POLICY ON THE CONTROL OF WATER QUALITY WITH RESPECT TO ON-SITE WASTE TREATMENT AND DISPOSAL PRACTICES

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I. OBJECTIVE

The North Coast Region is one of the fastest growing areas in California, with widespread and increasing dependence on on-site systems for sewage treatment and disposal. Due to ever-increasing costs, the ultimate construction of sewerage systems in developing areas can no longer be relied upon as a future solution to sewage disposal needs. More and more, on-site systems must be viewed as permanent means for waste treatment and disposal, capable of functioning properly for the life of the structure(s) served. The preponderance of adverse physical conditions throughout the North Coast Region necessitates careful evaluation of site suitability and design parameters for every on-site wastewater disposal system. This policy sets forth region-wide criteria and guidelines to protect water quality and to preclude health hazards and nuisance conditions arising from the subsurface discharge of waste from on-site waste treatment and disposal systems.

II. FINDINGS

1. On-site waste treatment and disposal can be acceptable and successful. The success of the on-site system is dependent on suitable site location, adequate design, proper construction, and regular maintenance. Failure of the on-site system can result in water pollution and the creation of health hazards and nuisance conditions.

2. Waste from on-site systems must be disposed and disbursed below ground surface and away from high groundwater. There are existing parcels of land which, due to limitations in size, unsuitable soils, and/or high groundwater, cannot accommodate on-site waste disposal.

3. Division 7 of the California Water Code grants to the Regional Water Board jurisdiction over all discharges of waste, including those from individual waste treatment and disposal systems or from community collection and disposal systems which utilize subsurface disposal. Local regulatory agencies, however, can most effectively control individual waste treatment and disposal systems, provided they strictly enforce ordinances and regulations designed to provide protection of water quality and the public health. Regulation of on-site systems on federal lands is beyond the jurisdiction of local agencies and must remain with the Regional Water Board.

4. The many variations in physical conditions, population densities, and parcel sizes throughout the Region may affect the propriety of use of on-site water treatment and disposal systems. Adherence to the guidelines, criteria, and water conservation practices contained herein ordinarily will protect public health and water quality. Local regulatory agencies and the Regional Water Board are encouraged to adopt more stringent regulations when warranted by local conditions.

5. Factors may arise which will justify less stringent requirements than set forth in the guidelines and siting and design criteria contained herein. Provision for waiver is included in this policy to address such situations.

6. On-site waste treatment and disposal systems can be an excellent sanitation device in rural and rural-urban areas. However, in areas where population densities are generally high and the availability of land is limited, on-site systems are not desirable. On-site waste treatment and disposal systems should not be permitted if adequate community sewerage systems are available or feasible.

7. Water conservation practices may protect present and future beneficial uses and public health, and may prevent nuisance and prolong the effective life of on-site wastewater treatment and disposal systems. However, water conservation practices do not reduce the need to size on-site systems as set forth in this policy.

8. The life of on-site wastewater treatment and disposal systems may be severely limited if improperly maintained. A means must be available to assure adequate maintenance of individual waste treatment and disposal systems. Management by public entities is encouraged wherever practicable.

9. Soil characteristics play a dominant role in the suitability of a site for subsurface sewage disposal. Increased emphasis on determining and utilizing soils information will improve site suitability evaluations.

10. The installation of many on-site disposal systems within a given area may result in hydraulic interference between systems and adverse cumulative impacts on the quality of ground and surface waters. Physical solutions or limitations on waste load densities for land developments and other facilities may be necessary to avert such eventualities.

11. New technologies for on-site waste treatment and disposal continue to evolve. Means should be promoted to allow for timely and orderly consideration of promising alternative methods of waste treatment and disposal. Where alternative methods demonstrate enhanced performance, consideration may be given for the utilization of different site criteria.

12. All aspects of on-site waste treatment and disposal would benefit from improved professional training and public education programs. Such training and education programs should be promoted by the Regional Water Board in cooperation with local regulatory agencies and public and private sector professional associations.

III. SITE SUITABILITY CRITERIA AND METHODS

A. Criteria

The following site criteria are considered necessary for the protection of water quality and the prevention of health hazards and nuisance conditions arising from the on-site discharge of wastes from residential and small commercial establishments. They shall be treated as region-wide standards for assessing site suitability for such systems. Waiver of individual criterion may be made in accordance with the "Provision for Waiver" contained in this policy. Systems resulting in large wastewater loads may require additional criteria which are not covered in this policy, and which will require review by the Regional Water Board on a case by case basis.

1. Subsurface Disposal

   On-site waste treatment and disposal systems shall be located, designed, constructed, and operated in a manner to ensure that effluent does not surface at any time, and that percolation of effluent will not adversely affect beneficial uses of waters of the State.

2. Ground Slope and Stability

   Natural ground slope in all areas to be used for effluent disposal shall not be greater than 30 percent.

   All soils to be utilized for effluent disposal shall be stable.

3. Soil Depth

   Soil depth is measured vertically to the point where bedrock, hardpan, impermeable soils or saturated soils are encountered.

   The minimum soil depth immediately below the leaching trench shall be three feet.

   Lesser soil depths may be granted only as a waiver or for alternative systems.

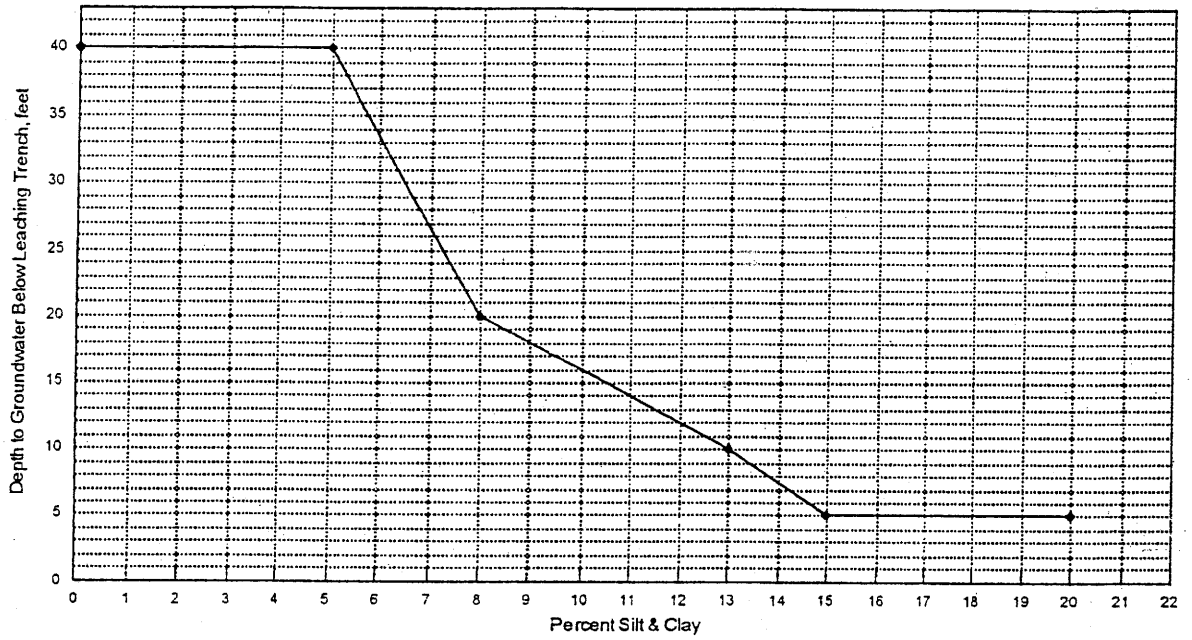
4. Depth to Groundwater

   Minimum depth to the anticipated highest level of groundwater below the bottom of the leaching trench shall be determined from Figure 4-1.

5. Percolation Rates

Percolation test results in the effluent disposal area shall not be less than one inch per 60 minutes (60 MPI) for conventional leaching trenches. Percolation rates of less than one inch per 60 minutes (60 MPI) may be granted as a waiver or for alternative systems.

FIGURE 4-1 MINIMUM DEPTH TO GROUNDWATER BELOW LEACHING TRENCH



Notes:

1. The Silt & Clay content shall be determined after adjustment for coarse fragments as indicated in the method set forth in Figure 4-2, and must exist for a minimum of three feet between the bottom of the leaching trench and groundwater.

2. For percolation rates slower than 5 mpi, a minimum depth to groundwater below the leaching trench shall be five feet.

3. For soils having greater than 15% Silt & Clay, lesser depths to groundwater, to a minimum depth of two feet below the leaching trench, may be granted only as a waiver or for alternative systems.

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6. Setback Distances

Minimum setback distances for various features of individual waste treatment and disposal systems shall be as shown in Table 4-1.

TABLE 4-1

MINIMUM SETBACK DISTANCES
(FEET)

Facility	Well	Perennially Flowing Stream [1]	Ephemeral Stream [2]	Ocean Lake or Reservoir [3]	Cut Banks, Natural Bluffs and Sharp Changes in Slope	Unstable Land Forms
Septic Tank/Sump	50	50	25	50	25	50
Leaching Field	100	100	50	100	25 [4]	50

[1] As measured from the line which defines the limit of 10 year frequency flood.
[2] As measured from the edge of the water course.
[3] As measured from the high-water line.
[4] As measured downgradient of the leaching field. Where soil depth or depth to groundwater below the leaching trench are less than five feet, a minimum setback distance of 50 feet shall be required.

7. Replacement Area

An adequate replacement area equivalent to and separate from the initial effluent disposal area shall be reserved at the time of site approval. The replacement system area shall not be disturbed to the extent that it is no longer suitable for wastewater disposal. The replacement system area shall not be used for the following: construction of buildings, parking lots or parking areas, driveways, swimming pools, or any other use that may adversely affect the replacement area.

B. Methods of Site Evaluation

Site evaluations are required in all instances to allow proper system design and to determine compliance with the preceding site suitability criteria prior to approving the use of on-site waste treatment and disposal systems. The responsible regulatory agency or Regional Water Board should be notified prior to the conduct of site evaluations since verification by agency personnel may be required. Site evaluations shall be conducted by individuals qualified as described in Section X. 6. of this policy, and evaluation methods shall be in accordance with the following guidelines.

1. General Site Features

Site features to be determined by inspection shall include:

a. Land area available for primary disposal system and replacement area.

b. Ground slope in the effluent disposal and replacement area.

c. Location of cut banks, fills, or evidence of past grading activities, natural bluffs, sharp changes in slope, soil landscape formations, and unstable land forms within 50 feet of the disposal and replacement area.

d. Location of wells, intercept drains, streams, and other bodies of water on the property in question and within 100 feet on adjacent properties.

2. Soil Profiles

Soil characteristics shall be evaluated by soil profile observations. One backhoe excavation in the primary disposal field and one in the replacement area shall be required for this purpose. A third profile shall be required if the initial two profiles show conditions which are dissimilar enough so as to alter the ultimate design or location of the leachfield area.

Augered test holes shall be an acceptable alternative, upon determination of the responsible regulatory agency: (a) where use of a backhoe is impractical because of access or because of the fragile nature of the soils, (b) when necessary only to verify conditions expected on the basis of prior soils investigations, or (c) when done in connection with geologic investigations. Where this method is employed, three test holes in the primary disposal field and three in the replacement area shall be required.

In the evaluation of new subdivisions, enough soil profile excavations shall be made to identify a suitable disposal and replacement area on each proposed parcel.

The following factors shall be observed and reported from ground surface to a limiting condition or five feet below the proposed leachfield system:

a. Thickness and coloring including Munsell Color Identification of soil layers, soil structure, and texture according to United States Department of Agriculture (USDA) classification.

b. Depth to a limiting condition such as hardpan, rock strata, a large volume of rock fragments, or impermeable soil layer.

c. Depth to observed groundwater.

d. Depth to and description of soil mottling and gleying.

e. Other prominent soil features which may affect site suitability, such as structure, stoniness, consistence, root zones and pores, dampness, massive and/or weak structured soils, etc.

3. Depth to Groundwater Determinations

The anticipated highest level of groundwater shall be estimated:

a. As the highest extent of soil mottling observed in the examination of soil profiles; or

b. By direct observation of groundwater levels during wet weather conditions. Methods for groundwater determinations and monitoring well construction shall be set forth by the local regulatory agency.

Where a conflict in the above methods of examination exists, the direct observation shall govern.

In those areas which, because of parent materials, soils lack the necessary iron compounds to exhibit mottling, direct observation during wet weather conditions shall be required. Guidance in defining such areas shall be provided by the Regional Water Board for each county within the Region.

4. Soil Percolation Suitability

Determination of a site's suitability for percolation of effluent shall be either of the following methods:

a. Percolation Testing

Stabilized percolation rates shall be established utilizing methods specified by the local regulatory agency.

Percolation testing of soils falling within Zone 1 and Zone 2 may be conducted in non-wet weather conditions provided presoaking of the test hole is accomplished with (a) a continuous 12 hour presoaking, or (b) a minimum of four complete refillings beginning during the day prior to that of the conduct of the test.

Percolation testing of soils within Zone 3 and Zone 4 shall be conducted during wet weather conditions. However, percolation testing of soils within Zones 3 and 4 may be conducted in non wet weather conditions provided the soils demonstrate a low shrink swell potential (Plasticity Index of less than 20, ASTM D 4318-84).

b. Soil Analysis

Soil samples representing the significant horizons within the excavated soil profile shall be obtained and analyzed for texture and bulk density according to methods prescribed by the Regional Water Board. The results shall be plotted on the soil textural triangle of Figure 4 -2 as per the indicated instructions.

(1) Soils within Zone 1 shall be considered to have minimal filtration capabilities, requiring increased depths to groundwater as per Figure 4-1.

(2) Soils within Zone 2 shall be considered suitable for effluent disposal without further testing.

(3) Soils within Zones 3 and 4 shall require percolation testing as per (a) above to verify suitability for effluent disposal.

5. Wet Weather Criteria

Wet weather testing periods shall be determined geographically by local regulatory agencies incorporating the following criteria as a minimum:

a. Between January 1 and April 30; and

b. Following 10 inches of rain in a 30-day period or after one-half of the seasonal normal precipitation has fallen.

Modification of wet weather testing beyond the limits of the above criteria may be made in accordance with a program of groundwater level monitoring instituted and conducted by the local regulatory agency.

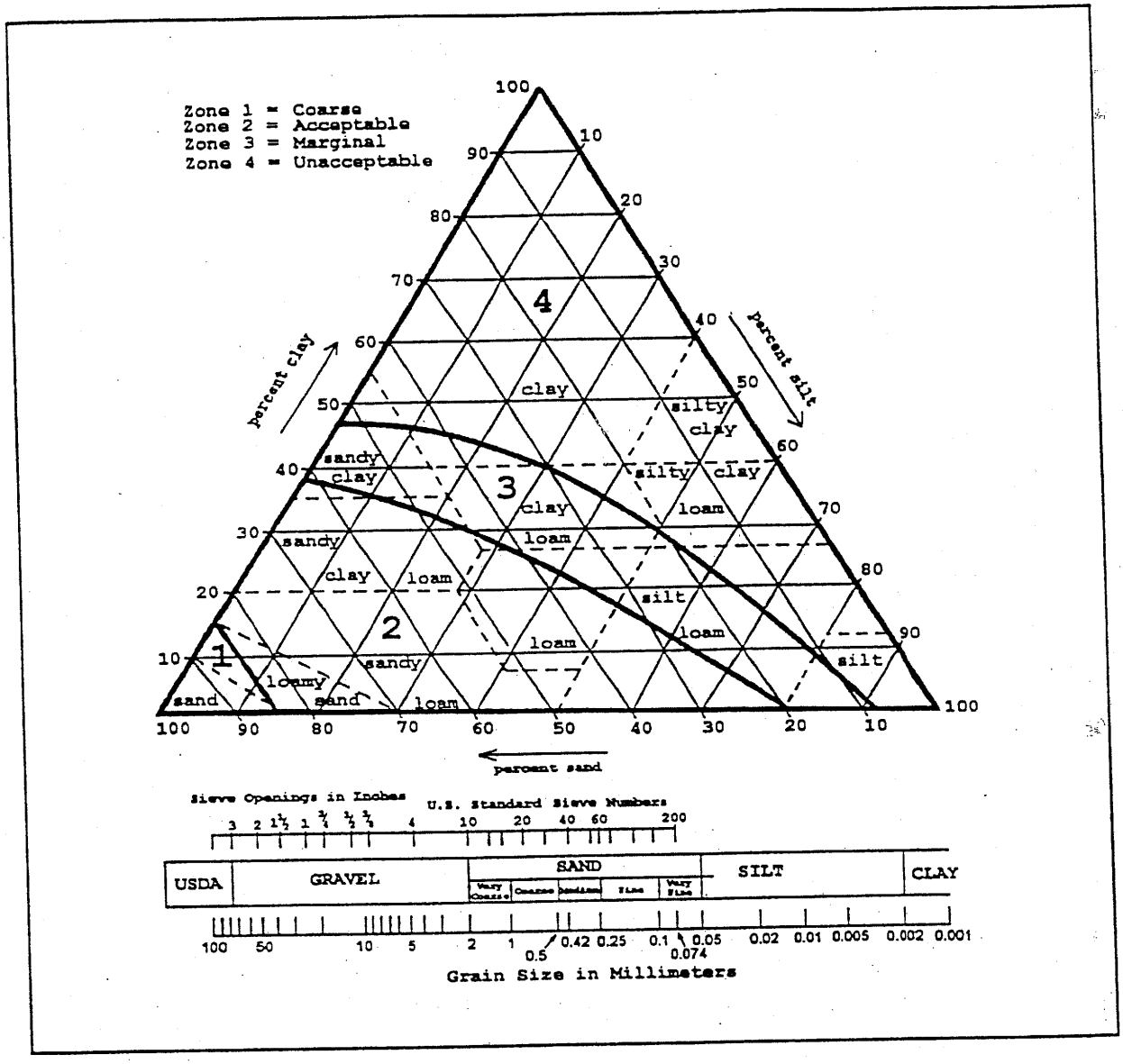
C. Provision for Waiver

Waiver of site suitability criteria and evaluation methods specified herein may be granted by the Regional Water Board or local regulatory agency when it can be satisfactorily demonstrated that water quality will not be impaired and public health will not be threatened as a result of such waivers.

Waivers may be granted for:

(1) Individual cases, or
(2) Defined geographical areas.

FIGURE 4-2 Soil Percolation Suitability Chart for Onsite Waste Treatment Systems



Instructions:

1. Plot texture on triangle based on percent sand, silt, and clay as determined by hydrometer analysis.
2. Adjust for coarse fragments by moving the plotted point in the 100 percent sand direction an additional 2% for each 10% (by volume) of fragments greater than 2mm in diameter.
3. Adjust for compactness of soil by moving the plotted point in the 100 percent clay direction an additional 15% for soils having a bulk-density greater than 1.7 gm/cc.

Note: For soils falling in sand, loamy sand, or sandy loam classification bulk density analysis will generally not affect suitability, and analysis is not necessary.

The local regulatory agency shall notify the Regional Water Board of the basis for each waiver. Prior to granting geographical area waivers, the local regulatory agency shall submit technical justification to the Regional Water Board for review and concurrence.

D. Waiver Prohibitions

Where surveys conducted by the local regulatory agencies and/or Regional Water Board staff indicate that discharges from on-site waste treatment and disposal systems in specific geographical areas are resulting in or threatening to result in health hazards or water quality impairment, the Regional Water Board may prohibit the issuance of waivers in said areas. Identification of "waiver prohibition areas" is incorporated into Section VII of this policy.

Exemptions to such prohibitions shall be granted by the Regional Water Board only where an authorized public agency can provide satisfactory assurance that individual systems will be appropriately designed, located, sized, shaped, constructed, and maintained to provide adequate protection of beneficial uses of water and prevention of nuisance, pollution, and contamination.

E. Individual Systems Prohibitions

The discharge from existing or new individual systems utilizing subsurface disposal shall be prohibited by the Regional Water Board in accordance with Section 13280 of the California Water Code where substantial evidence shows that such discharges will result in violation of water quality objectives, will impair present or future beneficial uses of water, will cause pollution, nuisance, or contamination, or will unreasonably degrade the quality of any waters of the State. Identification of "individual systems prohibition areas" is incorporated into Section VIII of this policy.

IV. DESIGN CRITERIA AND TECHNICAL GUIDELINES

A. Estimates of Wastewater Flows for Design Purposes

Although actual wastewater flows may in fact be less, estimates of wastewater flows for the design of conventional on-site systems shall be based on 150 gallons per day per bedroom. Local regulatory agencies may incorporate reduced flows into the design of the on-site system upon approval by the Regional Water Board or for alternative systems. Estimated flow rates for on-site systems receiving wastewater flows of greater than 1,500 gallons per day or from commercial establishments shall take into account peak loading rates and the chemical characteristics of the wastewater.

B. Septic Tank Capacity, Construction, Inspection, and Testing

At a minimum, septic tank capacity, construction, inspection, and testing requirements shall be based upon the current edition of the International Association of Plumbing and Mechanical Officials Uniform Plumbing Code (1994 Edition), or other local agency regulations approved by the Regional Water Board.

Individual treatment units other than septic tanks shall require certification by the National Sanitation Foundation (NSF) or the International Association of Plumbing and Mechanical Officials (IAPMO) prior to approval for use.

C. Leachfield System Design

The design of the leachfield shall be based on both the estimated flows set forth in Section IV. A. of this policy, and the organic loading of the on-site system. Table 4-2, or other local regulatory agency regulations approved by the Regional Water Board shall be acceptable for conventional on-site systems.

Table 4-2. RATES OF WASTEWATER APPLICATION FOR ABSORPTION AREAS

Soil Texture	Percolation Rate Minutes per Inch	Application Rate Gallons per Day per Square Foot
Gravel, coarse sand	<1	Not Suitable
Coarse to medium sand	1 - 5	1.2
Fine sand, loamy sand	6 - 15	1.1 - 0.8
Sandy loam, loam	16 - 30	0.7 - 0.6
Loam, porous silt loam	31 - 60	0.5 - 0.4
Silty clay loam, clay loam -a,b	61 - 120	0.4 - 0.2

Note: Application rates may be interpolated based on percolation rates, within the ranges listed above.

a. Soils without expandable clays.
b. These soils may be easily damaged during construction.

Utilization of the upper soil horizons for wastewater disposal shall be encouraged. Sidewall depth below the bottom of the leaching pipe shall be a minimum of 12 inches and shall not exceed 36 inches. The use of trenches deeper than 36 inches below the bottom of the leaching pipe shall be acceptable only where site investigations and plans by a qualified individual (per Section X. 6. of this policy) demonstrate the suitability of the system to accept wastewater and protect water quality.

Trench width shall not exceed 36 inches. Plastic leaching chambers are acceptable, provided the size is based on Table 4-2 of this policy.

D. Cesspools

The use of cesspools for on-site waste treatment and disposal shall be prohibited.

E. Holding Tanks

The use of holding tanks shall be prohibited except where the responsible regulatory agency determines that:

1. It is necessary to abate an existing nuisance or health hazard; or

2. The proposed use is within a sewer service area, sewers are under construction or contracts have been awarded and completion is expected within two years, there is capacity at the wastewater treatment plant and the sewering agency will assume responsibility for maintenance of the tanks; or

3. It is for use at a campground or similar temporary public facility where a permanent sewage disposal system is not necessary or feasible and maintenance is performed by a public agency.

F. Intercept Drains

The use of intercept drains to lower the level of perched groundwater in the immediate leachfield area shall be acceptable only under the following conditions:

1. Natural ground slope is greater than 5 percent;

2. Site investigations show groundwater to be perched on bedrock, hardpan, or an impermeable soil layer;

3. The intercept drain extends from ground surface into bedrock, hardpan, or impermeable soil layer.

In no case shall the pervious section of an intercept drain be located less than 15 feet upgradient or 50 feet laterally from any leachfield.

Where all of the above conditions cannot be met, actual performance of the intercept drain shall be demonstrated prior to approval.

G. Fills

The use of fills to create a leachfield cover shall be acceptable under the following conditions:

1. Where the natural soils and the fill material meet the suitability criteria as described in Section III. of this policy;

2. Where the quantity and method of fill application is described;

3. Where the natural slope does not exceed 20 percent;

4. Where placement of fill will not aggravate slope stability or significantly alter drainage patterns or natural water courses.

Leachlines for wastewater disposal shall be placed entirely within natural soils. Fill material shall not be used to create a basal area for alternative systems or mounds.

Local agencies shall provide specific criteria for the use of fill material which are compatible with the provisions of this policy.

H. Water Saving Devices

The use of water-saving devices may be incorporated into the on-site system design where maintenance of such devices is provided by a responsible entity.

Regional Water Board waste discharge regulation of on-site disposal systems may specify the use of water conservation.

I. Alternative Systems

An alternative system may be appropriate where physical site constraints preclude the installation of a standard septic tank leachfield on-site wastewater disposal system. Alternative systems shall be subject to a program of monitoring provided by a legally responsible entity.

1. Mound Systems

Mound systems utilize reduced criteria for soil permeability and depth to groundwater on slopes up to 12%. Percolation rates of up to 120 minutes per inch are allowed. A minimum of 24 inches of separation between groundwater and native ground surface is required. The mound design shall be based on the Design and Construction Manual for Wisconsin Mounds, Small Scale Wastewater Management Project, University of Wisconsin (January 1990).

2. Pressure Distribution Systems

Pressure distribution systems enable wastewater disposal in conditions of shallow topsoil over slowly permeable or fractured subsoils on slopes up to 30%. Percolation rates of 1 to 120 minutes per inch are required. The systems shall have a minimum depth to groundwater, fractured or consolidated rock, or impermeable soils of 24 inches beneath trench bottom. The design shall comply with criteria set forth by the local regulatory agency.

3. At-Grade Systems

At-Grade Systems enable wastewater disposal in conditions of shallow topsoils on slopes up to 25%. Percolation rates of up to 120 minutes per inch are allowed. A minimum of 36 inches of separation between groundwater and native ground surface is required. The design shall be based on the Wisconsin At-Grade Soil Absorption System Siting, Design and Construction Manual, Small Scale Wastewater Management Project, University of Wisconsin (January 1990).

4. Sand Filters

Sand filters may be used to pretreat the effluent from a septic tank by application to a bed of specified media. Maintenance is required to assure the long-term effectiveness of sand filters.

5. Proposals for alternative systems other than those listed above shall be evaluated jointly by the local regulatory agency and the Regional Water Board staff on a case by case basis.

J. Cumulative Effects

The potential cumulative effects on ground and surface waters include, but are not limited to, groundwater mounding and nitrate loading. The local regulatory agency and the Regional Water Board shall determine the need for a cumulative impact assessment for on-site systems, and will consider in particular, subdivision developments, commercial establishments, and on-site systems receiving greater than 1,500 gallons per day. For most on-site systems, the assessment of cumulative effects is not necessary.

Analysis of cumulative impact effects shall be conducted using accepted principles of groundwater hydraulics, shall describe the specific methodology, and shall include literature references as appropriate. The wastewater flow used for cumulative impact analysis shall normally be as follows: 100 gallons per day per bedroom for individual residential systems; design sewage flow for multi-family and other non-residential systems.

a. Groundwater Mounding Analysis

Groundwater mounding analysis shall be used to predict the highest rise of the water table and shall account for background groundwater conditions during the wet weather season. The maximum acceptable rise of the water table for short periods of time during the wet weather season, as estimated from groundwater mounding analysis, shall be as follows:

For systems with design flows of less than 1,500 gallons per day, groundwater mounding beneath the disposal field shall not result in more than a 50 percent reduction in the minimum depth to seasonally high groundwater as specified in this policy.

For systems with design flows of 1,500 gallons per day or more, a minimum groundwater clearance of 24 inches shall be maintained beneath the system.

b. Nitrate Loading

Analysis of nitrate loading effects shall be based, at a minimum, on an estimate of an annual chemical-water mass balance.

Minimum values used for the total nitrogen concentration of septic tank effluent shall be: 40 mg/l as N (for average flow conditions) for residential wastewater, or as determined from sampling of comparable system(s) or from literature values.

On-site systems shall not cause the groundwater nitrate concentration to exceed 10.0 mg/l as N at any source of drinking water on the property nor on any off-site potential drinking water source.

K. Septage Disposal

Septage disposal shall comply, as a minimum, with the California Code of Regulations, Title 23, Division 3, Chapter 15 and with federal regulations as described in 40 CFR Part 503.

V. MAINTENANCE RESPONSIBILITIES

Maintenance, monitoring, and repair of individual waste treatment and disposal systems shall be the responsibility of:

1. The individual property owner; or

2. A legally responsible entity of dischargers empowered to carry out such functions. That legally responsible entity shall be a public agency, unless demonstration is made to the Regional Water Board that an existing public agency is unavailable and formation of a new public agency is unreasonable. If such a demonstration is made, a private entity must be established with adequate financial, legal, and institutional resources to assume responsibility for waste discharge.

For subdivision developments where waste discharge requirements are prescribed by the Regional Water Board, the existence or formation of a legally responsible entity of dischargers shall be required.

VI. ABATEMENT

Abatement of failing individual waste treatment and disposal systems shall be obtained in accordance with local agency codes and procedures. When such remedies are ineffective and for systems subject to waste discharge requirements, abatement shall be obtained through Regional Water Board enforcement action.

Abatement of failing systems shall include short-term mitigation and permanent corrective measures. At a minimum, short-term mitigation shall include reduction of effluent flows and the posting of areas subject to the surfacing of inadequately treated sewage effluent.

VII. WAIVER PROHIBITION AREAS

Surveys conducted by local regulatory agencies with the assistance of the Regional Water Board staff indicate that discharges from septic tanks in specific areas are resulting in health hazards and water quality impairment. In accordance with the provisions of this policy, the Regional Water Board hereby prohibits the discharge of wastes from new septic tanks in the Jacoby Creek and Old Arcata Road areas in Humboldt County unless all provisions of the above policy are met without waiver.

(**Note:** This waiver prohibition exists by a prior Regional Water Board Order. The map has not been reproduced here in the interest of brevity.)

VIII. INDIVIDUAL SYSTEMS PROHIBITIONS

In order to achieve water quality objectives, protect present and future beneficial water uses, protect public health and prevent nuisance, discharge of waste from new individual disposal systems may be prohibited forthwith and discharge of waste from existing individual disposal systems may be prohibited in defined areas.

The Regional Water Board may grant an exemption to the prohibition for:

1. New individual disposal systems after presentation of geologic and hydrologic evidence by the proposed discharger that such systems will not individually or collectively result in a pollution or a nuisance; and

2. Existing individual disposal systems if it finds that the continued operation of such systems in a particular area will not individually or collectively directly or indirectly affect water quality adversely.

IX. EDUCATION AND TRAINING

Informational bulletins concerning construction, use, maintenance, and repair of individual waste treatment and disposal systems shall be made available for public education by local regulatory agencies.

Professional training concerning site evaluations and new alternative systems design concepts for subsurface effluent disposal shall be promoted periodically by Regional Water Board staff in cooperation with local regulatory agencies and public and private sector professional associations.

X. IMPLEMENTATION

1. Local agencies, shall, as necessary, revise existing sewage disposal ordinances to be compatible with the provisions of this policy. The Regional Water Board shall be notified by local agencies of the revisions.

2. Local agencies shall submit for Regional Water Board approval a report describing:

   a. The current program and methods for disposing of septic tank pumpage; and

   b. Plans for meeting future septage disposal needs.

3. Proposals for on-site waste treatment and disposal systems shall be processed as follows:

   a. Processed entirely by the local regulatory agency:

      i. Systems to serve a single dwelling unit within a recorded land development;

      ii. Systems for less than 1,500 gpd domestic waste flows from commercial/industrial establishments;

      iii. Land developments consisting of four or fewer parcels;

      iv. Dwellings involving four or fewer family units.

      The Regional Water Board shall be notified of waivers granted for any of the above.

   b. Reviewed by the Regional Water Board for possible establishment of waste discharge requirements:

      i. Land developments consisting of five or more parcels;

      ii. Dwellings involving five or more family units;

      iii. Systems for commercial/industrial establishments with domestic waste flows equal to or greater than 1,500 gpd.

      iv. All systems proposed for new construction or repairs on federal lands.

   c. The Regional Water Board shall retain jurisdiction over any individual waste treatment and disposal systems which may in its judgment result in water pollution, nuisance and/or health hazards.

4. The Regional Water Board and local regulatory agency shall develop and maintain working agreements concerning procedures and guidelines to be followed in the issuance of waivers as provided by this policy.

5. The Regional Water Board shall, as necessary, request of each local regulatory agency in the Region, an identification of geographical areas that may qualify for establishment of:

   a. On-site wastewater management district,

   b. Waiver prohibition areas, or

   c. Individual systems prohibitions.

   Designation of such areas by the Regional Water Board shall be made formal by incorporation into this policy.

6. Site evaluations in accordance with this policy shall be performed by individuals who by virtue of their education, training, and experience, are qualified to examine and assess soil, geologic, and hydrologic properties as related to subsurface effluent disposal. Credentials required of such individuals shall be specified by local regulatory agencies and shall include, as a minimum, education, training, and experience as geologist, soil scientist, registered civil engineer, or registered environmental health specialist.

7. Laboratory analysis of soils shall be conducted at commercial soils testing laboratories, or at other firms or establishments which can demonstrate to the satisfaction of the Regional Water Board the necessary equipment and personnel capabilities for performing the required tests. Procedures for laboratory analysis shall be provided by the Regional Water Board. Examination of soil testing capabilities shall be conducted by the Regional Water Board according to the demand.

8. Alternative systems shall be evaluated as follows:

   a. The Regional Water Board shall, as necessary, prepare a written report which summarizes the progress and findings of the alternative systems within the Region.

   b. The local regulatory agency shall prepare a written report following the construction season which describes the number of alternative systems permitted and the operational status of the alternative systems within its jurisdiction.

      The Regional Water Board shall prepare annually a report which summarizes the status of alternative systems within the North Coast Region.

   c. The Regional Water Board shall maintain a literature and information file which pertains to alternative systems.

9. The Regional Water Board shall maintain a literature and information file which pertains to water conservation.

10. The local regulatory agencies shall establish, as necessary, a time schedule for compliance of septage disposal sites to be compatible with the provisions of this policy.

XI. DEFINITIONS

The following definitions apply to this policy.

Alternative System. Any individual system that does not include a standard septic tank or an NSF or IAPMO certified device for treatment, or does not include standard leaching trenches for effluent disposal, which has been demonstrated to function in such a manner as to protect water quality and preclude health hazards and nuisance conditions.

Bedrock. Solid rock, which may have fractures, that lies beneath soils and other unconsolidated material. Bedrock may be exposed at the surface or have an overburden several hundred feet thick.

Bulk Density. The mass of dry soil per unit bulk volume. The bulk volume is determined before drying to a constant weight of 105°.

Coarse Fragments. Rock or mineral particles greater than 2.0 mm in diameter.

Conventional On-Site Waste Treatment and Disposal System. Any system using a standard septic tank for treatment and standard leaching trenches for effluent disposal.

Cumulative Effects. The persistent and/or increasing effect of individual waste treatment and disposal systems resulting from the density of such discharges in relation to the assimilative capacity of the ground environment. Examples include salt or nitrate additions to groundwater, nutrient enrichment of surface water, and hydraulic interference with groundwater and between adjacent systems.

Cut Bank. A man-made excavation of the natural terrain in excess of three feet.

Dual Leachfield System. An effluent disposal system consisting of two complete standard leachfields connected by an accessible diversion valve and intended for alternating use on an annual or semiannual basis.

Entity of Dischargers. A public agency, or a party which can demonstrate to the Regional Water Board comparable, legal and financial authority and responsibility, for the purpose of monitoring, inspecting, and maintaining individual waste treatment and disposal systems.

Ephemeral Stream. Any observable water course that flows only in direct response to precipitation. It receives no water from springs and no long-continued supply from melting snow or other surface source. Its stream channel is at all times above the local water table. Any water course that does not meet this definition is to be considered a perennial stream for the purposes of this policy.

Failure. The ineffective treatment and disposal of waste resulting in the surfacing of sewage effluent and/or the degradation of ground and surface water quality.

Graywater. Untreated household wastewater which has not come into contact with toilet waste. Graywater includes used water from bathtubs, showers, bathroom wash basins, and water from clothes washing machines and laundry tubs. It does not include wastewater from kitchen sinks, dishwashers or laundry water from soiled diapers.

Groundwater. Any subsurface body of water which is beneficially used or is usable. It includes perched water if such water is used or usable, or is hydraulically continuous with used or usable water.

Hardpan. An irreversibly hardened soil layer caused by the cementation of soil particles. The cementing agent may be silica, calcium carbonate, iron, or organic matter.

Impermeable Soil Layer. Any layer of soil having a percolation rate slower than 120 MPI or a Zone 4 Soil Texture according to Figure 4-2 of this policy which has a high shrink swell potential (Plasticity Index of greater than 20, ASTM D 4318-84).

Incompatible Use. Any activity or land uses that would preclude or damage an area for future use as an effluent disposal site. Includes the construction of buildings, roads or other permanent structures and activities that may result in the permanent compaction or removal of existing soil.

Intercept Drain: A drain, installed to intercept the lateral movement of groundwater and discharge it to a suitable area. Often referred to as a curtain drain.

Limiting Soil Layer. The portion of the soil profile that because of percolation characteristics, most restricts the successful operation of a leachfield.

Local Regulatory Agency. Any agency having authority as provided by county or city ordinances to control approval, installation, and use of individual waste treatment and disposal systems. May include county/city health department, building departments, or department of public works.

Mottles. Irregular spots of different colors that vary in number and size. The redoximorphic features of soils (mottling and gleying) are used to indicate poor aeration and lack of drainage.

On-Site Wastewater Disposal Zone. An area designated for operation and maintenance of individual waste treatment and disposal systems by a public agency entrusted with powers in accordance with the provisions of Chapter 3, Part 2, Division 6, of the State Health and Safety Code.

Perched Water. A subsurface body of water separated from the main groundwater body by a relatively impermeable stratum above the main groundwater body.

Perennial Stream. Any stretch of a stream that can be expected to flow continuously or seasonally. They are generally fed in part by springs.

Saturated Soil. The condition of soil when all available pore space is occupied by water and the soil is unable to accept additional moisture. In fine textured soils a free water surface may not be apparent. The extent of saturated soil conditions and anticipated level of high groundwater can be estimated by the extent of soil mottling.

Soil. The unconsolidated material on the surface of the earth that exhibits properties and characteristics that are a product of the combined factors of parent material, climate, living organisms, topography, and time.

Soil Depth. The combined thickness of adjacent soil layers that are suitable for effluent filtration. Soil depth is measured vertically to bedrock, hardpan, impermeable soil layer, or saturated soil.

Soil Horizon or Layer. A layer of soil approximately parallel to the land surface and differing from adjacent (underlying or overlying) layers in some property or characteristic. Differences include, but are not limited to, color, texture, pH, structure, and porosity.

Soil Texture (United States Department of Agriculture (USDA)). The relative amounts of sand, silt, and clay as defined by the classes of the soil textural triangle. Textural classes may be modified when coarse fragments are present in sufficient number, i.e., gravelly sandy loam, cobbled clay, etc.

Standard Leaching Trenches. Leaching trenches designed in accordance standard practice in local agency regulations.

Unstable Landform. An area which shows evidence of mass downslope movement such as debris flow, landslides, rockfills, and hummocky hillslopes with undrained depressions upslope. Unstable landforms may exhibit slip surfaces roughly parallel to the hillside; landslide scars and curving debris ridges; fences, trees, and telephone poles which appear tilted; or tree trunks which bend uniformly as they enter the ground. Active sand dunes are unstable land forms.