternjacob
Supervisor, Hazardous Materials Management Division
Emergency Response / Investigation Section

cc: Riverside County District Attorney, Investigator Wayne P. Hoy
Colorado River Basin Region RWQCB, Charles Springer

United States Environmental Protection Agency

Underground Injection Control Program
Region 9 Ground Water Office (WTR-9)

EPA 909-F-99-002
July 1999

EPA

ALERT FOR RV, BOAT AND MOBILE HOME OWNERS AND PARK OPERATORS ABOUT **SAFE WASTEWATER DISPOSAL**

Mixing chemicals with waste in sewage holding tanks or septic systems may produce toxic fumes, corrode pipelines and tanks, and pollute soil and water when discharged.

If you spend any time living in a recreational vehicle (RV) or boat, you are probably aware of the problem of controlling odors from sewage holding tanks. There are a number of commercial products available to control those odors. Some of those products contain chemicals which may pollute water resources. If you use those chemicals and then empty your holding tank into a septic system (or other onsite wastewater treatment system) or dispose of holding tank waste illegally, you may be creating health and environmental hazards. These chemicals and their by-products may pass through onsite wastewater treatment systems, flowing to soil, ground water, and possibly nearby surface waters. They may also corrode treatment system parts, creating a safety hazard.

How septic systems work. A typical septic system contains two major components: a septic tank and an absorption field, also known as a drainfield or leachfield. These systems use natural processes to treat wastewater onsite, as opposed to offsite at a municipal wastewater treatment plant. The purpose of the septic tank is to separate solids from the liquid waste, and to promote partial breakdown of contaminants by microorganisms (bacteria) naturally present in wastewater. The absorption field also treats the wastewater through physical, biological and chemical processes in the soil.

When chemicals, such as formaldehyde, are added to septic systems, they can cause bacteria in the system to die. When this happens, the septic system cannot treat waste adequately. Solids that are allowed to pass from the septic tank, due to inadequate or incomplete treatment, may clog the absorption field. Furthermore, clogged systems may send inadequately or incompletely treated sewage to the surface, threatening the health of people or pets who come into contact with it. Or it may percolate to ground water, where the chemicals and untreated wastewater could contaminate nearby drinking water wells, rivers and streams.

If a sewage deodorizer, household cleaner, or other product contains a warning that it is **not safe for septic systems**, it may also be unsafe for disposal at a municipal wastewater treatment plant. Please ***read labels carefully*** to identify any hazardous ingredients.

The restoration of contaminated ground water is extremely costly and can take years. To prevent problems, RV and mobile home parks, as well as dump station operators, may take measures to control hazardous chemical disposal into their waste treatment systems. If they do not, and their system causes ground water contamination, they may be forced to **close the dump station or the park** until the problem can be corrected.

DO NOT USE CHEMICALS WHICH HARM WASTEWATER TREATMENT

Formaldehyde: Active ingredient in some deodorizers, also called Formalin. Formaldehyde is an EPA-recognized probable carcinogen (cancer-causing agent), and is a listed hazardous waste.

Para-dichlorobenzene: Known carcinogen. Common deodorizer in mothballs, urinal cakes and other products. Para-dichlorobenzene is a listed drinking water contaminant.

OTHER CHEMICALS HAZARDOUS TO SEPTIC TREATMENT include heavy metals (such as zinc), benzene, toluene, xylene, ethylene glycol (anti-freeze), methylene chloride, 1,1,1-trichloroethane (TCA), trichloroethylene (TCE), and perchloroethylene (PCE). **Strong acids and bases**, such as sulfuric acid or caustic soda, can destroy biological activity and damage tank walls and fixtures.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

June 10, 1999

Investigator Wayne Hoy
District Attorney's Office, Riverside County
4075 Main Street
Riverside, CA 92501

Dear Mr. Hoy:

Several months ago, EPA staff received ~~complaints~~ reports from staff from the Colorado River Basin Regional Water Quality Control Board (the Board) regarding the use and sale of ~~illegal~~ sewage holding tank deodorizers, septic tank additives, and absorption field declogging agents. The Board staff alleged that use of these products is impairing septic treatment, particularly at facilities receiving waste from recreational vehicles (Rvs) and multiple mobile homes. Sewage from impaired systems was (and is) being discharged to the subsurface with inadequate or no treatment, endangering water quality and public health.

A typical septic system contains two major components: a septic tank and an absorption field, also known as a drainfield or leachfield. Some systems utilize a septic tank connected to a drywell, also called a seepage pit. Treatment in the septic tank is dependent on natural processes. The purpose of the septic tank is to seperate solids from the liquid waste, and to promote breakdown of contaminants (primarily ammonia and pathogens) by microorganisms (bacteria) naturally present in wastewater. The absorption field also treats the wastewater through physical, biological and chemical processes in the soil.

EPA concurs with the Board's allegations that chemical additives, including extreme acids (such as sulfuric acid) and bases (such as caustic soda), impair, or in higher doses destroy, the treatment capacity of septic tanks and soils below absorption fields. When chemicals are added to septic systems in amounts sufficient to liquefy sludge, any contaminants suspended in that sludge will be released to the environment. Beneficial bacteria in the septic system die, disabling treatment (which may lead to more clogging sooner, requiring more maintenance.) Soil bacteria below the absorption fields may die, decreasing treatment capacity and destroying soil structure.

Disposal of chemicals to drywells, or any vertical pipe used to dispose of septic tank effluent, may contaminate ground water more rapidly than leachfields, particularly if the drywell or pipe disposes into or passes through water-bearing zones.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

adrian
Richardson

copy:
Robert
abdi
Jaime
Steve
Joe

JUN 04 1998

Charles Springer
Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

RECEIVED
JUN - 8 1998
REGION 7

Dear Mr. Springer:

I want to thank you for bringing up the compliance problem you are having with the Recreational Vehicle (RV) park septic system on Bureau of Land Management (BLM) lands. This is the site where RV residents' use of cleaning substances that include formaldehyde is destroying the biological activity of the septic system, resulting in very high releases of ammonia and nitrate from the system, in excess of their Waste Discharge Requirements.

Existing regulation at the state and federal level prohibits the use of chemical substances which will result in degradation of ground water resources, but clearly that is not adequate to prevent abuses like this one. Because treatment options are not readily available and could be very costly, prevention of failure through the prohibition of the use of chemical additives, such as formaldehyde, may be the best means of protecting ground water quality. We in early July for meetings and/or inspections

At least one county agency in the area confirms that this problem extends beyond the site you mentioned. Riverside County Environmental Health is considering use of its police powers under the California Health and Safety Code to confiscate septic tank additives from retail distributors. This would certainly help, but it does not fully resolve the problem if the RV park residents are obtaining the chemicals from their home states or en route to the park.

The U.S. EPA Region 9 Ground Water Office (EPA) would like to develop educational materials for the RV park users to alert them to the ramifications of septic system abuse. In order to do this, we need to get a better understanding of the practices leading to system failure. EPA has two options for getting this information: we could conduct inspections of the facilities where this is likely to be a problem, or we could recruit local or regional inspectors to create the message which we could then distribute.

If you think that EPA presence could motivate compliance on the part of some of the park owners and managers which you regulate or are regulated by the county, we will conduct inspections of some representative facilities. We would appreciate any recommendations you have regarding problem sites. We would also welcome the chance to conduct joint inspections of any of these facilities (i.e., an EPA/regional inspection team of two.)

If, however, there has been ample inspection of facilities like these, by the Regional Board or by county agencies, then perhaps it would be more efficient for you to help us create a pamphlet educating RV residents on the use and abuse of wastewater collection and treatment systems (and the ground water problems which may result from system abuse.) EPA would publish and distribute the pamphlet to park managers, chambers of commerce, National Park sites, operators of RV disposal sites, and to RV users journals and websites. It would include a recommendation that RV park managers prohibit the use or disposal of any chemicals which would cause them to be in violation of water quality law.

Further, large capacity septic systems, or any subsurface disposal system receiving chemical waste, are subject to the Underground Injection Control regulations per the Safe Drinking Water Act. If you do encounter a site which you know or suspect to be a source of ground water contamination, and local and state compliance efforts do not result in compliance, EPA will pursue compliance and/or take enforcement action at those sites, particularly if there may an underground source of drinking water at risk.

Whatever action we do take, I would like to keep the affected counties informed of EPA's intentions so that they may participate or assist at any point. They could provide referrals of problem sites, or review the draft pamphlet, or let us know of their actions to stop endangering discharges, so that I can at least accurately report on the range of responses regulators are taking. It may be worthwhile to convene a meeting of local regulators in the Colorado River Basin to discuss this problem and coordinate our response. EPA would be available in early July for meetings and/or inspections.

To discuss this further, please call me at (415) 744-1834, or send me an email: janes.elizabeth@epamail.epa.gov. I look forward to working with you to address this problem.

Sincerely,

Elizabeth Janes

Elizabeth Janes
California UIC Project Officer
Ground Water Office (WTR-9)

cc:
Thomas L. Wolf, Director, Imperial County DEHS, 939 Main Street, El Centro, CA 92243
Robert L. Kennedy, Director, Inyo County DEHS, P.O. Box 427, Independence, CA 93526
John M. Fanning, Director, Riverside Co. Env. Health, P.O. Box 7600 Riverside, CA 92513
Pamella Bennet, Director, San Bernardino Co. Env. Health, 385 N. Arrowhead, San Bernardino, CA 92415-0160
Dan Avera, Director, San Diego Co. DEH, P.O. Box 85261, San Diego, CA 92186-5261
Bob Morris, RWQCB9, 9771 Clairemont Mesa Blvd., Ste. A, San Diego, CA 92124
John Youngerman, SWRCB DWQ, 901 P Street, Sacramento, CA 95814

Winston H. Hickox
Secretary for Environmental Protection

Colorado River Basin Regi

Internet Address: http://www.swrcb.ca.gov
73-720 Fred Waring Drive, Suite 100, Palm Desert, California 92260
Phone (760) 346-7491 • FAX (760) 341-6820

Gray Davis
Governor

August 30, 1999

Kenneth Hoffman
211 Verde Sur
Palm Springs, CA 92262

RE: Notice of Possible Discharge of Hazardous or Designated Wastes from Self-Service Car Wash Wastewater Disposal Facilities under General Waste Discharge Requirements, Board Order No. 93-600

Regional Board staff recently conducted a survey of self-service car wash wastewater disposal facilities in cooperation with U. S. Environmental Protection Agency (USEPA). Staff observed that at your facility an engine degreaser is available as part of the wash cycle. Please note, degreasers and cleaning solvents that are typically used in the process of cleaning engines are known to contain volatile organic compounds (VOCs) that are considered hazardous waste. Standard oil and grease interceptors are not designed to remove VOCs, and therefore wastewater containing these hazardous contaminants may be discharging through your oil and grease interceptor/seepage pit system into ground water causing pollution.

Discharge Specification A.11 of Board Order No. 93-600 (enclosed) requires that the discharge of infiltrating wastewater shall not cause pollution of ground water as defined in Section 13050(l) of Division 7 of the California Water Code. Furthermore, discharge of chemicals containing hazardous waste as defined in the California Code of Regulations, Title 23, Chapter 15, Section 2521(a) and 2522(a) to any part of the wastewater disposal system is prohibited. We request that you notify all patrons of your car wash facilities by posting a sign at your facility that use (resulting in subsurface discharge) of any hazardous chemicals is a violation of these State of California regulations.

Should you have questions concerning the above, please call me at (760) 776-8940.

Charles Springer

CHARLES SPRINGER
Sanitary Engineering Associate

CS/jj

Enc.: As stated above

Cc: Adobe Road Car Wash, Twentynine Palms

File: 7A366666025, Adobe Road Car Wash, Board Order No. 93-60025

California Regional Water Quality Control Board
Colorado River Basin Region

Winston H. Hickox
Secretary for Environmental Protection

Internet Address: http://www.swrcb.ca.gov
73-720 Fred Waring Drive, Suite 100, Palm Desert, California 92260
Phone (760) 346-7491 • FAX (760) 341-6820

Gray Davis
Governor

March 4, 1999

Larry Bain, Director
Joshua Springs Mobile Home Park
18070 Langlois Road
Desert Hot Springs, CA 92241

RE: Inquiry on Maintenance of Septic Tank/Seepage Pit Systems for Compliance with General Waste Discharge Requirements, Board Order No. 97-50002, for Joshua Springs Mobile Home Park - Southeast of Desert Hot Springs

In response to your letter, dated March 2, 1999, requesting information on maintenance of septic tank seepage pit systems, Regional Board staff offers the following answers/comments to the six questions/statements presented:

1. Table I -2 is a guide for the correct size or capacity of a septic tank per the number of bedrooms or fixture units discharging sewage. Table I -3 is a guide to estimate the maximum flow rate for each type of facility listed. A typical mobile home has an average of eight fixture units and a maximum flow of 250 gallons-per-day of domestic sewage. Ten mobile homes with about 80 fixture units requires a 3,000 gallon tank eventhough the maximum discharge is 2,500 gallons-per-day.

2. Yes. If the scum layer in the inlet compartment of a septic tank is more than 10 inches, the sludge in the bottom portion of the tank is usually about twice as much or 20 inches. This means the tank is overloaded with sewage solids and the bacteria living in the water space between the layers are not able to digest the waste fast enough, and a rapid buildup of sewage solids occurs.

3. Unless all of the wastes including the solids (on the top and bottom) and the liquids are pumped when a septic tank is overloaded, the bacteria will not be able to regenerate for the digestion process to be established. The effluent from an overloaded tank contains an excessive content of total nitrogen that will eventually result in a clogged seepage pit that pollutes ground water.

4. The amount of sludge (including the scum layer) obviously accumulates rapidly when too many residents are discharging into an undersized septic tank. Please refer to the UPC Table I - 2. Discharge of nonbiodegradable wastes or certain wastes that are slow for bacteria to digest will cause a rapid buildup of sludge. Please see Page 9 (copy enclosed) from a pamphlet published by San Bernardino County Health Department for a list of household wastes that should not be discharged into a septic tank.

5. Please note, there is no comparison in the amount of discharge of non-biodegradeable wastes verses biodegradeable wastes. Wastes such as grease, chicken bones, coffee grounds, kleenex, etc. are essentially non-biodegradeable and simply do not breakdown fast enough for bacteria to digest, and therefore only accumulate in a septic tank.

6. As stated in Item No. 1, Table I -2 is a guide to the proper capacity of a septic tank. That is, for 30 mobile homes having about 240 fixture units, a 9,000 gallon tank would be adequate. Therefore, all of the tanks in the subject park appear to be undersized. Nevertheless, to compensate for this insufficient capacity, staff recommends pumping the tanks at least twice per year as noted.

Should you have questions concerning the above, please call me at (760) 776-8940.

CHARLES SPRINGER
Sanitary Engineering Associate

CS:hs

Enc.: As stated above

File: 7A331317001, Joshua Springs Mobile Home Park, Board Order No. 97-50002

Tips to avoid trouble

DON'T **wait until your septic system fails to have your tank pumped.** It is cheaper and easier to *prevent* system failure than to correct a failed system or to install a new system. Remember, once the leachline is clogged, cleaning the tank will do little good. You will need a new leaching area.

✶ ***DON'T*** **waste money on chemical, yeast, bacteria or enzyme additives.** These products usually don't prevent problems and could hurt your system in the long run, or even contaminate groundwater. Only regular tank pumpings by professional licensed septic tank pumpers can help.

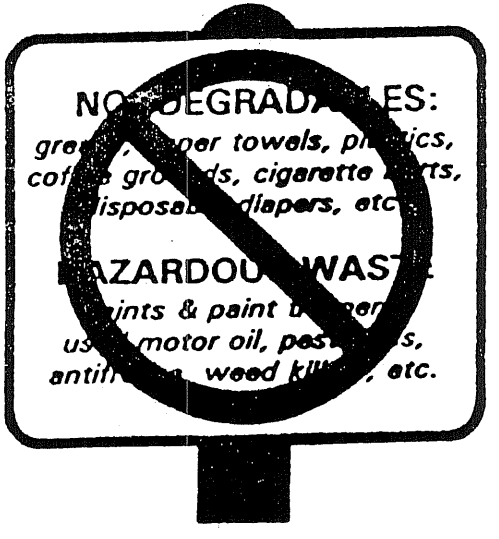
DON'T **destroy an old, failed leachline.** It may be used again by letting the old leachline *dry out*, or rest, for three to five years. DEHS recommends installing a diversion valve when your new leachline is built to change the flow of wastewater from the new line to the old line. After the three to five year waiting period, you can release the wastewater to the new line on even-numbered years and to the old line on odd-numbered years. If you let a leaching area rest every other year *and* have your septic tank pumped regularly, the leachline(s) should last the life of your home or building.

DON'T **allow anyone to drive, park or pave over any part of the system.** Traffic vibration or heavy weight could damage pipes and your seepage pits. The area over the leachline should be left undisturbed with only a mowed grass cover. Keep trees and shrubs away from your septic system area. Their roots could clog or damage your leachline(s).

✶ ***DON'T*** **use your toilet and sink as a trash can to dump non-degradables** ***(things that do not dissolve).*** Keep things like vegetable trimmings, cooking oils, greases, coffee grounds, cigarette butts, kleenex, paper towels, disposable diapers, and sanitary pads out of your septic tank. Use good quality white toilet paper that breaks up easily when wet. Dyes from colored toilet paper can hurt the bacteria.

✶ ***DON'T*** **contaminate the groundwater or harm your septic system by pouring harmful chemicals down the drain or toilet.** Large amounts of cleaning products can kill the good bacteria in your septic tank that treat wastewater. Read the instructions on the labels and use only as directed.

KEEP THESE MATERIALS
OUT OF YOUR SEPTIC SYSTEM!



Administration Office
County of Alpine

Jeanne Lear
Assistant to the Board

MEMO

TO: Harold J. Singer, Executive Officer
California Regional Water Quality Control Board
Lahontan Region
P.O. Box 9428
South Lake Tahoe, CA 95731-2428

FROM: Jeanne Lear, Administrative Coordinator

DATE: April 2, 1991

RE: Amendment to Septic System Memorandum of Understanding

Pursuant to your request, enclosed please find one original signature page to the requested amendment which was approved by the Board of Supervisors this date.

If you have any questions, please feel free to call.

The amendment of Item [redacted]. G., changing the word "after" [redacted] to "before" in the Septic System Memorandum of Understanding with the Lahontan Regional Water Quality Control Board is executed on the date of the last signature below, by the following authorized representatives of the parties.

C Ann Wade

C. Ann Wade, Chair,
Board of Supervisors,
Alpine County

April 2, 1991
Date

Harold J Singer

Harold J. Singer
Executive Officer

Mar 11, 1991
Date

STATE OF CALIFORNIA

Pete Wilson, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LAHONTAN REGION
2092 LAKE TAHOE BOULEVARD
O. BOX 9428
SOUTH LAKE TAHOE, CALIFORNIA 95731-2428
(916) 544-3481

March 11, 1991

Alpine County Health Department
P.O. Box 306
Markleeville, CA 96120

Dear Sir/Madam:

AMENDED SEPTIC SYSTEM MEMORANDUM OF UNDERSTANDING

It has come to our attention that an error was made in the original wording of the above-referenced Memorandum of Understanding (MOU) between the Regional Board and Alpine County. Item II. G. of the MOU should have had the word "before" rather than "after" so that the MOU would accurately reflect the intentions of the Regional Board. Pursuant to item XI of the MOU, we propose that this change be made with the mutual agreement of both parties. If you concur, please substitute the enclosed page containing this correction with the corresponding page in your copy of the agreement.

Also, please have one of the enclosed forms signed and returned to this office within 60 days of receipt. We thank you for your prompt attention to this matter. If you have any questions or comments, please contact David Himebaugh or Dr. Ranjit Gill.

Sincerely,

Harold J. Singer

HAROLD J. SINGER
EXECUTIVE OFFICER

Enclosure

cc: septic system mailing list

sh

3. The development is non-residential or of mixed occupancy and the wastewater discharge does not exceed 500 gal/acre/day as determined using Table I-2 and I-3 in the Uniform Plumbing Code and occupant loads as determined by Table 33A in the Uniform Building Code; or
4. The project is in a class that has been designated exempt from Regional Board review in writing under signature of the Regional Board Executive Officer; or
5. The project; development has been granted an exemption by the Board and complies with the County's standards for use of septic tank wastewater disposal systems.

II. The County shall not issue construction permits without Regional Board approval for the following projects:

A. Projects that involved domestic wastewater discharge from commercial or industrial development in excess of 500/gal/acre/day as determined by the Board; or
B. Projects that will have industrial wastewater discharge; or
C. Projects that exceed the two EDU/acre density requirement for septic tank use (except in exempted areas); or
D. Projects that do not comply with the County's standards for use of septic tank wastewater disposal systems; or
E. Projects located within existing waste discharge prohibition areas (unless in areas exempted in I.B. above); or
F. Projects utilizing package wastewater treatment plants with on-site disposal; or
G. Projects that consist of a single-family home on individual lots that were created out of a subdivision before June 16, 1988, when the lot has a net area of less than 15,000 square feet.

III. The County, at its discretion, may defer consideration of projects, based on water quality impacts, to the Board for any projects even if it appears that compliance with Section I. of this Memorandum of Understanding has been achieved.

The amendment of Item [redacted] G., changing the word "after" [redacted] "before" in the Septic System Memorandum of Understanding with the Lahontan Regional Water Quality Control Board is executed on the date of the last signature below, by the following authorized representatives of the parties.

_____

_____
Date

Harold J. Singer
Executive Officer

Mar 11, 1991
Date

STATE OF CALIFORNIA

GEORGE DEUKMEJIAN, *Governor*

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LAHONTAN REGION
2092 LAKE TAHOE BOULEVARD
P.O. BOX 9428
SOUTH LAKE TAHOE, CALIFORNIA 95731-2428
(916) 544-3481

July 2, 1990

Barbara K. Jones
Deputy County Clerk
Alpine County
P.O. Box 158
Markleeville, CA 96120

Dear Ms. Jones:

MEMORANDUM OF UNDERSTANDING BETWEEN THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD-LAHONTAN REGION AND THE COUNTY OF ALPINE

On May 23, 1990, we received your letter and Memorandum of Understanding (MOU) between the County of Alpine and the California Regional Water Quality Control Board-Lahontan Region regarding the septic system permitting process. We appreciate the cooperation extended from the County of Alpine by entering into this MOU.

A copy of the signed MOU is enclosed. Please note that we have changed our office address on the final page of the MOU. If you have any questions regarding this matter, please contact Cindy Rofer or David Himebaugh at this office.

Sincerely,

Harold J. Singer

HAROLD J. SINGER
EXECUTIVE OFFICER

Enclosure (1)

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THE BOARD OF SUPERVISORS

ALPINE COUNTY, CALIFORNIA

P. O. BOX 158
MARKLEEVILLE, CALIFORNIA 96120

TELEPHONE
916—694-2281

April 30, 1990

California Regional Water Quality
Control Board
Lahontan Region
15371 Bonanza Road
Victorville, California 92392-2494

Re: Memorandum of Understanding
Between Lahontan Board and Alpine County

Gentlemen:

Enclosed please find two original copies of the Memorandum of Understanding between the California Water Quality Control Board Lahontan Region and Alpine County (Alpine County Contract number CC89-46). The MOU was approved by the Board of Supervisors at their regular meeting of November 21, 1989.

After agreements have been fully executed by your executive officer, please return one original to this office for proper filing.

Thank you.

Sincerely,

Barbara K Jones

Barbara K. Jones
Deputy County Clerk

/bkj
Enclosures

CONTRACT NO.: CC89-46
Approved: 11/21/89

Memorandum of Understanding
Between the
California Water Quality Control Board
Lahontan Region
and
Alpine County

This Memorandum of Understanding is entered into by and between the California Regional Water Quality Control Board, Lahontan Region (hereinafter Board), and the County of Alpine (hereinafter County). Its purpose is to expedite the overall review process for proposed developments and to provide a clear operating policy between the Board and the County on the implementation of the Board's guidelines for wastewater disposal from land developments.

Section 13260 of the California Water Code requires any person discharging waste or proposing to discharge waste that may affect waters of the State, except to a community sewer system, to file a report of waste discharge with the regional board of that region. Implementation of this code section has included regulation of individual waste systems wherever warranted.

In 1973 and again in 1974, the Board adopted guidelines to (1) establish the conditions under which waivers of the filing requirement would be in the public interest (pursuant of California Water Code Section 13269); (2) establish minimum criteria for the use of individual waste water disposal systems; and (3) prevent pollution or nuisance cased by the discharges from waste water disposal systems.

On January 14, 1988, the Regional Board adopted revisions to the "Guidelines for Waste Disposal from Land Developments". In conjunction with these revisions, the Regional Board also adopted the "Regional Board Guidelines for Implementation of Criteria for Individual Waste Disposal Systems". These implementation guidelines list general and specific provisions in considering exemptions to the maximum density criteria two equivalent dwelling units per acre (EDUs) for individual waste disposal system in both new and existing land developments.

This requirement also applies to domestic wastewater discharges from new commercial and industrial development with wastewater discharge volumes exceeding two EDU, per acre density (500 gal/day/acre based on 250 gal/day/EDUs). On June 16, 1988, the State Water Resources Control Board approved the revisions. For purposes of this Memorandum of Understanding, gross acreage is that area which encompasses the entire net lot area plus any underlying fee title lands within the adjacent right-of-ways, if any.

Inasmuch as the County has incorporated into its review criteria the "Minimum Criteria for Subsurface Discharge of Sewage" contained in the Board's guidelines, and has consistently applied these criteria in its review of proposed developments, it is not against the public interest for the Board to reduce its oversight work by eliminating redundant review of proposed projects.

It is agreed that:

I. The County is authorized to issue construction permits for projects that utilize individual subsurface waste water disposal systems without Regional Board approval under the following conditions:

   A. All of the Following:
      1. The on-site soil characteristics comply with the established "Minimum Criteria for Individual Waste Disposal Systems" as adopted by Resolution 6-88-15; and
      2. The discharge is composed of <u>domestic</u> wastewater only; and

   B. One of the Following:
      1. The development consists of single-family residences or multiple-family residences, the density does not exceed two equivalent dwelling units (EDU) per acre (500 gal/acre/day wastewater flow), or
      2. The development consists only of a single-family home on an individual lot which has a minimum net area of 15,000 square feet; or

3. The development is non-residential or of mixed occupancy and the wastewater discharge does not exceed 500 gal/acre/day as determined using Table I-2 and I-3 in the Uniform Plumbing Code and occupant loads as determined by Table 33A in the Uniform Building Code; or
4. The project is in a class that has been designated exempt from Regional Board review in writing under signature of the Regional Board Executive Officer; or
5. The project; development has bee granted an exemption by the Board and complies with the County's standards for use of septic tank wastewater disposal systems.

II. The County shall not issue construction permits without Regional Board approval for the following projects:

A. Projects that involved domestic wastewater discharge from commercial or industrial development in excess of 500/gal/acre/day as determined by the Board; or
B. Projects that will have industrial wastewater discharge; or
C. Projects that exceed the two EDU/acre density requirement for septic tank use (except in exempted areas); or
D. Projects that do not comply with the County's standards for use of septic tank wastewater disposal systems; or
E. Projects located within existing waste discharge prohibition areas (unless in areas exempted in I. B. above); or
F. Projects utilizing package wastewater treatment plants with on-site disposal; or
G. Projects that consist of a single-family home on individual lots that were created out of a subdivision after June 16, 1988, when the lot has a net area of less than 15,000 square feet.

III. The County, at its discretion, may defer consideration of projects, based on water quality impacts, to the Board for any projects even if it appears that compliance with Section I. of this Memorandum of Understanding has been achieved.

IV. The County, at its discretion, may require the formation of a public entity (as defined in the State of California Government Code Section 53090 et seq.) to maintain septic systems in residential developments of one hundred (100) lots or more.

V. The Board may review permits issued by the County at its discretion. Copies of permits will be made available upon request for review in County offices.

VI. The Board, upon reviewing permits issued by the County, may require proposals be submitted and/or waste discharge requirements (permits) be obtained for all other types of waste discharges such as storm water runoff and solid waste leachate.

VII. The County, on its own initiative or at the request of an applicant and upon providing information specified in the implementation guidelines, may apply for individual, large scale, or area-wide exemptions.

VIII. The applicant, for projects found in compliance with the Board's guidelines, will be notified of acceptance by issuance of a County building permit or by issuance of a Board clearance letter.

IX. The County shall maintain a record of all documents submitted and reviewed under this Memorandum of Understanding.

X. This Memorandum of Understanding shall be effective immediately after execution of this agreement and shall remain in full force until terminated by a prior thirty (30) day written notice by either party.

XI. This Memorandum of Understanding may be amended as mutually agreed to by the County and the Regional Board.

XII. All notices and communications under this Memorandum of Understanding shall be addressed to the following:

Alpine County Health Dept.
P.O. Box 306
Markleeville, CA 96120

California Regional Water Quality
Control Board-Lahontan Region

P.O. Box 9428
South Lake Tahoe, CA 95731-2428

This Memorandum of Understanding is executed on the date of the most recent signature below, by the following authorized representative of the parties.

Alpine County

Date: 5-1-90

Executive Officer

Date: July 2, 1990

CalEPA

Lahontan
Regional Water
Quality Control
Board

South Lake Tahoe
Office

2501 Lake Tahoe Blvd.
South Lake Tahoe, CA
96150
(530) 542-5400
FAX (530) 544-2271

READ FILE

Pete Wilson
Governor

February 6, 1998

Dr. Richard Botto
Alpine County Health Dept.
PO Box 545
Markleeville, CA 96120

Dear Dr. Botto:

PROPOSED DELEGATION TO LOCAL GOVERNMENTS OF ADDITIONAL RESPONSIBILITY FOR IMPLEMENTATION OF REGIONAL BOARD SEPTIC SYSTEM CRITERIA

The Regional Board has expressed its desire to delegate approvals for all domestic septic system discharges (including alternative systems and exemptions from the criteria) to local governments. This delegation would not change the Board's existing septic system prohibitions, or septic system location and density criteria, and local governments would be responsible for ensuring compliance with all applicable Regional Board regulations. The Regional Board would still retain responsibility for reviewing discharges of industrial waste to septic systems.

The regulation of septic systems in Alpine County is based on County regulations and siting and density criteria contained in *the Water Quality Control Plan for the Lahontan Region* (Basin Plan) (excerpts enclosed). Through a Memorandum of Understanding (MOU), the County issues septic tank permits on behalf of the Regional Board. However, the Regional Board has retained authority to approve of alternative systems and exemptions to the basic criteria. Since this procedure was implemented in 1988, it is evident to me that County staff have successfully and skillfully implemented the program.

I am therefore delegating additional authority to Alpine County and am proposing to revise our MOU such that it would delegate complete authority for approvals of individual domestic waste disposal systems to Alpine County. The following describes what I intend to delegate immediately to Alpine County, and what I plan to delegate in the near future once we revise our MOU with you.

Delegation -- Exemptions for Alternative Systems

Pursuant to the conditions in the section titled "*Permitting Authority*" on page 4.4 - 20 of the Basin Plan, I am immediately delegating authority to Alpine County to approve of alternative systems. My expectation is that the County will use the "Criteria for Alternative Systems" on page 4.4 - 19 and 20 of the Basin Plan.

Proposed Delegation -- Exemptions to Density and Siting Criteria

Pursuant to Sections 3 and 4 in the section titled "*Implementation of Criteria for Individual Waste Disposal Systems*" on page 4.4 - 18 of the Basin Plan, I am prepared to delegate authority in the near future to Alpine County to approve of exemptions to the siting criteria and, in many circumstances, the density criteria. We are drafting a revised MOU to implement this delegation. You should expect to receive the draft of the revised MOU by February 17, 1998. This new MOU would replace the existing MOU with Alpine County. The basis for such delegation would be the commitment from you that Alpine County would use the Basin Plan criteria in evaluating exemption requests.

Please contact me at (530) 542-5412 if you have any comments or questions on this matter.

Sincerely,

Harold J. Singer

HAROLD J. SINGER
EXECUTIVE OFFICER

Enclosures

cc: Regional Board Members w/enclosures
Alpine County Planning Dept./Dick Bobertz

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monitoring wells were installed. Waste discharge requirements revised in 1991 required additional treatment to meet secondary treatment standards and periodic ground water monitoring to evaluate the effects of the discharges.

Markleeville Public Utility District

Wastewater from the community of Markleeville is treated by the District's facility consisting of a mechanically aerated oxidation pond and two evaporation-percolation ponds. The system is designed to treat 0.04 mgd. All of the ponds are currently unlined and the subsurface flow migrates towards Markleeville Creek, located approximately 100 feet south of the ponds. There are numerous seeps at the toe of the slope below the ponds. It is unknown if the seeps are natural or are a result of the ponds. Regional Board staff is investigating potential impacts to water quality. Future increases in capacity may be handled by reserve capacity available in Harvey Place Reservoir which is currently used by South Tahoe Public Utility District (see Community Facility discussion for STPUD).

Other Small Community Systems

The Lahontan Basin has several small community wastewater treatment systems. These systems include eight oxidation pond systems located in Fort Bidwell, northern Eagle Lake (Stones-Bengard Sanitary Cooperative), southern Eagle Lake (USFS), Eagle Lake Ranger District, Leavitt Lake, Sierra Army Depot, Floriston, and the Woodfords Indian Community. Many other small communities and facilities discharge to community leachfield systems. Nine such facilities in the North Lahontan Basin are regulated by waste discharge requirements. In the South Lahontan Basin, there are many more small communities and individual industrial, commercial and recreational facilities that utilize separate wastewater treatment and disposal systems. Individual systems range from community leachfields to evaporation-percolation ponds to package activated sludge treatment plants. Approximately sixty-four such systems are regulated under waste discharge requirements.

Other potential small community systems considered in the 1975 North Lahontan Basin Plan include systems for Cedarville, Johnstonville/Janesville, Lake Forest Estates, Walker, and Twin Lakes. Other potential small community systems considered in the 1975 South Lahontan Basin Plan included systems for Randsburg, Johannesburg and Red Mountain, Little Rock, Pearblossom, Leona Valley, portions of the San Gabriel Mountains, Wrightwood, Hinkley, and Daggett. These systems have not been constructed. The need for community systems in these areas will be evaluated on a case-by-case basis if problems with current septic systems become apparent.

Individual Wastewater Treatment Systems (Septic Systems)

The following principles and policies will be applied by the Regional Board in review of water quality factors relating to land developments and waste disposal from individual waste disposal systems:

1. The following criteria will be applied as the minimum to ensure continued adequate protection of water quality, protection of present and future beneficial uses, and prevention of pollution, contamination and nuisance conditions. The Regional Board will prohibit the discharge from individual disposal systems which do not conform to these criteria.

2. These criteria prescribe minimum conditions for waste disposal from individual on-site systems and do not preclude the establishment of more stringent criteria by local agencies or the Regional Board. The Regional Board does not intend to preempt the authority of local agencies and will support local agencies to the fullest extent possible, particularly in the implementation of more stringent regulations.

3. Detailed procedures to implement these criteria and to process exemptions to these criteria are included in "Regional Board Guidelines for Implementation of Criteria for Individual Waste Disposal Systems" (see Appendix C).

4. The criteria contained herein are applicable to the entire Lahontan Region and pertain to any and all proposed building that involves wastewater discharges to other than a community sewer system. The criteria apply to: (1) proposed building on lots within new subdivisions or parcels, and (2) proposed building on existing

subdivided lots or parcels, **and** (3) proposed subdivisions. The criteria do not apply to: (1) existing individual waste disposal systems, or (2) projects which have final building permits prior to June 16, 1988, unless evidence exists which necessitates retrofit of septic systems to conform with current criteria. The "Regional Board Guidelines for Implementation of Criteria for Individual Waste Disposal Systems" specifies separate exemption procedures for existing developments and for new developments. Existing development includes projects for which **final** development plans, such as a final tract map, were approved by local agencies **prior** to June 16, 1988. New development includes subdivisions or individual parcels which **do not** have final development plans approved by local agencies **prior** to June 16, 1988.

5. These criteria do not apply to projects within septic system prohibition areas where the criteria are more stringent (for prohibitions, see Section 4.1 of this Chapter); and these criteria will preempt less stringent criteria in septic system prohibition areas.

6. Where community sewer systems are available, the Board will encourage connection to the sewer system in lieu of use of individual disposal systems.

Criteria for Individual Waste Disposal Systems

1. *Maximum Density*

Individual waste disposal systems associated with new developments which have a gross density greater than two (2) single family equivalent dwelling units per acre will be required to have secondary-level treatment of wastewater. Equivalent dwelling units (EDUs) are defined as a unit of measure used for sizing a development based on the amount of waste generated from that development; the value used in implementation of these criteria is 250 gallons per day per EDU. For the purposes of these criteria, the discharge from a single family dwelling is equal to one EDU. Senior citizen dwelling units and second units as defined in Government Code Sections 65852.1 and 65852.2 will not be considered as additional dwelling units. In addition to residential developments, this secondary level treatment policy also applies to wastewater discharges from commercial, industrial, recreational and all other developments with wastewater discharge volumes exceeding two EDU per acre density (500/gal/day/acre based on 250 gal/day/EDU). Use of new septic systems is permitted in existing developments with lot sizes having a net area greater than or equal to 15,000 square feet. The net area is that contained within the boundaries as set forth in the legal lot description.

2. *Minimum Distances*

The Regional Board has established the minimum distances (see Table 4.4-1 entitled, "Minimum Distances For Siting Individual Waste Disposal Systems") necessary to provide protection to water quality and/or public health. Local hydrogeological conditions may necessitate greater separation of the sewage disposal system from a well or watercourse for protection of beneficial uses (e.g., drinking supply and water contact recreation).

3. *Additional Minimum Criteria*

a. The percolation rate in the disposal area shall not be slower than 60 minutes per inch if the discharge is to a leachfield or 30 minutes per inch if discharge is to a seepage pit. If percolation rates are faster than 5 minutes per inch, then the soil for a total thickness of five feet below the bottom of the leaching trench shall contain at least 15% of material passing the No. 200 U.S. Standard Sieve and less than one-fourth of the representative soil cross-section shall be occupied by stones larger than 6 inches in diameter. Where the percolation rates are faster than 5 minutes per inch and the above requirement is not met, the minimum distance to ground water between the bottom of the disposal facilities and the anticipated high ground water shall be 40 feet. (The percolation rates shall be determined in accordance with procedures prescribed by the appropriate local public health agency).

b. Clay, bedrock, other material impervious to the passage of water, or fractured bedrock, shall not be less than 5 feet below the bottom of the leaching trench or less than 10 feet below the bottom of the seepage pit. Impervious is defined

for design purposes as a stratum with percolation times of greater than 120 minutes per inch.

c. Depth to anticipated high ground water below the bottom of the leaching trench shall not be less than 5 feet. Depth to anticipated high ground water below the bottom of the seepage pit shall not be less than 10 feet. Greater depths are required if native material does not provide adequate filtration.

d. Ground slope in the disposal area shall not be greater than 30 percent.

e. Minimum criteria specified above must be met within the area of the proposed system and within the 100% expansion area for the proposed system.

Exemptions to the Criteria for Individual Waste Disposal Systems

In certain locations and under special circumstances, the Board or its Executive Officer may waive individual criteria.

1. Waiver of one or more individual criteria may occur if:

   a. The area beneath the proposed septic system discharge has no significant amount of ground water having present or future beneficial uses; or

   b. It can be proven that no pollution, nuisance or unreasonable degradation of either surface or ground waters will occur as a result of the proposed septic system density when considered individually or cumulatively with other discharges in the area; or

   c. Construction of a community collection, treatment, and disposal system is imminent. Short-term, interim use of individual waste disposal systems may be allowed.

Implementation of Criteria for Individual Waste Disposal Systems

1. The Regional Board and the local agencies have adopted, through Memoranda of Understanding, criteria which are compatible with or more stringent than these criteria.

2. The Memoranda of Understanding include the procedures of the review and processing of applications for proposed discharge of wastewater from land developments which only discharge **domestic** waste, including single-family-unit residential, multi-unit residential, commercial, industrial and recreational developments. The Memoranda of Understanding include provisions for Regional Board review and processing of specific application (e.g., for industrial waste discharges).

3. For those local agencies which have adopted these or more stringent criteria, land developments which only discharge **domestic** waste, including single-family-unit residential, multi-unit residential, commercial, industrial and recreational developments, will be permitted entirely by the local agency. (However, the Regional Board reserves the authority to take action, if necessary, as described in item 6 below.)

4. Whenever the proposed development will not meet the minimum criteria and no Memorandum of Understanding or other equivalent document exists between the Regional Board and the local agency, applications for all projects shall be transmitted to the Regional Board along with a complete report of waste discharge and a filing fee.

5. The Regional Board will review, on a project-by-project basis, proposals for commercial, industrial, recreational and all other types of developments which discharge **industrial** waste. If required, the report of waste discharge will contain information on estimated wastewater flows, types of wastes, and occupancy rates which will enable the Regional Board to evaluate the discharge in terms of EDUs.

6. In any case, the Regional Board will prohibit the discharge of wastes from land developments which will result in violation of water quality objectives, will impair present or future beneficial uses of water, or will cause pollution, nuisance, or contamination, or will unreasonably degrade quality of any waters of the State.

Implementation for Other Types of Waste Disposal from Land Developments

1. Severe impact on water quality can result from failure to implement adequate measures to control storm drainage and erosion. Land developers must provide plans for the control of such runoff from initial construction up to the complete build-out of the development. (See "Land Development" section.)

2. The disposal of solid waste can have adverse impacts on water quality and public health. Land developers must submit a plan which conforms to the regional or county master plan and contains adequate provisions for solid waste disposal for complete build-out of the development.

3. The disposal of septic tank sludge is an important part of any area-wide master plan for waste disposal. Land developers must submit a plan which conforms to the regional or county master plan and contains adequate provisions for septic tank sludge disposal for complete build-out of the development.

4. The responsibility for the timely submittal of information necessary for the Board to determine compliance with these guidelines rests with persons submitting proposals for development or discharge. The Porter-Cologne Water Quality Control Act provides that no person shall initiate discharges of waste prior to filing a report of waste discharge and prior to (1) issuance of waste discharge requirements, (2) the expiration of 120 days after submittal of an adequate report of waste discharge, or (3) the issuance of a waiver by the Regional Board.

Alternative Individual Waste Disposal Systems

In areas where conditions do not support the use of conventional individual subsurface waste disposal systems (e.g., septic systems), the use of engineered alternative systems can be considered. Alternative waste disposal systems include, but are not limited to, mound systems, evapotranspiration beds, sand filters (intermittent and/or recirculating), and lined evaporation ponds. The Regional Board supports the use of engineered alternative systems for waste disposal as a remedy for otherwise unsuitable existing lots. However, the Regional Board discourages the use of engineered alternative systems for new construction, lots, or subdivisions.

Several factors the Local Health Officer and/or the Regional Board staff will consider when evaluating a proposal for the use of an alternative system include, but are not limited to:

1. **size of parcel**
2. **density of surrounding development**
3. **depth to ground water and bedrock**
4. **depth of soils** suitable for waste disposal as classified under the USDA classification system
5. **climate**
6. **access**
   (a) for maintenance and pumping year-round
   (b) control to prevent public contact
7. **emergency contingency plans** (including plans for expansion, replacement or repair)
8. **operation and maintenance requirements**
9. **distance to sewer**

Criteria for Alternative Systems

1. The conditions (soils, ground water, slope) which limit the use of conventional septic tank systems may also apply to alternative systems which rely on soil absorption for treatment and/or disposal of all or most of the wastewater generated (see Criteria for Individual Waste Disposal Systems).

2. **Mound Systems.** Mound systems shall be installed in accordance with criteria established in the State Board's *Guidelines for Mound Systems* (1980) or other criteria acceptable to the Executive Officer in conformance with standard engineering practices.

3. **Evapotranspiration Systems.** Evapotranspiration systems shall be installed in accordance with criteria contained in the State Board's *Guidelines for Evapotranspiration Systems* (1980) or other criteria acceptable to the Executive Officer in conformance with standard engineering practices.

4. **Sand Filters.** Sand filters shall be installed in accordance with the specifications for sand filters in the State of Oregon, Department of Environmental Quality's *On-site Sewage Disposal Rules* (July 1, 1991) or other criteria acceptable

to the Executive Officer in conformance with standard engineering practices.

5. **Grey Water Systems.** Under certain circumstances, grey water systems may be an acceptable method of disposal in conjunction with a composting toilet or holding tank to handle black water. Examples of appropriate applications include recreational areas such as campgrounds, day use facilities, and trailheads. Grey water systems shall be installed in accordance with the California Plumbing Code (24 Cal. Code of Regs., Part 5) and the local administrative authority. If properly constructed and operated, grey water systems are not expected to create a nuisance or pollution.

6. Other proposals for alternative systems shall be evaluated jointly by the local regulatory agency and Regional Board staff on a case-by-case basis. Some engineered systems may be considered experimental by the Regional Board. Experimental systems will be handled with caution. A trial period of at least one year should be established whereby proper system operation must be demonstrated. Under such an approach, experimental systems are granted a one-year conditional approval.

7. All proposals for alternative systems shall be designed by a Civil Engineer, Engineering Geologist or Sanitarian licensed to practice in California.

Maintenance Requirements

System designers should be responsible for developing specifications and procedures for proper system operation. Designers should provide to system owners an informational operation and maintenance document that includes: (1) clear and concise procedures for operation and maintenance, and (2) instructions for repair and/or replacement of critical items within forty-eight hours following failure. Engineered systems should be inspected by a licensed Civil Engineer, Engineering Geologist or Sanitarian during installation to insure conformance with approved plans.

Permitting Authority

The County Health Officer may approve alternative systems when **all** of the following conditions are met:

1. The Health Officer has found the system to be in compliance with criteria approved by the Regional Board Executive Officer (see Criteria for Individual Waste Disposal Systems and Criteria for Alternative Systems above); ***and***

2. The Health Officer has either: (1) informed the Regional Board Executive Officer of the proposal to use the alternative system and the Executive Officer agrees that it complies with the finding in (a) above; or (2) a written agreement that the Executive Officer has delegated approval authority to the County Health Officer; ***and***

3. A public or private entity has agreed in writing to assume responsibility for the inspection, monitoring, maintenance, and eventual decommissioning/reclamation of the system.

If all of the above conditions cannot be met, the Regional Board will consider issuing waste discharge requirements for alternative systems.

Table 4.4-1
MINIMUM DISTANCES FOR SITING WASTE DISPOSAL SYSTEMS (in feet)

Facility	Domestic Well	Public Well	Perennial Stream[1]	Drainage Course or Ephemeral Stream[2]
Septic tank or sewer line	50	50	50	25
Leaching field	100	100	100	50
Seepage pit	150	150	100	50

continued...

Facility	Fill Bank[3]	Cut or Property Line[4]	Lake or Reservoir[5]	
Septic tank or sewer pit	10	25	50	
Leaching field	4h	50	200	
Seepage pit	4h[6]	75	200	

[1] As measured from the line which defines the limit of a 100-year-frequency flood.

[2] As measured from the edge of the channel.

[3] Distance in feet equals four times the vertical height of the cut or fill bank. Distance is measured from the top edge of the bank.

[4] Distance in feet from property line of any neighboring lot on which individual well(s) are used. (Distances are to property lines of neighboring lots, i.e., not street easements)

[5] As measured from the high water line. (Regional Board Resolution No. 82-6 defines the high water line for Eagle Lake, Eagle Drainage Hydrologic Area as 5117.5 feet, a definition used in prohibiting the discharge of wastes from subsurface disposal systems on a lot with an elevation of less than 5130 feet. See Section 4.1 of this Basin Plan for waste discharge prohibitions for Eagle Lake.)

[6] As measured from the high seepage level.

Alpine County Health Dept.
P. Box 545
M leeville, CA 96120

Virginia Huber
El Dorado Co. Environmental Management
3368 Lake Tahoe Blvd, Ste. 303
South Lake Tahoe, CA 96150

Modoc County Environmental Health
202 West Fourth Street
Alturas, CA 96101

Janet Mann
Nevada County Health Dept.
10075 Levon Ave., Ste 203
Truckee, CA 96161

Sierra County Health Dept.
PO Box 7
Loyalton, CA 96118

Los Angeles Co. Dept. of Health Svcs.
2525 Corporate Place, Room 150
Monterey Park, CA 91754

San Bernardino Co. Health Dept.
305 N. Arrowhead, 2nd Floor
San Bernardino, CA 92415

Dick Bobertz
Alpine Co. Planning Dept.
17300 State Highway 89
Markleeville, CA 96120

Kern County Planning Dept.
1415 Truxton Ave.
Bakersfield, CA 93301

Mike Bellomy
City of Barstow Planning Dept.
220 East Mountain View
Barstow, CA 92311

Dave Johnston
El Dorado County Health Dept.
2850 Fairlane Court
Placerville, CA 95667

Doug Ames
Lassen County Health Dept.
555 Hospital Lane
Susanville, CA 96130

Mono County Health Dept.
PO Box 476
Bridgeport, CA 93517

Placer County Health Dept.
11484 "B" Avenue
Auburn, CA 95603

Kern County Health Dept.
1700 Flower St.
Bakersfield, CA 93305

Inyo County Environmental Health Dept.
PO Box 427
Independence, CA 93526

Environmental Health Services
385 N. Arrowhead, 2nd Floor
San Bernardino, CA 92415

Jon Morgan
El Dorado Co. Planning Dept.
2850 Fair Lane Court
Placerville, CA 95667

City of Adelanto Planning Dept.
PO Box 10
Adelanto, CA 92301

California City Planning Dept.
21000 Hacienda Blvd.
California City, CA 93505

City of Hesperia Planning Dept.
[illegible]5 Main Street
Hesperia, CA 92345

City of Los Angeles Planning Dept.
200 N. Spring Street
Los Angeles, CA 90051-0100

City of Ridgecrest Planning Dept.
100 W. California Ave.
Ridgecrest, CA 93555

City of Susanville Planning Dept.
66 No. Lassen Street
Susanville, CA 96130

Robert Sorvaag
Lassen County Community Development
707 Nevada St., Room 236
[illegible]sanville, CA 96130

Mammoth Lakes Planning Dept.
PO Box 1609
Mammoth Lakes, CA 93546

Mono County Planning Dept.
PO Box 8
Bridgeport, CA 93517

Placer County Planning Dept.
11414 "B" Avenue
Auburn, CA 95603

Tim Beals
Sierra County Planning Dept.
PO Box 530
Downieville, CA 95936

City of Lancaster Planning Dept.
44933 North Fern Avenue
Lancaster, CA 93534

City of Palmdale Planning Dept.
38300 Sierra Highway
Palmdale, CA 93535

City of South Lake Tahoe Planning Dept.
1900 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

City of Victorville Planning Dept.
PO Box 5001
Victorville, CA 92393-5001

Los Angeles County Planning Dept.
320 W. Temple Street
Los Angeles, CA 90012

Modoc County Planning Commission
202 West Fourth Street
Alturas, CA 96101

Nevada County Planning Dept.
950 Maidu
Nevada City, CA 95959

Randy Scott
San Bernardino Co. Planning Dept.
385 N. Arrowhead Ave., 3rd Floor
San Bernardino, CA 92415

Town of Truckee Planning Dept.
11570 Donner Pass Road
Truckee, CA 96161

Administration Office
County of Alpine

Jeanne Lear
Assistant to the Board

MEMO

TO: Harold J. Singer, Executive Officer
California Regional Water Quality Control Board
Lahontan Region
P.O. Box 9428
South Lake Tahoe, CA 95731-2428

FROM: Jeanne Lear, Administrative Coordinator

DATE: April 2, 1991

RE: Amendment to Septic System Memorandum of Understanding

Pursuant to your request, enclosed please find one original signature page to the requested amendment which was approved by the Board of Supervisors this date.

If you have any questions, please feel free to call.

P. O. BOX 387 • MARKLEEVILLE, CALIFORNIA 96120 • (916) 694-2287

The amendment of Item [redacted]. G., changing the word "after" [redacted] to "before" in the Septic System Memorandum of Understanding with the Lahontan Regional Water Quality Control Board is executed on the date of the last signature below, by the following authorized representatives of the parties.

C Ann Wade

C. Ann Wade, Chair,
Board of Supervisors,
Alpine County

April 2, 1991
Date

Harold J Singer

Harold J. Singer
Executive Officer

Mar 11, 1991
Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LAHONTAN REGION
2092 LAKE TAHOE BOULEVARD
BOX 9428
SOUTH LAKE TAHOE, CALIFORNIA 95731-2428
(916) 544-3481

March 11, 1991

Alpine County Health Department
P.O. Box 306
Markleeville, CA 96120

Dear Sir/Madam:

AMENDED SEPTIC SYSTEM MEMORANDUM OF UNDERSTANDING

It has come to our attention that an error was made in the original wording of the above-referenced Memorandum of Understanding (MOU) between the Regional Board and Alpine County. Item II. G. of the MOU should have had the word "before" rather than "after" so that the MOU would accurately reflect the intentions of the Regional Board. Pursuant to item XI of the MOU, we propose that this change be made with the mutual agreement of both parties. If you concur, please substitute the enclosed page containing this correction with the corresponding page in your copy of the agreement.

Also, please have one of the enclosed forms signed and returned to this office within 60 days of receipt. We thank you for your prompt attention to this matter. If you have any questions or comments, please contact David Himebaugh or Dr. Ranjit Gill.

Sincerely,

Harold J. Singer

HAROLD J. SINGER
EXECUTIVE OFFICER

Enclosure

cc: septic system mailing list

sh

3. The development is non-residential or of mixed occupancy and the wastewater discharge does not exceed 500 gal/acre/day as determined using Table I-2 and I-3 in the Uniform Plumbing Code and occupant loads as determined by Table 33A in the Uniform Building Code; or
4. The project is in a class that has been designated exempt from Regional Board review in writing under signature of the Regional Board Executive Officer; or
5. The project; development has been granted an exemption by the Board and complies with the County's standards for use of septic tank wastewater disposal systems.

II. The County shall not issue construction permits without Regional Board approval for the following projects:

A. Projects that involved domestic wastewater discharge from commercial or industrial development in excess of 500/gal/acre/day as determined by the Board; or
B. Projects that will have industrial wastewater discharge; or
C. Projects that exceed the two EDU/acre density requirement for septic tank use (except in exempted areas); or
D. Projects that do not comply with the County's standards for use of septic tank wastewater disposal systems; or
E. Projects located within existing waste discharge prohibition areas (unless in areas exempted in I.B. above); or
F. Projects utilizing package wastewater treatment plants with on-site disposal; or
G. Projects that consist of a single-family home on individual lots that were created out of a subdivision before June 16, 1988, when the lot has a net area of less than 15,000 square feet.

III. The County, at its discretion, may defer consideration of projects, based on water quality impacts, to the Board for any projects even if it appears that compliance with Section I. of this Memorandum of Understanding has been achieved.

Septic System Memorandum of Understanding with the Lahontan Regional Water Quality Control Board is executed on the date of the last signature below, by the following authorized representatives of the parties.

_____

_____
Date

Harold J. Singer
Executive Officer

Mar 11, 1991
Date

#2

STATE OF CALIFORNIA

GEORGE DEUKMEJIAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LAHONTAN REGION
2092 LAKE TAHOE BOULEVARD
P.O. BOX 9428
SOUTH LAKE TAHOE, CALIFORNIA 95731-2428
(916) 544-3481

July 2, 1990

Barbara K. Jones
Deputy County Clerk
Alpine County
P.O. Box 158
Markleeville, CA 96120

Dear Ms. Jones:

MEMORANDUM OF UNDERSTANDING BETWEEN THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD-LAHONTAN REGION AND THE COUNTY OF ALPINE

On May 23, 1990, we received your letter and Memorandum of Understanding (MOU) between the County of Alpine and the California Regional Water Quality Control Board-Lahontan Region regarding the septic system permitting process. We appreciate the cooperation extended from the County of Alpine by entering into this MOU.

A copy of the signed MOU is enclosed. Please note that we have changed our office address on the final page of the MOU. If you have any questions regarding this matter, please contact Cindy Rofer or David Himebaugh at this office.

Sincerely,

HAROLD J. SINGER
EXECUTIVE OFFICER

Enclosure (1)

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THE BOARD OF SUPERVISORS
ALPINE COUNTY, CALIFORNIA

P. O. BOX 158
.RKLEEVILLE, CALIFORNIA 96120

TELEPHONE
916—694-2281

April 30, 1990

California Regional Water Quality
Control Board
Lahontan Region
15371 Bonanza Road
Victorville, California 92392-2494

Re: Memorandum of Understanding
Between Lahontan Board and Alpine County

Gentlemen:

Enclosed please find two original copies of the Memorandum of Understanding between the California Water Quality Control Board Lahontan Region and Alpine County (Alpine County Contract number CC89-46). The MOU was approved by the Board of Supervisors at their regular meeting of November 21, 1989.

After agreements have been fully executed by your executive officer, please return one original to this office for proper filing.

Thank you.

Sincerely,

Barbara K Jones

Barbara K. Jones
Deputy County Clerk

/bkj
Enclosures

CONTRACT NO.: 6089-40
Approved: 11/21/89

Memorandum of Understanding
Between the
California Water Quality Control Board
Lahontan Region
and
Alpine County

This Memorandum of Understanding is entered into by and between the California Regional Water Quality Control Board, Lahontan Region (hereinafter Board), and the County of Alpine (hereinafter County). Its purpose is to expedite the overall review process for proposed developments and to provide a clear operating policy between the Board and the County on the implementation of the Board's guidelines for wastewater disposal from land developments.

Section 13260 of the California Water Code requires any person discharging waste or proposing to discharge waste that may affect waters of the State, except to a community sewer system, to file a report of waste discharge with the regional board of that region. Implementation of this code section has included regulation of individual waste systems wherever warranted.

In 1973 and again in 1974, the Board adopted guidelines to (1) establish the conditions under which waivers of the filing requirement would be in the public interest (pursuant of California Water Code Section 13269); (2) establish minimum criteria for the use of individual waste water disposal systems; and (3) prevent pollution or nuisance cased by the discharges from waste water disposal systems.

On January 14, 1988, the Regional Board adopted revisions to the "Guidelines for Waste Disposal from Land Developments". In conjunction with these revisions, the Regional Board also adopted the "Regional Board Guidelines for Implementation of Criteria for Individual Waste Disposal Systems". These implementation guidelines list general and specific provisions in considering exemptions to the maximum density criteria two equivalent dwelling units per acre (EDUs) for individual waste disposal system in both new and existing land developments.

This requirement also applies to domestic wastewater discharges from new commercial and industrial development with wastewater discharge volumes exceeding two EDU, per acre density (500 gal/day/acre based on 250 gal/day/EDUs). On June 16, 1988, the State Water Resources Control Board approved the revisions. For purposes of this Memorandum of Understanding, gross acreage is that area which encompasses the entire net lot area plus any underlying fee title lands within the adjacent right-of-ways, if any.

Inasmuch as the County has incorporated into its review criteria the "Minimum Criteria for Subsurface Discharge of Sewage" contained in the Board's guidelines, and has consistently applied these criteria in its review of proposed developments, it is not against the public interest for the Board to reduce its oversight work by eliminating redundant review of proposed projects.

It is agreed that:

I. The County is authorized to issue construction permits for projects that utilize individual subsurface waste water disposal systems without Regional Board approval under the following conditions:

   A. All of the Following:
      1. The on-site soil characteristics comply with the established "Minimum Criteria for Individual Waste Disposal Systems" as adopted by Resolution 6-88-15; and
      2. The discharge is composed of <u>domestic</u> wastewater only; and

   B. One of the Following:
      1. The development consists of single-family residences or multiple-family residences, the density does not exceed two equivalent dwelling units (EDU) per acre (500 gal/acre/day wastewater flow), or
      2. The development consists only of a single-family home on an individual lot which has a minimum net area of 15,000 square feet; or

3. The development is non-residential or of mixed occupancy and the wastewater discharge does not exceed 500 gal/acre/day as determined using Table I-2 and I-3 in the Uniform Plumbing Code and occupant loads as determined by Table 33A in the Uniform Building Code; or
4. The project is in a class that has been designated exempt from Regional Board review in writing under signature of the Regional Board Executive Officer; or
5. The project; development has bee granted an exemption by the Board and complies with the County's standards for use of septic tank wastewater disposal systems.

II. The County shall not issue construction permits without Regional Board approval for the following projects:

A. Projects that involved domestic wastewater discharge from commercial or industrial development in excess of 500/gal/acre/day as determined by the Board; or
B. Projects that will have industrial wastewater discharge; or
C. Projects that exceed the two EDU/acre density requirement for septic tank use (except in exempted areas); or
D. Projects that do not comply with the County's standards for use of septic tank wastewater disposal systems; or
E. Projects located within existing waste discharge prohibition areas (unless in areas exempted in I. B. above); or
F. Projects utilizing package wastewater treatment plants with on-site disposal; or
G. Projects that consist of a single-family home on individual lots that were created out of a subdivision after June 16, 1988, when the lot has a net area of less than 15,000 square feet.

III. The County, at its discretion, may defer consideration of projects, based on water quality impacts, to the Board for any projects even if it appears that compliance with Section I. of this Memorandum of Understanding has been achieved.

IV. The County, at its discretion, may require the formation of a public entity (as defined in the State of California Government Code Section 53090 et seq.) to maintain septic systems in residential developments of one hundred (100) lots or more.

V. The Board may review permits issued by the County at its discretion. Copies of permits will be made available upon request for review in County offices.

VI. The Board, upon reviewing permits issued by the County, may require proposals be submitted and/or waste discharge requirements (permits) be obtained for all other types of waste discharges such as storm water runoff and solid waste leachate.

VII. The County, on its own initiative or at the request of an applicant and upon providing information specified in the implementation guidelines, may apply for individual, large scale, or area-wide exemptions.

VIII. The applicant, for projects found in compliance with the Board's guidelines, will be notified of acceptance by issuance of a County building permit or by issuance of a Board clearance letter.

IX. The County shall maintain a record of all documents submitted and reviewed under this Memorandum of Understanding.

X. This Memorandum of Understanding shall be effective immediately after execution of this agreement and shall remain in full force until terminated by a prior thirty (30) day written notice by either party.

XI. This Memorandum of Understanding may be amended as mutually agreed to by the County and the Regional Board.

XII. All notices and communications under this Memorandum of Understanding shall be addressed to the following:

Alpine County Health Dept.
P.O. Box 306
Markleeville, CA 96120

California Regional Water Quality
Control Board-Lahontan Region

P.O. Box 9428
South Lake Tahoe, CA 95731-2428

This Memorandum of Understanding is executed on the date of the most recent signature below, by the following authorized representative of the parties.

Alpine County

Date: 5-1-90

Executive Officer

Date: July 2, 1990