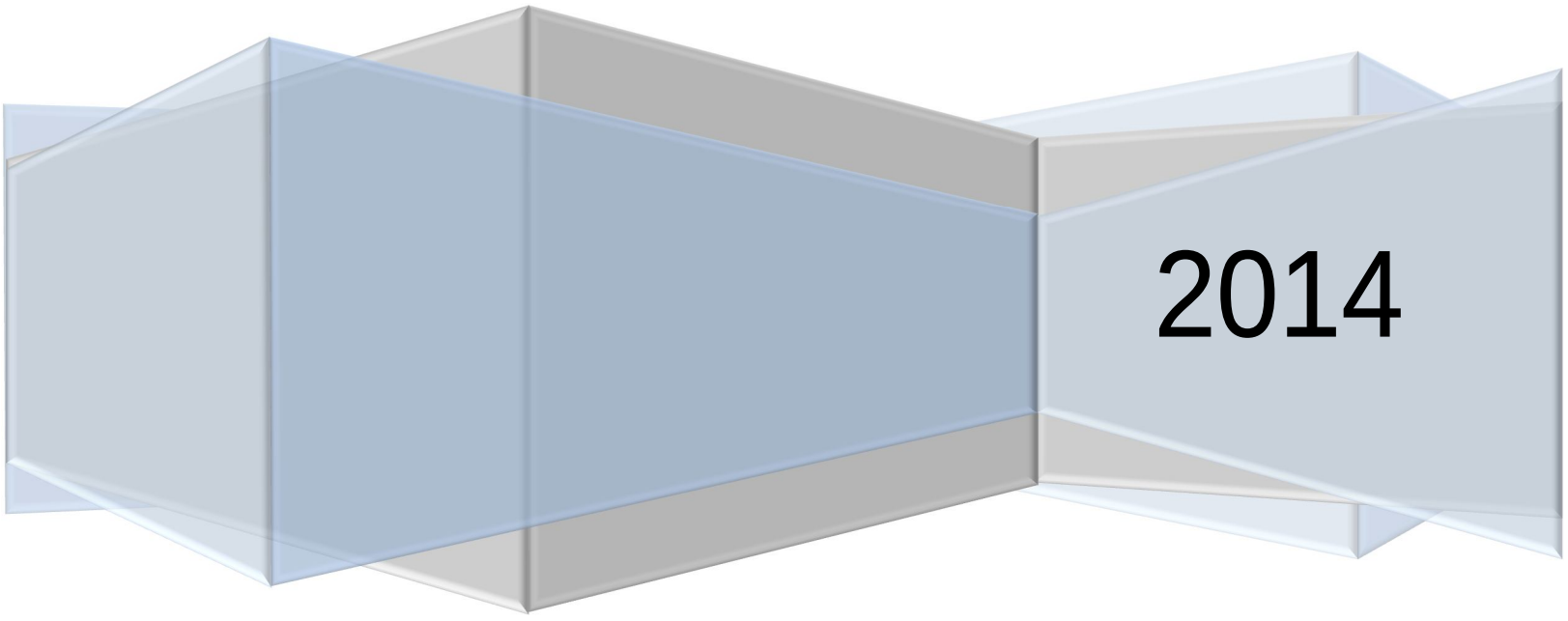
Santa Barbara County Public Health Department
Environmental Health Services

Onsite Wastewater Treatment Systems

Local Agency Management Program

Lawrence Fay, Director

Revision 1: 07/21/15



Revision History

Date	Revision	Description
12/09/14	0	Original Document
07/21/15	1	Incorporates changes recommended by the Central Coast Water Board

TABLE OF CONTENTS

Section I Introduction 1

Section II Survey and Evaluation 3

2003 Septic System Sanitary Survey Executive Summary 4

Introduction 4

Geology, Soils and Water Resources 4

Existing Septic System Practices 7

Septic System Information Surveys 13

Groundwater Quality Impacts 18

Problem Assessment 20

Summary of Results 22

Management Recommendations 22

Focus Area Recommendations 23

Update to the 2003 Sanitary Survey 25

Section III Water Quality Monitoring 26

South Santa Barbara County 29

Santa Ynez River Groundwater Basins 32

North Santa Barbara County Groundwater Basins 34

Section IV Projected Onsite Wastewater Demand 37

Section V Requirements for Existing Onsite Wastewater Treatment Systems 39

Existing Functioning Onsite Wastewater Treatment Systems 39

Failed Onsite Wastewater Treatment Systems 39

Onsite Wastewater Treatment System Repairs/Upgrades 40

Onsite Wastewater Treatment Systems in Degraded Basins 40

Onsite Wastewater Treatment System Evaluation/Modification 40

Onsite Wastewater Treatment System Abandonment Standards 41

Advanced Protection Management Plan 41

Section VI Requirements for New OWTS 43

General Policy Recommendations/Provisions 44

Protection of OWTS 45

Prohibitions 45

Professional Qualifications 45

Site/Soil Evaluation 46
Wet Weather Borings....46
Tank Requirements 46
Dispersal Fields 47
Leach Line Construction 47
Seepage Pit Construction 48
Low Pressure Distribution 48
Subsurface Drip Systems 48
Alternative Wastewater Treatment Systems 49
Supplemental Treatment 49
Operating Permits....50
Section VII Alternative Means of Wastewater Disposal in the Event of an OWTS Failure or Groundwater Degradation 51
Section VIII Education & Outreach....52
Direct Staff Contact....52
EHS Website....52
Stakeholder/Community Meetings....52
Ongoing Education....53
Section IX Enforcement 54
Failure to Obtain a Permit 54
Inspection/Maintenance 54
OWTS Failure 55
Section X Septage Management....56
Section XI Program Administration 58
APPENDIX I Ordinance....60
APPENDIX 2 State Water Resources Control Board Onsite Wastewater Treatment System Policy....87
APPENDIX 3 Onsite Wastewater Management Plan Guidance....139
APPENDIX 4 Santa Barbara County Septic Tank Inspection Report....142
APPENDIX 5 Liquid Waste Program Process Flow Chart 144
APPENDIX 6 Homeowner's Guide....145
APPENDIX 7 Santa Barbara County Public Health Department Organization Chart....149
APPENDIX 8 Lamp Completeness Checklist 150

Section I
Introduction

The California Water Code authorizes the State Water Resources Control Board (SWRCB) to regulate all discharges that could affect the quality of the waters of the state. The policies of the SWRCB are implemented locally through nine regional water quality control boards. Historically, each regional board developed "basin plans" that outlined water quality objectives in their respective jurisdictions as well as policies and programs to achieve those objectives.

Discharges are regulated through the use of Waste Discharge Requirements that act as discharge permits. With regards to the regulation of wastewater in Santa Barbara County, the Central Coast Regional Water Quality Control Board (Central Coast Water Board) issues discharge permits to the municipalities and special districts that operate wastewater (sewage) treatment plants in the county. In addition, they issue storm water permits to the incorporated cities and to the County as well as permits for the use of recycled water.

The State's regulatory authority extends to individual Onsite Wastewater Treatment Systems (OWTS). Therefore, general guidelines for the siting, design and construction of new OWTS were part of each regional board's basin plan. The SWRCB and the regional boards recognized the advantages and efficiencies of regulation of such systems by local agencies. Consequently, while the regional boards retained primacy over large and some specialized systems, direct regulatory authority for individual OWTS has been delegated to individual counties through Memorandums of Understanding.

In June 2012, the SWRCB adopted the Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems hereinafter referred to the as the State Policy or the Policy. The Policy became effective in May 2013 and for the first time, established a statewide, risk-based tiered approach for the regulation and management of OWTS. Please see Appendix 2 to review the complete text of the Policy.

Under the tiered approach of the Policy, Tier 1 establishes minimum standards for low risk new or replacement OWTS. Tier 2 allows local agencies to develop customized management programs that address the conditions specific to that jurisdiction. These Local Agency Management Programs (LAMPS) must be approved by the appropriate regional water quality control board. Tier 3 applies special, enhanced standards to both new and existing OWTS located near a water body that has been listed as impaired due to nitrogen or pathogens pursuant to Section 303(d) of the Clean Water Act. Once approved, the standards contained in an approved LAMP supersede the Tier 1 standards.

Environmental Health Services acknowledges that the Tier 1 standards afford an essential level of public health and water quality protection. Accordingly, the County's local ordinance (Appendix I) includes a number of the Tier 1 standards including the site and soil evaluation requirements, effluent application rates and setbacks to groundwater. Additionally, the Tier 1 standards apply unless they are specifically addressed in the LAMP or ordinance.

There are however, certain elements in Tier 1 that would be problematic in Santa Barbara County. Examples would include: ***limits on dispersal field depth, the 2½ acre minimum parcel size for new lots on which an OWTS can be installed and the prohibition of the use of seepage pits.*** There are properties throughout the county where these restrictions would preclude an individual from developing their property.

To reconcile these competing concerns, when conditions will not allow the use of a standard OWTS, the ordinance will require the use of supplemental treatment in conjunction with an operating permit, to remove the constituents of concern. Conditions of the operating permits would include regular system inspection, maintenance and reporting. Consequently, in those areas where the County's ordinance differs from Tier 1, the required mitigation measures would result in an equal level of public health and groundwater protection.

On September 10, 2013 the Santa Barbara County Board of Supervisors authorized the Local Health Officer and Director of the Public Health Department to submit a letter to the Central Coast Regional Water Quality Control Board informing the Board of the County's intent to develop a LAMP in lieu of implementing Tier 1 standards. It is the intent of the Board of Supervisors, in adopting this plan, to ensure that OWTS are constructed, modified, repaired, abandoned, operated, maintained, inspected and serviced in a manner that prevents environmental degradation and protects the health, safety and general welfare of the people of the county.

This LAMP conforms to all of the applicable Tier 2 criteria listed in Section 9 of the State Policy including adherence to the "prohibitions" contained in Section 9.4. It is structured and organized in accordance with the Onsite Wastewater Management Plan Guidance developed by the Central Coast Water Board included in Appendix 3.

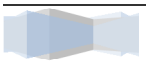
The actual standards for existing and new OWTS are specified in the State Water Resources Control Board's Policy, the California Plumbing Code and in Article I, Chapter 18C of the Santa Barbara County Code (Ordinance). The County ordinance has been revised and updated so that it addresses conventional OWTS (those systems using a standard tank and dispersal field as well as those utilizing supplemental treatment or alternative systems such as mound and evapotranspiration systems). A complete copy of the ordinance is included in Appendix I.

OWTS, including conventional systems, require routine maintenance in order to ensure that they function properly and to extend the life of the system. While this LAMP does not require mandatory maintenance for conventional systems, operating permits with regular maintenance and reporting conditions, will be required for all other types of systems.

It is the intent of Environmental Health Services (EHS), as the Administrative Authority, to regulate all domestic waste flows up to peak flows of 10,000 gallons per day, the maximum allowed under the state regulations**.** Surface discharge and other types of wastewater discharge such as winery production waste will be regulated by the Regional Water Quality Control Board unless an agreement is made with EHS for those duties.

The provisions of this LAMP will apply to the unincorporated areas of Santa Barbara County. It will not be implemented within the incorporated cities unless there is an agreement approved by the County and the City extending the authority of EHS to within the City's jurisdiction.

While every effort was made to make this a comprehensive plan, it is likely that it will be necessary to modify it in the future for several reasons. Section 9.3.3 of the Policy requires that a jurisdiction complete an evaluation of its monitoring program every five (5) years to determine if water quality is being impacted by OWTS and whether modifications must be made to its LAMP to address any noted water quality impacts. In addition, modifications or revisions will be needed as technology, conditions and experience change over time. When it has been determined changes are necessary, those changes will be made after consultation with the Central Coast Regional Water Quality Control Board and if changes are substantive, EHS will return to the Santa Barbara County Board of Supervisors for approval.



Section II
Survey and Evaluation

In 2001, Santa Barbara County Environmental Health Services (EHS) authorized an in-depth survey of the OWTS in the county that was completed in 2003. This survey offers a comprehensive review of the climate, soil and geologic conditions in Santa Barbara County as they relate to onsite sewage treatment systems as well as a comprehensive review of the distribution, age and condition of systems throughout the county. The conditions have not changed significantly since the survey was completed and it still represents the best data source on the use of OWTS in the county.

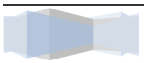
A significant part of the survey consisted of researching and compiling existing data from a number of different sources. These included reviewing previous OWTS surveys, and Septic Tank Inspection Reports as well as EHS and Central Coast Water Board files. An additional source of information was the collective knowledge and experience of EHS staff, the Central Coast Water Board staff, contractors, consultants and individual homeowners.

While the Septic System Survey (the Survey) covered the entire county, it focused on the designated "special problem areas" and other areas where there are especially dense concentrations of OWTS and or other specific problems with the use of these systems. The goals of the survey were to:

- *assess the impacts of existing OWTS on groundwater and surface water'*
- *identify those areas that are problematic for the use of OWTS;*
- *determine the condition of the systems that were surveyed;*
- *identify areas where OWTS inspection and servicing is recommended;*
- *identify areas where the extension of the public sewer was warranted and feasible.*

Due to its length (in excess of 200 pages) the entire Septic System Sanitary Survey is not included in this LAMP. However, the Executive Summary is included on the following pages followed by a Survey Update. The complete Survey can be accessed through the EHS website at:

www.countyofsb.org/phd/environmentalhealth



2003 Septic System Sanitary Survey
Executive Summary

Introduction

This report presents the results of a Septic System Sanitary Survey of Santa Barbara County conducted by Questa Engineering Corporation for the Santa Barbara County Environmental Health Services. The study is one of a number of efforts that the County has undertaken over the past several years in response to the growing concerns about the use and public health and water quality impacts of septic systems. Other activities to improve the understanding and overall management of septic systems in the County have included:

- *County Wastewater Ordinance. Updating of County regulations for onsite sewage dispersal systems, including the prohibition of hollow "seepage pits".*
- *GIS Mapping. Development of a Geographic Information System (GIS) analysis to begin the process of locating, characterizing and tracking the septic systems in the unincorporated area of the County.*
- *Septic Tank Inspection Reports. Requirements for inspection, evaluation and reporting of the condition and noted deficiencies whenever a septic system is serviced.*
- *Public Education. Provision of educational information and workshops on basic operational and maintenance aspects of septic systems.*
- *Septic to Sewer Conversions. Acquisition of State funding to support local efforts to investigate and develop plans for extension of public sewers to areas experiencing chronic septic system problems.*

The Septic System Sanitary Survey was undertaken with the express purpose of collecting and consolidating pertinent data regarding onsite sewage dispersal systems, assessing the associated impact on public health and water quality, identifying and evaluating specific areas that are problematic for the use of septic systems, and developing recommendations on ways to address certain types of problems or specific problem areas. The study covered the entire County; however, the primary focus of the work was centered on identified "Special Problem Areas" and other parts of the County where there are especially heavy concentrations of septic systems and/or suspected problems. The Study was not intended to isolate or evaluate the functioning status or impact from individual septic systems or specific properties.

Geology, Soils and Water Resources

Geology

The geology of Santa Barbara County is related to the tectonic and depositional history of the area. The northeast portion of the county is mountainous with a northeast to southwest structural trend paralleling the San Andreas Fault. The southeast and south coast portions of the county have a structural trend of east-west, which includes the Santa Ynez Mountains. The western coast and adjacent low-lying valleys and hills in the north-central region trend mainly west-northwest to east-southeast.

South Coast Region. In the south coast and coastal mountains portion of the county, the rocks are characterized by a folded stratigraphic sequence that increases in age, in general, from the southwest to the northeast across the Santa Ynez Mountains. Alluvial deposits are also present along the coast and

in stream valleys and include alluvium and alluvial fan deposits of silt, sand and gravel, and boulder-cobble fanglomerate and conglomerate. A large amount of residential development utilizing septic systems has occurred in areas that lie at the interface between the alluvial deposits and the Quaternary and Tertiary sedimentary formations, especially in the Goleta, Santa Barbara and Carpinteria areas.

Bedrock types include shale, siliceous shale siltstone and sandstone. Most of the bedrock of the area has low permeability and low percolation rates. Shale, mudstone, and claystone have very low permeability. Geologic formations posing the most difficult constraints for septic systems include the Rincon, Monterey, Sespe and (locally) Santa Barbara formations due to very low or highly variable permeability. Surficial sedimentary deposits are generally favorable for septic system, but may have constraints locally due to excessively fast percolation rates, steep slopes, drainage, flooding, and high groundwater conditions.

West Coast and North-Central Region. The west coast and north-central portion of the county is dominated by Quaternary sedimentary deposits and underlying Tertiary deposits. In the river valleys and low-lying coastal plains, deposits are dominated by surficial sediments and older dissected surficial deposits. These sediments include recent and older beach sands, dune sands, stream channel deposits of gravel, sand, and silt, remnants of beach terrace and alluvial fan deposits, and the Orcutt Sand, a wind-blown sand deposit. These deposits are generally moderate to well drained with variable percolation rates; however, locally, permeability and septic system suitability can be restricted due to accumulation of finer-grained sediments or high water table conditions.

Northeastern Region. The northeastern portion of the county consists of the San Rafael and Sierra Madre Mountains. This part of the county is very sparsely developed, with very few septic systems. These mountains are dominated by a sequence of folded Tertiary and Cretaceous age sedimentary deposits. Rock types include sandstone, siltstone, claystone, shale and conglomerate.

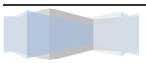
Soils

South County. The South County soils are divided into three main categories as follows:

Alluvial Fans, Flood Plains, Valleys, and Tidal Flats. Alluvial fans, flood plains, valleys, and tidal flats are mostly located along the coast and adjacent drainage ways. The soils are formed from sedimentary-derived alluvium. The soils are generally moderately to severely limited for leachfield use due to flooding, wetness, moderately sloping ground, and slow permeability. Some sandy areas have rapid permeability.

Terraces and Coastal Valleys. The terraces and coastal valleys are located within four miles of the Pacific Ocean and along the coastline. In these areas the soils tend to be relatively deep, formed in alluvium derived from sedimentary rock, and are moderately well drained to well drained. In general, these areas tend to be suitable for leachfield systems; however, there are some sections within this area where steep slopes and slow permeability present moderate to severe limitations for leachfield use.

Foothills and Mountains. The soils in the foothills and mountains are loamy sands and clays derived from shale, sandstone sediments, and some igneous rock. Leachfield suitability ranges from moderately to severely limited, although most soils are severely limited. The limitations are due to slow percolation rates, steep slopes, and shallow depths to bedrock.



North County. The North County soils are divided into four categories as follows:

Alluvial Fans, Flood Plains, Valleys, and Terraces. These soils are deep and range from somewhat excessively well drained to somewhat poorly drained and occur on nearly level to moderately steep slopes. The soils are formed in alluvium derived mostly from sedimentary rock. The soils have a broad range in permeability, from slow to rapid, depending upon the relative amount of sands, silts and clays in the sedimentary deposits. Consequently, the areas include soil types that range from slightly to severely limited for leachfield use.

Terraces and Adjacent Uplands. The terraces and adjacent upland soils are somewhat excessively drained to somewhat poorly drained sands to clay loams. Slow permeability, slopes, and poor drainage slightly to severely limit leachfield use in these areas.

Uplands and High Terraces. These soils are sands to clays derived from sedimentary and igneous rock. Leachfield suitability ranges from moderately to severely limited, though most soils are severely limited. The limitations are due to slow percolation rates, steep slopes, and shallow depths to bedrock.

Miscellaneous Land Types. Miscellaneous land types include sedimentary rock landscape and coastal sand dunes and beaches, which have relatively little or no significance or impact on the use and effects of septic systems in Santa Barbara County. They are used for watershed and recreation.

Surface Waters

Santa Barbara County contains six principal watersheds: South Coast, Santa Ynez, San Antonio, Santa Maria, Cuyama and Sisquoc River. The South Coast Watershed is unique in that it consists of north-south flowing drainages flowing from their headwaters in the Santa Ynez Mountains to the Pacific Ocean. The other principal watersheds generally drain from east to west. In all watersheds, flow is highly dependent upon rainfall, with little base flow (i.e., from groundwater) and no significant snowmelt. Average annual rainfall in the County ranges from 9 inches in New Cuyama to 24 inches in the Santa Ynez Mountains; annual rainfall along the coast is in the range of 16 to 18 inches.

Groundwaters

Overall, groundwater supplies an estimated 75-85% of Santa Barbara County's commercial, industrial, and agricultural water. However, some areas, such as the Goleta Water District, have used almost no groundwater for several years. There are eleven major groundwater basins, located in four geographically distinct regions of the county. There are also four relatively small and/or undeveloped groundwater basins in the county.

South County. Five major groundwater basins are located between the Santa Ynez Mountains and the Pacific Ocean: Carpinteria, Montecito, Santa Barbara, Foothills and Goleta. The basins are generally composed of unconsolidated material from uplift and erosion of the mountains.

Santa Ynez River. Three major groundwater basins lie within the drainage area of the Santa Ynez River, Santa Ynez Uplands, Buellton Uplands, and Lompoc Groundwater Basin.

North County. The North County Groundwater Basins include the San Antonio and Santa Maria Valley Groundwater Basins. Land use is dominated by agriculture, though ranching, urban development, and oil development are also distributed through the basins.

Cuyama. Encompassing 255 square miles, the Cuyama Groundwater Basin is located between the Caliente Range to the north and the San Rafael Mountains to the south. Roughly twenty percent of the basin's area underlies northeastern Santa Barbara County, with most of the basin extending into Ventura, Kern, and San Luis Obispo Counties.

Existing Septic System Practices

Regulatory Framework

In California, all wastewater treatment and disposal systems, including individual septic systems, fall under the overall regulatory authority of the State Water Resources Control Board and the nine California Regional Water Quality Control Boards (Regional Boards). The Regional Board's involvement in regulation of onsite systems most often involves the formation and implementation of basic water protection policies. These are reflected in the individual Regional Board's Basin Plan, generally in the form of guidelines, criteria and/or prohibitions related to the siting, design, construction and maintenance of onsite systems. The Regional Boards generally delegate regulatory authority for septic systems to counties, cities or special districts, subject to the condition that the local agency commits to enforcing the minimum requirements contained in the Basin Plan policies. The Regional Boards generally elect to retain permitting authority over large and/or commercial or industrial onsite systems.

Santa Barbara County falls within the jurisdiction of the Central Coast Regional Water Quality Control Board (Regional Board). The Regional Board has adopted policies and requirements pertaining to onsite systems that are contained within the Water Quality Control Plan for the Central Coast Basin, more commonly referred to as the "Basin Plan". The onsite systems element of the Basin Plan sets forth various objectives, guidelines, general principles and recommendations for the use of onsite systems that cover various topics related to siting, design, construction, operation, maintenance and corrective/enforcement actions.

Since 1991, onsite sewage disposal systems in Santa Barbara County have been regulated by the County Public Health Department, Environmental Health Services Division. Prior to that, permitting of onsite systems came under the administrative authority of the County Building Department.

Santa Barbara County regulations for onsite sewage disposal systems are contained in Chapter 29, Article II of the County Code, which was most recently updated in 1999. This is commonly referred to as the "County Wastewater Ordinance". These regulations set forth specific requirements related to (a) permitting and inspection of onsite systems; (b) septic tank design and construction; (c) drywell and disposal field requirements; and (c) servicing, inspection, reporting and upgrade requirements. Standards pertaining to system sizing and construction are contained in the California (Uniform) Plumbing Code. Additional requirements for onsite systems in Santa Barbara County may be adopted as part of Community Plans or as project-specific mitigation measures or conditions applied to development proposals lying within a designated Special Problem Area of the County.

Septic System Design and Siting Requirements

Santa Barbara County septic system requirements provide for use of conventional systems including septic tanks for treatment and leachlines or drywells for disposal.

Leachlines are the preferred method of disposal; drywells are permissible only where the use of leachlines is infeasible. Hollow "seepage pits" have been prohibited since 1999. There are only a small number of "alternative" systems (less than 10) in the County; these are systems that provide additional

treatment (beyond the septic tank) or different methods of disposal (e.g. mounds, or pressure-dosing leachfields) designed to overcome specific soil or groundwater constraints.

Standard criteria in County regulations follow the Basin Plan guidelines, and address such factors as (a) soil characteristics and depth; (b) percolation rates; (c) vertical separation to groundwater; (d) maximum ground slope; (e) setback distances to wells and water features; (f) system sizing; and (g) reserve area for future drainfield replacement/expansion.

Septic System Usage in Santa Barbara County

GIS Mapping. In early 2000, Santa Barbara County undertook a project using Geographic Information System (GIS) analysis to begin the process of locating, characterizing and tracking the septic systems in the unincorporated area of the County. The study determined that there are an estimated 8,749 properties in unincorporated areas served by septic systems, plus an additional 581 parcels within sewer districts that also have septic systems, despite the availability of sewers. The Health Department has used this work as a springboard to begin the "hard file" conversion of years of septic system permit history into the Department's permit software program and the GIS database. The Septic System Sanitary Survey helped advance this effort and also was able to take advantage of some of the first "batches" of information converted to the GIS database system.

Identification of Focus Areas. The GIS mapping information shows that septic system usage in Santa Barbara County includes a large number of systems scattered widely throughout the County, with heavy concentrations around the main population areas of the South Coast and the Santa Ynez Valley and, to lesser extent, the Orcutt and Santa Maria areas (see **Figure 2-1**). Under the Septic System Sanitary Survey, the GIS mapping data, along with reconnaissance field surveys and other information, was used to help identify 24 "Focus Areas", which encompass the heaviest concentrations of septic systems and the areas of potentially greatest concern from a public health and water quality perspective. The Focus Areas encompass defined neighborhoods or geographical areas warranting special attention; they also provide the basis for presenting the full range of conditions and problems that need to be addressed in regard to septic system usage in the County. These locations of the Focus Areas are indicated in **Figure 2-1** and described in **Table 2-1**. They encompass about 4,300 septic systems, or approximately 45% of the total number of systems in the County. They include roughly 2,850 parcels in the South Coast and about 1,450 parcels in the Santa Ynez Valley and North County. The largest numbers of systems covered in the list are in Hope Ranch, Montecito Area, Santa Ynez and Los Olivos. The smallest Focus Areas identified are Rincon Point several small subdivisions in the Goleta foothills area and near Orcutt.

Figure 2-1
Septic System Usage and Focus Areas

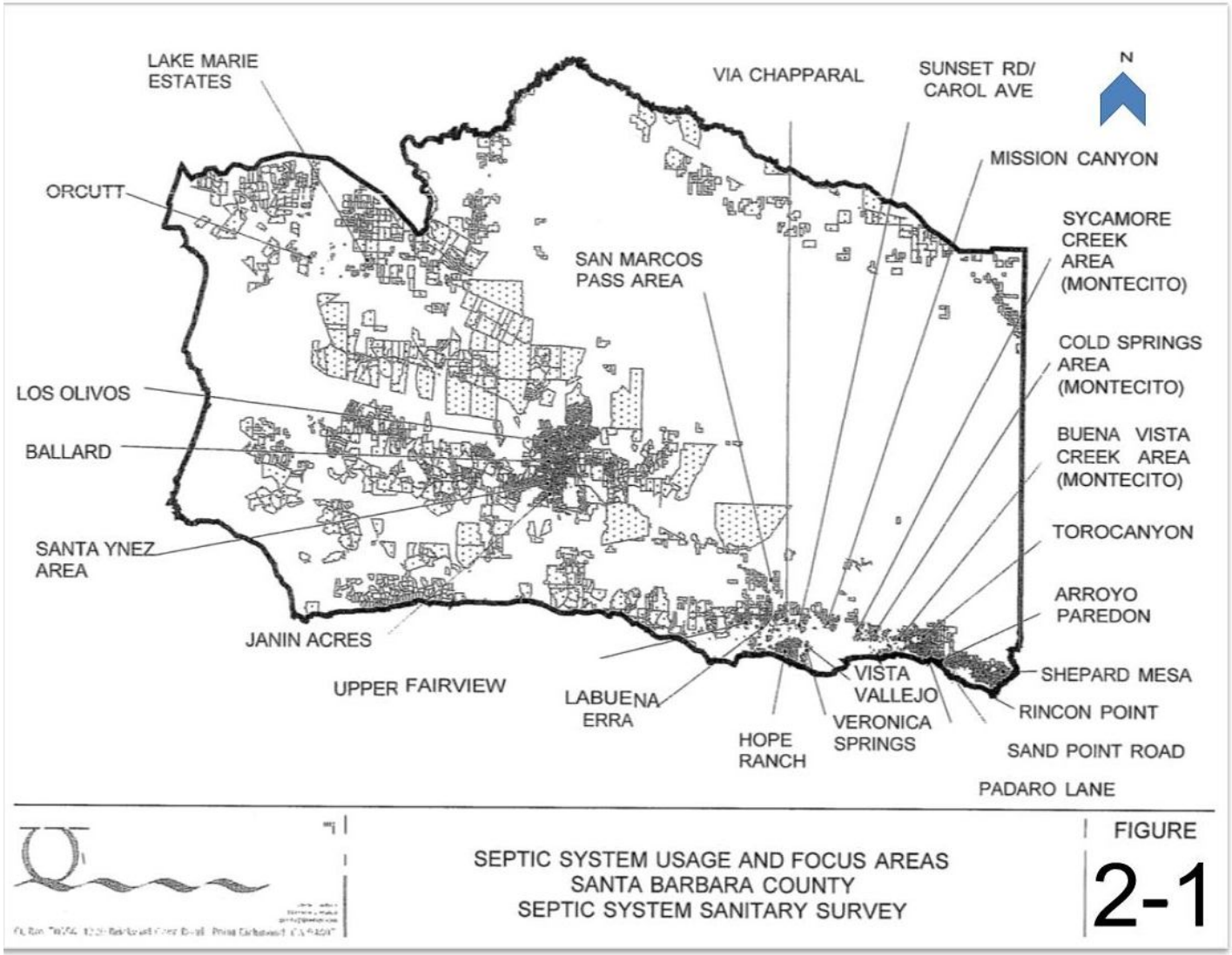


Table 2-1

Focus Area	Area (Acres)	Number of Septic Systems	Description
CARPINTERIA AREA			
Rincon Point	10	36	Beachfront development area at Santa Barbara-Ventura County line; high groundwater conditions, small lots abutting Rincon Creek and ocean. Nearshore ocean waters listed as 303(d) impaired water body for pathogens: prior water quality studies Lower Rincon Creek Watershed Study (DNA study) and South Coast Characterization Study. Sewer study in progress.
Shepard Mesa	448	119	Special Problem Area; large-lot rural residential area; Rincon Creek and Carpinteria Creek watershed.
Arroyo Paredon	303	84	Semi-rural area near Carpinteria in area of orchards and greenhouses near Foothill Road. Drains via Arroyo Paredon Creek to ocean at Serena area.
Sand Point Rd	85	70	Beachfront area between Carpinteria Marsh and Pacific Ocean along Sand Point Road and Avenue Del Mar; small lots on dune sands with high groundwater conditions: preliminary sewer feasibility study completed by Carpinteria Sanitary District.
Padaro Lane	47	53	Beachside area east of Loon Point (Summerland); many beachfront lots on dune sands with high groundwater conditions; preliminary sewer feasibility study completed by Carpinteria Sanitary District.
Toro Canyon	1.058	297	Toro Canyon Plan Area; medium to large lot rural residential area; difficult soil and topographic constraints and close proximity to East and West Toro Creek. Special septic system requirements adopted for area in Toro Canyon Plan.
MONTECITO AREA			
Buena Vista Creek Area	544	340	Large semi-rural residential area located above E. Valley Road in Romero Creek and Buena Vista Creek drainage basins. Very high density of septic systems on small lots in vicinity of Orchard Avenue and Tabor Lane; difficult terrain and soil conditions in higher elevations: located in Montecito Sanitary District.
Cold Springs Area	379	141	Semi-rural residential area located above E. Valley Road in Cold Springs-Montecito Creek drainage basins. Difficult terrain and soil conditions in higher elevations; located in Montecito Sanitary District.
Sycamore Creek Area	340	175	Semi-rural residential area located above Sycamore Canyon Road adjacent to Santa Barbara; medium to large lots; difficult terrain and soil conditions in higher elevations; creek encroachment-setback problems; located in Montecito Sanitary District.

Focus Area	Area (Acres)	Number of Septic Systems	Description
SANTA BARBARA AREA			
Mission Canyon	485	253	Special Problem Area; large semi-rural residential area adjacent to Santa Barbara in generally steep terrain with difficult soil and geologic conditions for septic systems; several alternative septic system designs (evapotranspiration systems) used to overcome constraints; drains to Mission Creek through Botanical Gardens, which is listed as 303(d) impaired water body for pathogens; prior water quality sampling data from South Coast Characterization Study and Project Clean Water.
Vista Vallejo	12	49	Pocket of small residential lots surrounded by Santa Barbara urban area near Santa Barbara Golf Club: many old septic systems 40+ years old: located in Arroyo Burro Creek watershed.
Veronica Springs	82	77	Semi-rural residential area on hilly terrain near mouth of Arroyo Burro Creek; some parcels border tributary stream; variable to difficult soil and geologic conditions for septic systems; Arroyo Burro Creek listed as 303(d) impaired water body for pathogens.
Sunset St/Carol Ave Area	25	84	Pocket of small residential lots surrounded by Santa Barbara urban area near La Cumbre Road; many very small lots with limited septic system repair options; local water supply wells potentially at risk.
Hope Ranch	1,947	809	Medium to large-lot semi-rural residential community on rolling hills and coastal terraces west of Santa Barbara; drains via local tributary stream to ocean, Arroyo Burro Creek and Goleta area to west; mix of older and new homes with significant equestrian uses.
GOLETA AREA			
La Buena Tierra Area	31	27	Small pocket of semi-rural residences at north edge of Goleta: drains through orchards and urban area to San Jose and Maria Ygnacio Creek; moderate to good conditions for septic systems.
Via Chaparral/La Paloma Ave	102	59	Rural residential area in foothills north of Goleta near Highway 154; rolling hills with numerous small seasonal drainage channels; moderate to difficult conditions for septic systems.
Upper Fairview Area	397	97	Rolling foothills and creekside area at north edge of Goleta on Vegas Creek; includes Holliday Hills subdivision and La Goleta Road area. Moderate to poor soil and geologic conditions for septic systems: includes some multi-family residential properties and commercial business (Infogenesis). This area is characterized by shallow perched groundwater and very poor percolation.
Painted Cave Area	44	78	Small parcels located in steep. Rugged terrain near Painted Cave area and San Marcos Trout Club; older systems for homes built on National Forest; very poor/difficult conditions for septic systems.
SOUTH COUNTY TOTAL		2,848	

Focus Area	Area (Acres)	Number of Septic Systems	Description
SANTA YNEZ AREA			
Los Olivos	280	343	Special Problem Area; large number of small to very small lots in densely developed septic town setting; shallow groundwater in large portions of town; drywells discharge directly to water table; groundwater nitrate impacts documented; recommended for wastewater management plan by Regional Water Quality Control Board; prior septic tank maintenance study; dissected by Alamo Pintado Creek; tributary to Santa Ynez River.
Ballard	173	129	Special Problem Area; medium to large-lot rural town; medium to high density of septic systems; fair to good conditions for septic systems; many older developed properties with possible code compliance problems; adjacent to Alamo Pintado Creek; tributary to Santa Ynez River. Flood control improvements completed at the northeast end of the village alleviated shallow groundwater issues.
Santa Ynez Area	1.610	669	Large number and density of semi-rural and rural residential development on east side of Santa Ynez; soil conditions range from good to very poor due to undulating topography and high (perched) groundwater conditions caused by deposition from old stream meanders.
Janin Acres	207	98	Special Problem Area; rural residential subdivision and some commercial properties, located between Santa Ynez and Solvang; shallow restrictive soils favoring deep trenches and dry-wells have apparently led to elevated nitrate levels in groundwater/local water supply wells (Rancho Marcelino Water Company).
NORTH COUNTY			
Lake Marie Estates	134	181	Large semi-rural subdivision located east of Orcutt; relatively small lots in fair to good soil conditions; many older systems and some localized problems due to restrictive (slowly permeable) subsoils.
Orcutt	98	38	Large rural residential lots located west of Orcutt fair to good soil conditions: older systems and possible localized problems due to restrictive (slowly permeable) subsoils.
NORTH COUNTY TOTAL		1,458	
GRAND TOTAL		**4,306**	

Septic System Information Surveys

A major part of the Septic System Sanitary Survey was devoted to researching, compiling and reviewing existing information from a variety of sources, including: (a) prior septic system surveys; (b) personal experience and permit and complaint files maintained by the County Health Department and the Regional Water Board; (c) Septic Tank Inspection reports; (d) personal knowledge and experience of septic tank contractors and consultants; and (e) individual homeowners. This information forms a large part of the basis for assessing the status of septic system practices in the County.

Prior Studies

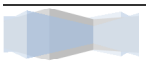
The only significant prior septic system surveys in Santa Barbara County were conducted in the Santa Ynez area. In 1975, the County completed a door-to-door survey in Los Olivos. The septic systems were found to be functioning satisfactorily, but most of the systems were determined to be discharging directly to groundwater during certain times of the year. In 1995, a Septic Tank Maintenance District Study was completed for the Santa Ynez area. This involved review of current practices and problems and an assessment of the feasibility of establishing a maintenance program to address the problems. No action has been taken to implement the conclusions and recommendations of the study.

County Records

Permit Files. One of the main sources of septic system information are County permit files. Since 1991, septic system permit files have been maintained by the Public Health Department in the Main Office (Santa Barbara) and North County Office (Santa Maria). Before that septic system permitting was the responsibility of the Building Department. Building Department septic system records are scattered and sketchy, and were not researched and compiled as part of this Study. It is estimated that there is permit information on file with the Health Department for about 25% to 30% of the septic systems in the County.

As part of the Sanitary Survey, an extensive review of permit files was completed. The file information was assembled in an excel spreadsheet, which was then incorporated into the GIS database for use along with the 800 to 900 electronic permit files already compiled by the Health Department staff. At the conclusion of the search, approximately 2,500 permit files were added to the County's permit database. From these data it was determined that permits issued over the past 10 years included 376 new construction, 173 modifications, 607 repairs, 251 abandonment, and 288 certification of existing systems. In terms of system types, the data show an almost even, 50-50 split between leachline and drywell designs.

Complaint Files. The Health Department maintains records of complaints that are received in regard to various public health or sanitation matters. Septic system surfacing and nuisance odor problems are a common complaint issue. As part of the Sanitary Survey individual complaint files were reviewed, concentrating mainly on information for the various defined Focus Areas. Complaint information was entered into excel spreadsheets, and made available for integration into the GIS database. During the period of 1993 through 2001, there were a total of 88 septic system-related complaints in the 24 Focus Areas examined in this Study. Of the complaints filed, approximately one-third were confirmed as a problem that the Health Department was able to trace to a malfunctioning septic system or graywater discharge. The Focus Areas recording the greatest number of complaints (six or more) were Hope Ranch, Mission Canyon, Sunset/Carol Avenue Area (Santa Barbara), Toro Canyon and Veronica Springs. The greatest numbers of confirmed problems (three or more) were the Sunset/Carol Avenue Area, Painted Cave Area, and Santa Ynez.



Septic Tank Inspection Reports

Septic tank inspection reports provided significant information for the Sanitary Survey. As part of this Sanitary Survey, data from the first three years of Septic Tank Inspection Reports were compiled and reviewed. Concurrent with the Sanitary Survey, the Health Department staff converted the hard copy Inspection Reports into an electronic format linked to the GIS database. The data reviewed included inspections for a total of 1,820 parcels, completed through December 2001.

Overall, the Inspection Reports for the first three years of this mandatory inspection program revealed 75 dry well/seepage pit failures, 59 leachline failures, and 223 additional unspecified failures. Failures are defined as those systems noted in the inspection reports as: (a) failed disposal field with discharge to surface; (b) disposal field not absorbing septic effluent; or (c) discharge of groundwater to surface/drainage (possible failure). This amounts to a total of 357 system failures that were identified in a 3-year period (roughly 120 per year) and have been (or will be) addressed with appropriate corrective action. These represent significant septic system problems that may have not been identified and addressed, were it not for the County's mandatory inspection and reporting program. Additionally, the Inspection Reports show that several hundred maintenance issues were identified and corrected through the septic system evaluations.

Inspection data for the various Focus Areas showed the following:

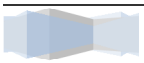
1. Inspection Rate. Overall, about 25% of the septic systems in these Focus Areas were serviced during the first three years of the Inspection Reporting Program. The areas having the greatest inspection activity, as a percentage of the number of systems, were Padaro Lane, Hope Ranch, Veronica Springs, Buena Vista Creek, Cold Springs, Sycamore Creek, Mission Creek, Upper Fairview and Toro Canyon. In these areas, the rate of inspection ranged from 25 to 33%. The areas with the lowest rate of inspection (less than 15% of the systems) were Painted Cave, Lake Marie Estates and Orcutt area.

2. Maintenance Rate. Overall, system maintenance work was required on approximately 5.3% of the systems in these Focus Areas during the 3-year reporting period. The areas reporting the greatest maintenance activity, as a percentage of total systems, were Sand Point Road, Hope Ranch, Rincon Point, Sycamore Creek and Mission Canyon. As a percentage of inspections performed, the greatest amount of required maintenance was reported to be in Rincon Point, Sand Point Road, Ballard, Santa Ynez, and Sunset/Carol Ave. Area.

3. Failure Rate. Overall, system failures were observed in about 4.3% of the total systems in these Focus Areas during this 3-year reporting period. The greatest number of failures were observed in Hope Ranch, Santa Ynez, Toro Canyon, Buena Vista Creek, Los Olivos and Sycamore Creek areas. As a percentage of the total systems in the area, Arroyo Paredon and Padaro Lane had the highest rate of failure (8%). The areas reporting the lowest number and rate of failures were Rincon Point, Orcutt area, Ballard, Painted Cave, and Mission Canyon.

Contractor-Consultant Questionnaire Survey

A questionnaire was developed and distributed to contractors and consultants that provide septic system services within Santa Barbara County to information, such as: (a) the types of septic system problems frequently encountered; (b) areas of concern; (c) problem ratings; (d) opinion on long term septic system management needs; and (e) comments or recommendations on standards, regulations, pumper inspection report requirements, monitoring needs, or any comments in general. Fourteen contactors/consultants responded to the survey.



In general the South Coast was given a medium overall problem rating. Specific focus areas that were assigned a high problem rating include Rincon Point, Padaro Lane, Sand Point Road, and Cold Springs area. Improved practices, which include routine system inspection, alternative design, community system, and sewers, were recommended for Rincon Point, Padaro Lane, Sand Point Road, Toro Canyon and Hope Ranch. In the North County, the overall problem rating was ranked as low to medium. Routine system inspections and allowing alternative designs were recommended for the Santa Ynez area. A minority of the respondents either had no opinion or felt the program is OK as is. Specific comments and recommendations received from contractors/consultants are listed in **Table 2-2**.

Homeowner Questionnaire Survey

A septic system questionnaire was developed and distributed to residents in the watershed areas that were selected for water quality sampling and for focused evaluation. In conjunction with the mail-out survey, five public meetings were held in the South Coast and North County areas during April 2002. The purpose of the questionnaire survey and meetings was three-fold: (1) to inform the residents in the study area about the Sanitary Survey and share some of the preliminary findings; (2) to allow homeowners to provide direct input to the Sanitary Survey regarding their own personal knowledge and experience with the septic system on their property; and (3) to provide a forum for discussion of septic system issues in general as a matter of public outreach and education. Out of approximately 3,860 questionnaire survey forms mailed to property owners, a total of 576 (15%) questionnaires were completed and returned by homeowners.

Briefly, information obtained from the homeowner questionnaire survey included the following:

- *Type of Disposal System. Approximately two-thirds indicated their system include leachlines for disposal; a little less than one-third reported dry wells/seepage pits.*
- *Graywater Systems. Approximately 7% reported having graywater systems.*
- *Age of System. About 16% indicated their system to be less than 10 years old, and nearly 60% stated that their system was more than 10 years old; the remainder indicated no knowledge of the system age.*
- *Pumping of System. About half of the people indicated they have their septic tank pumped out about once every 2 to 5 years, which is the normally recommended frequency. About the same number indicated less frequent pumping. Some (6%) indicated pumping once a year and, in Hope Ranch, about 2% reported more than one pumping per year, which is generally indicative of more frequent system problems.*
- *Repairs. Roughly 40% indicated that their septic system had been repaired at some point in time; and virtually all indicated that the repair was effective.*
- *Problems Observed. About 12% indicated that they had observed problems with their system, including: (a) slow drainage of plumbing fixtures and backup into the house; (b) wet areas and/or odors in the leachfield area; and (c) surfacing sewage (i.e., liquid on the ground surface). The predominant response for all problems was that the conditions occurred in response to heavy rainfall or for "unexplained reasons".*
- *Other Homeowner Comments. About 5% entered other comments on the survey form in the space provided. Most of the individual comments fell into three main categories: (1) expressing frustration with the operation of their septic system and urging the extension of sewers to their area; (2) emphasizing that septic systems can be effective as long as they are maintained properly; and (3) complaints about failures of neighboring septic systems.*

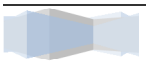
Table 2-2
Contractor-Consultant Comments and Recommendations

- **Design Standards and Regulations**
  - Recycler System
  - Efforts to update ordinance is good
  - Encourage sewer connections
  - Recommend minimum depth under 4" perforated pipe to be no less than 36"
  - Old systems are typically undersized
  - Require grease traps where needed
  - Install diverter valve instead of distribution box
  - Upgrade septic system, as needed, when house is remodeled.
  - Seasonal saturation is a problem
  - Old drywells are not gravel filled

- **Septic system pumper/inspection reporting requirements**
  - Enforce codes to repair or replace failed systems.
  - Require mandatory pumping every 2-3 years.
  - Drywells on pumper's maps should be checked for rock.
  - Properly pumping the septic tank and making sure invert is properly installed in the tank would solve most leachfield failures.

- **Other monitoring/inspection needs**
  - Safety
  - Pumpers completing inspection reports must be knowledgeable in the installation and maintenance of the systems that they inspect.

- **Other**
  - Montecito, Hope Ranch, and Padaro Lanes are good candidates for sewer because of poor percolation rates and/or high groundwater makes sites unsuitable for septic systems.
  - Poor design of the septic system is the rule rather than the exception.
  - Mainly old septic systems experiencing failure.
  - Eliminate use of septic systems.



Surface Water Quality Impacts

A major impetus for this Septic System Sanitary Survey was the chronic observation of high bacteriological readings in the ocean waters along the South Coast of Santa Barbara County. Discharges from septic systems located near the ocean or in the contributing watershed areas were identified as one possible source for these high readings. Various water quality sampling efforts have been conducted in the past, and there are other on- going studies and sampling programs that provide information on surface water quality conditions in Santa Barbara County. However, there have been no comprehensive water quality sampling studies directed specifically at septic system areas in the County. To address this "data gap", a surface water quality sampling effort was conducted as part of the Sanitary Survey. The purpose of the sampling program was to document the water quality conditions in surface streams in areas of the County where there are large concentrations of septic systems, to aid in assessing whether or not (and where) surface water contamination may be occurring as a result of existing septic system practices.

Sampling Program

Sampling Locations. Surface water sampling stations were selected to isolate, as much as possible, surface waters in areas having a relatively large number or heavy concentration of septic systems or where there have been historic problems or special concern regarding septic system usage. Initially, 53 sampling stations were identified for sampling on 20 different streams that flow through areas of the County served by septic systems. Approximately two-thirds of the sampling stations were on streams in the South Coast area, a few in the Orcutt area, and the remainder in the Santa Ynez area. Because of unusually low rainfall-runoff conditions during the period of the study, several of the proposed sampling stations were dry throughout the sampling period. Out of the original 53 identified sampling stations, only 33 had sufficient streamflow and were able to be sampled during the study.

Water Quality Constituents. The sampling program focused strictly on bacteriological impacts, which is the primary public health consideration relative to septic system practices and, generally, the best indicator of septic system influence. Each sample was analyzed for the following bacteria indicators: Total Coliform, E. coli, and Enterococcus.

Sampling Period and Methods. The water quality sampling was conducted over an approximate 14-week period in the winter and spring of 2002, starting the last week of January and extending into the first week of May. Six full sampling runs were conducted during the study period. The sampling program was designed to avoid sampling during rainfall-runoff periods, in order to avoid collection of stormwater runoff pollutants from other sources (e.g., animal wastes). There were no major storms during the sampling period; all samples were taken during what would be considered non-rainy periods.

Summary of Sampling Results and Findings

The results and findings from the sampling data can be summarized as follows:

1. A large percentage of the sample results were in excess of water contact recreation criteria for all bacteria indicator organisms; and this was common to most of the streams sampled.

2. Streams showing the lowest bacteriological readings and fewest incidents of exceedances included:

Romero Creek	San Antonio Creek
Buena Vista Creek	Maria Ygnacio Creek
Montecito Creek	San Jose Creek
Mission Creek	

3. Streams showing the highest bacteriological readings and the most incidents of exceedances included:

Rincon Creek	Sycamore Creek
Arroyo Paredon	Arroyo Burro Tributary
East Toro Creek	Hope Ranch (unnamed creek)
West Toro Creek	Alamo Pintado Creek

4. The percentage of all values found to be in excess of bacteriological water quality objectives for each indicator organism were as follows:

Parameter	Log Mean	Single Sample Maximum
Total Coliform	91%	35%
E. coli	39%	28%
Enterococcus	73%	53%

5. The percentage of values exceeding the State Health Department standards and Basin Plan objectives for water contact recreation (28 to 91 percent) was similar to the findings from the 1999 South Coast Watershed Characterization Study, which reported exceedance percentages of 30 to 90 percent for the four streams investigated in that study.

Groundwater Quality Impacts

Standard criteria for siting and design are intended to prevent adverse impacts on groundwaters from onsite sewage disposal systems. The most important factors are the provision of sufficient depth of unsaturated soil below the leachfield (or drywell) where filtering and breakdown of wastewater constituents can take place. Without adequate separation distance to the water table, groundwater becomes vulnerable to contamination with pathogenic bacteria and viruses, as well as other wastewater constituents (e.g., nitrogen). Highly permeable soils (e.g., sands and gravels) also provide minimal treatment of the percolating wastewater and normally require greater separation distances to afford proper groundwater protection. Additionally, where there is a high concentration or density of septic systems in a given area (i.e., small lot sizes), groundwater can be degraded from the accumulation of nitrate, chloride and other salts that are not filtered or otherwise removed to a significant extent by percolation through the soil. Adverse effects on groundwater quality from septic systems can show up in the form of degraded or contaminated well water supplies, or potentially as subsurface seepage into streams, lakes, lagoons or ocean waters.

The Septic System Sanitary Survey for Santa Barbara County did not include any field investigation or testing of groundwater quality. Instead, a review was made of available groundwater quality information to help in identifying areas of existing or threatened impacts from onsite sewage disposal systems. The information was obtained from published reports, County and Regional Water Board studies, and monitoring data from selected water supply wells in the County. The findings are summarized below.

Groundwater Basin Information

Information from the Santa Barbara County Water Agency and the Central Coast Regional Water Quality Control Board indicates that groundwater quality is generally adequate tor existing and potential uses in most of the groundwater basins in the County. However, the data indicate evidence of increasing nitrate levels in several of the major groundwater basins, namely, Santa Maria, Cuyama and Santa Ynez. The Regional Board has identified these groundwater basins for further investigation to determine the specific sources and develop appropriate measures to arrest, control or manage the nitrate problems. Agricultural operations are believed to be responsible for most of the observed increases in groundwater-nitrate concentrations. However, in the Santa Ynez Valley, the large concentrations of septic systems are also considered to be a contributing factor.

Water System Information

Review of groundwater data for small water system wells located in and around the defined Focus Areas show reasonably good groundwater quality, with respect to nitrate concentrations, for most of the systems. There are noticeably higher nitrate concentrations in several of the wells in the Santa Ynez and Los Olivos area, corresponding with findings of the Regional Board's groundwater-nitrate assessment study. None of the systems reported nitrate levels in excess of the drinking water limit of 45 mg/L; however, there were several showing results approaching the limit.

Groundwater quality data reported for small water systems in the South Coast area are generally lower in nitrate levels than in the Santa Ynez Valley, with the following exceptions.

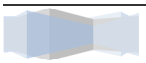
Veronica Springs – Vista Vallejo Area. The Las Positas Mutual Water Company has one inactive well (#1) that has shown a consistently high nitrate concentration, virtually at the drinking water limit of 45 mg/L. This well draws its supply beginning at a depth of 75 feet and may be influenced by discharges from septic systems in the Veronica Springs area or, more likely, the Vista Vallejo area, which is located immediately to the north of the well.

Sunset Road/Carol Avenue Area. Nitrate data for the Amber Gardens and Lincolnwood Subdivision water wells in the Sunset Road/Carol A venue area of Santa Barbara show an increasing trend in nitrate concentration over the past 20 years, with levels approaching the drinking water limit in recent years. Both wells are in relatively close proximity and downgradient of the "pocket" of septic systems in the Sunset Road/Carol A venue area, where numerous drywells are used due to the relatively small lot sizes of these parcels. Based on the dense concentration of septic systems on relatively small lots so close by, there is a reasonable likelihood that the elevated nitrate concentrations in these wells is due mainly to septic system discharges.

Local Problem Areas

Two specific groundwater pollution problem areas have been documented in septic system areas in Santa Barbara County. These are Los Olivos and Janin Acres in the Santa Ynez Valley. The finding of elevated groundwater-nitrate problems in both of these areas was a significant factor in the Board of Supervisors' designation of these two areas as Special Problem Areas.

Los Olivos. In 1975, the Santa Barbara County Health Department conducted a door-to- door sanitary survey of residences and businesses in Los Olivos to assess the status of septic system conditions. The study revealed that about 60% of the properties were served by drywells that generally extend into permeable alluvial deposits and discharge directly to the groundwater during certain times of the year. A follow-up water quality sampling effort in 1977 showed conclusively that the high density of septic



systems discharging into or immediately above the water table in Los Olivos is contributing to a significant increase locally in the groundwater-nitrate concentration. Some of the wells registered nitrate concentrations virtually at the drinking water limit of 45 mg/L.

Janin Acres. The Janin Acres subdivision, located between Solvang and Santa Ynez, was developed in the late 1960s and obtains its water supply from two local wells owned and operated by the Rancho Marcelino Water Company. Many of the parcels in the subdivision utilize deep trenches or drywells for onsite sewage disposal. Sampling of the Rancho Marcelino water wells over the past 40 years has indicated a significant increase in nitrate concentration that coincides with the development of the subdivision and the use of onsite sewage disposal systems in the area. The nitrate concentrations found in the wells has increased from less than 10 mg/l to over 50 mg/L (i.e., exceeding the drinking water limit) during this time period. The data show a strong correlation between groundwater quality degradation and the installation and use of septic systems in the Janin Acres subdivision and neighboring areas in Santa Ynez (to the north).

Problem Assessment

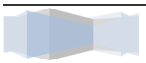
Using the data collected in the study, an overall problem assessment was made for each of the identified septic system Focus Areas. The purpose of this assessment was to define or rate the degree of the septic system problems in each of the Focus Areas related to environmental effects and provision of basic sanitation requirements. Septic system performance is affected by numerous factors that cannot be reduced to simple calculations; and evidence of system performance often changes over time and is not easily discerned from a one-time inspection or survey. Accordingly, the analysis incorporated a combination of factual (scientific) data, anecdotal information obtained from files, surveys and interviews, and professional judgment exercised by the project team based on many years of experience in this field. The results are intended to establish, as much as possible, an objective picture of the septic system operational and environmental conditions in each area to guide decisions on long-term management of these systems or, as necessary, their eventual replacement with more appropriate methods of sanitary waste treatment and disposal.

Assessment Factors

The following assessment factors and rating system were used as the basis for judging the suitability and performance of septic systems in each Focus Area.

Geology/Soils/Groundwater Constraints. The basic physical suitability of an area for the use of onsite sewage disposal systems is dictated more than anything else by the geology, soils and groundwater conditions. For this factor, a "High" rating was assigned to areas where siting constraints were judged to be significant because of the geology, soils or known high groundwater conditions. A "Medium" rating was assigned where there was found to be evidence of probable or variable, site-specific constraints. A "Low" rating was assigned to areas where the conditions appear, from all available evidence, to be generally suitable for septic system use with few or no serious inherent geologic, soils or groundwater constraints.

Lot Size and Density of Systems. Generally, the larger the lot size, the greater the ability for septic systems to be located and operated safely and effectively. For this factor, a "High" rating was assigned to areas having a high percentage of lot sizes less than 0.5 acres. A "Medium" rating was assigned for areas with lot sizes predominantly 0.5 to 1.0 acre or larger; and a "Low" rating was assigned for areas with lot sizes generally greater than 1.0 acres.



Total Number of Septic Systems. The number of septic systems in a given area is important from the standpoint of judging the total population that may be exposed to public health hazards or nuisances from malfunctioning systems. For this factor, a "High" rating was assigned to areas having generally 100 or more properties served by septic systems. However, there were also a few areas with a relatively small number of systems ("pockets") surrounded by urban development on public sewers that were also assigned a "High" rating. In these few instances the potential impacts on the surrounding (urban area) population were taken into account. A "Medium" rating was assigned generally for areas with 50 to 100 septic systems; and a "Low" rating was assigned to areas with about 50 or fewer septic systems.

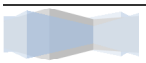
Type and Age of Systems. This factor was included to give consideration to the age of the septic systems, which are an indicator of the likely technology and design standards in use, which, in turn, can be a reflection on the probable compliance with current codes and industry standards. For this factor, a "High" rating was assigned to virtually all Focus Areas. The only areas receiving a "Medium" rating were those judged to have reasonably suitable soil/site conditions in areas well removed from surface waters and groundwater impact areas. The basis for this distinction was that the potential for finding code compliance problems or system failure problems in these areas is less, despite the system age. No areas were believed to warrant a "Low" rating with respect to system type and age.

Survey Information. This factor provided for the consideration of a wide variety of background information and input regarding the general condition, suitability and performance of septic systems in each area as reflected in the information surveys and inspection data. Considerable professional judgment was used to interpret and apply the survey information. In general, the information was reviewed to look for an indication of chronic or repeated problems and other comments indicative of the level of septic system problems or concerns in each area. Based on this review, each area was rated, qualitatively, as "High", "Medium" or "Low", depending on the preponderance of the evidence available.

Proximity/Threat to Surface Water Uses. Avoiding impacts to coastal waters as well as streams, lakes and lagoons are an important aspect of septic system use and management. This is affected largely by proximity to surface waters and the nature or uses of the waters. For this factor, a "High" rating was assigned where septic systems immediately adjoin coastal waters, perennial streams or other significant seasonal watercourses. A "Medium" rating was assigned where the watercourses in the area were judged to be primarily seasonal in nature. A "Low" rating was assigned where there were few if any identifiable watercourses judged to be at risk of impact from septic systems in the area.

Proximity/Threat to Groundwater Uses. Properly sited and operated septic systems can generally be relied upon to provide suitable protection to groundwaters. However, older and deep drywell systems as well as high concentrations of septic systems may contribute pollutants directly to the water table without sufficient opportunity for soil absorption or dispersion. For this factor a "High" rating was assigned to areas overlying major groundwater basins of the County. A "Medium" rating was assigned where only portions of the Focus Area overly a groundwater basin. A "Low" rating was assigned where the area is located outside any active or known groundwater basins, such as in the upper foothill areas north of Goleta or immediately along the coast.

Evidence of Water Quality Impact. Impacts on both surface water quality and groundwater quality were a major impetus for the funding and authorization of this Septic System Sanitary Survey. The results from the surface water bacteriological sampling program conducted as part of this study, as well as results from other prior water quality investigations, were considered in judging each area. Generally, where water quality impacts have been documented which have caused or threaten to cause exceedance of water quality criteria (i.e., standards), a "High" rating was assigned. A "Medium" rating was assigned where water quality results are suggestive of a possible impact from septic systems; and a "Low" rating



was assigned where, to date, there is little or no existing or prior evidence of water quality impact that would implicate septic systems in the area.

Summary of Results

Table 2-3 displays, in summary form, the results of the problem assessment of each of the 24 Septic System Focus Areas according to the various factors adopted for the analysis. In the far right-hand column an overall rating for the area is suggested based on collective consideration of the various individual factors.

Management Recommendations

A series of recommendations were formulated and to address septic system problems in Santa Barbara County identified through this Sanitary Survey. Recommendations include various general management measures that can be implemented by the County Environmental Health Services to address certain types of problems or situations, as well as more specific measures applicable to the individual Focus Areas examined in the study.

General Recommendations

Based partly on the results of this Sanitary Survey and partly on a broader overview of current practices, the following general recommendations are made to improve overall management of septic systems in Santa Barbara County.

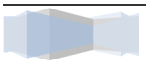
Water Quality Monitoring. The water quality monitoring program developed and conducted during this Sanitary Survey should be continued. A regular sampling program is warranted to maintain a minimum baseline level of water quality information in areas of special concern, to track any trends that may arise, and generally help to recognize problems and assist in ongoing assessment of the overall effectiveness of septic systems in the County.

Septic System Information Review A periodic review and evaluation of septic system information compiled in the County's permit and GIS database system should be made. As inspection data continues to become available, review and analysis of the data will help to identity developing problems before they become severe and give guidance on changes in policies, practices or other measures as they become needed.

Education and Training. Measures should be taken to provide or encourage training and education of septic system installers and pumping contractors. As regulations change and different technologies come into more common use, continuing education and training is needed to assure consistent understanding and application of practices and overall better performance and quality of onsite systems.

Operating Permits. The County Wastewater Ordinance should be amended to provide a mechanism for the issuance of operating permits for systems employing alternative or supplemental treatment and disposal technologies, or for other special circumstances. Alternative technologies require a higher level of maintenance oversight which would be facilitated by the use of operating permits, requiring that routine inspection and reporting is carried out to assure that system components are checked and remain functional.

Drywell Design Requirements. The County regulations for drywells should be revised to require the installation of dual (200%) capacity fields in all new installations, and supplemental treatment systems in problematic or sensitive locations. Drywells, while a necessary option in many instances in the County,



are an inferior method of onsite sewage disposal. This is because they rely primarily on physical filtering and dispersal of wastewater constituents at depths and in geologic materials that typically lack the aerobic/biological activity which predominates in the near surface soil environment and helps to sustain the long-term functioning of leachline systems. Their useful life and effectiveness can be improved through the installation of redundant (200%) systems and a higher level of pre-treatment to compensate for the lack of favorable "soil" treatment processes at the deep depths where sewage effluent is released to the environment.

Focus Area Recommendations

Specific management recommendations for the various Focus Areas examined in the Sanitary Survey fall into several categories, ranging from case-by-case management of individual septic systems (i.e., status quo) to public sewer conversion projects as follows.

Case-by-Case System Management. This reflects the current management program for septic systems in the County, where permitting of new systems, repairs and upgrades to existing systems, and response to complaints are dealt with on a system-by-system or "case-by-case" basis. This is an appropriate level of management for the majority of the County, including the following Focus Areas examined in this study:

Shepard Mesa	Upper Fairview
La Buena Tierra	Via Chaparral
Lake Marie Estates	Orcutt Area

Mandatory Inspection-Upgrade Program. A mandatory inspection and upgrade program is recommended for several areas of the County due to the age and density of septic systems, difficult site conditions, general lack of information about the sewage disposal practices and actual evidence of or potential threat to public health and water quality. The aim would be to require an inspection and servicing of each septic system similar to that performed under the existing Septic Tank Inspection requirements. Areas where this is recommended are as follows and encompass approximately 800 total septic systems:

Arroyo Paredon	Buena Vista Creek
Cold Spring	Sycamore Creek
Veronica Springs	Painted Cave

Onsite Wastewater Management Plan. Development and implementation of an onsite Wastewater Management Plan is recommended for certain areas of the County where soil-geologic conditions are reasonably suitable for continued use of septic systems for significant portions of the area, but where other factors (e.g., total number of systems, localized problems, age of systems, water quality threats) dictate that special management efforts be made to improve and maintain long-term effectiveness of onsite wastewater systems and avoid serious environmental problems. In essence, an Onsite Wastewater Management Plan is a customized septic system plan for a specific area that could include, for example, a mix of different types of septic system designs, sewerage of certain areas, and special maintenance activities. Areas where this is recommended include:

Toro Canyon	Mission Canyon
Hope Ranch	Ballard
Santa Ynez	

Extension of sewers to portions of Santa Ynez and Mission Canyon should be considered where feasible.

Public Sewerage. Conversion from septic systems to public sewers is recommended for several Focus Areas where significant problems or threat to public health have been identified in this study and where public sewers are reasonably available and represent the probable best long-term wastewater management approach for the area. The areas warranting consideration for conversion to public sewers include:

Rincon Point	Sand Point Road
Padaro Lane	Sunset Rd/Carol Ave
Vista Vallejo	Santa Ynez (selected areas)
Janin Acres	

Community Wastewater Facility. It is recommended that feasibility and environmental studies be undertaken to develop and implement a community wastewater facility for the town of Los Olivos. The need for a community wastewater solution in Los Olivos stems from the very high density of development in the town, combined with the inherent soil and groundwater conditions that force homeowners and businesses to utilize drywell systems that discharge directly into the groundwater strata in the area. The study of alternatives for the town can and should consider various service area configurations, the possibility of maintaining septic systems in limited areas of town, the possibility of a joint community facility with Ballard, an interceptor sewer connection to the City of Solvang, and various locations and technologies for a community wastewater treatment and disposal facility.

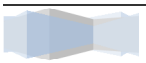
Update to the 2003 Sanitary Survey

As mentioned previously, while the Survey covered the entire county, it primarily concentrated on a number of "focus areas" where the conditions made the use of OWTS particularly problematic. Since the completion of the Survey in 2003, EHS has worked to mitigate the impacts of the use of OWTS in some of these focus areas. These efforts have primarily come in the form of funding studies to determine the feasibility of extending the public sewer. Several of these projects are discussed below.

At the request of a number of the homeowners and the City of Santa Barbara, EHS authorized and funded engineering studies to determine the feasibility and the potential costs of extending the sewer to Sunset/Carol Rd and sections of Mission Canyon. The Survey gave these areas an overall problem ranking of High and Medium High, respectively. The reports found that sewering these areas will be difficult because the terrain will necessitate the need for lift stations and the need to obtain a number of easements across private property. In addition the soil formation in the studied area of Mission Canyon is prone to slides that could result in damaging or breaking a sewer line. As a result, there has been no additional effort to extend the sewer to these areas to date.

South of the City of Carpinteria, the Survey gave the areas of Rincon Pt., Sand Point Rd. and Padaro Ln. overall problem rankings of High, High, and Medium High, respectively. The properties on Sand Point Rd. have since been connected to sewer and the OWTS abandoned. Much of Padaro Ln. is now served by public sewer and extension of the public sewer to the western portions south of U.S. Highway 101 has received all necessary permits and construction will begin soon. Work to extend the sewer to the homes located near Rincon Point began in January, 2014.

Due to high density, poor soil conditions and seasonally high groundwater, the Township of Los Olivos is a county listed Special Problems Area for the use of OWTS. Accordingly, the Survey also gave Los Olivos an overall problem ranking of High. In 2012, EHS authorized and funded a Preliminary Engineering Report to study feasibility and potential costs of installing a wastewater collection system and packaged treatment plant to serve the commercial area of Los Olivos. The report was completed in 2013 and while no construction has occurred, a "steering committee" has been formed to investigate the concept further.



Section III
Water Quality Monitoring

The purpose of this LAMP is to establish standards and policies for the installation, operation and maintenance of OWTS in order to protect water quality and public health. The water quality monitoring element is intended to track the impact of OWTS effluent on groundwater and surface water as well as the effectiveness of this LAMP in addressing those impacts over time.

Surface water is very limited and primarily in the form of reservoirs such as Cachuma Lake. The Santa Ynez River and the Santa Maria River are located adjacent to very rural land and national forest with a very low density of OWTS operating in the watershed. These rivers, while large, contain flowing water only after substantial winter rains.

There are a number of "blue-line" streams in the county. "Blue-line stream" means that a stream appears as a broken or solid blue line (or a purple line) on a USGS topographic map. Most are located in the Santa Ynez Mountains and related foothills. In general, these creeks are ephemeral in nature and contain water for only a short period of time after the winter rain season. While some creeks flow year round, they are generally located in, or adjacent to, rural lands that have a very low density of OWTS in the watershed.

Using information obtained from the Water Resources Division of the Santa Barbara County Public Works Department, the 2003 Sanitary Survey identifies and briefly describes the major groundwater basins of the county. Reproduced from the Survey, **Figure 3-1** contains a map showing the configuration and location of these basins while **Table 3-1** provides information on the approximate size of each basin (in acres) as well as the primary uses of each basin's water resources.

Because of the factors discussed above, the water quality monitoring element of the LAMP will focus on the groundwater resources of the county. More specifically, it will focus on those groundwater basins located beneath areas with a large number and or a high density of OWTS where the use of these systems could impact or is thought to have impacted, groundwater quality.

The County will use data from available sources consistent with OWTS Policy Section 9.3.2 to assess groundwater quality. In addition to the water systems operated by the cities and special districts, there are a number of smaller public and semi-public water systems operating in Santa Barbara County. Most of these smaller systems utilize groundwater exclusively and all are required to perform routine, water quality monitoring as a condition of their Domestic Water Supply Permits. EHS proposes to utilize this data, specifically, bacteria, nitrate and nitrite results, to measure OWTS impacts on groundwater.

.

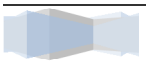


Figure 3-1
Major Groundwater Basins
Santa Barbara County, California

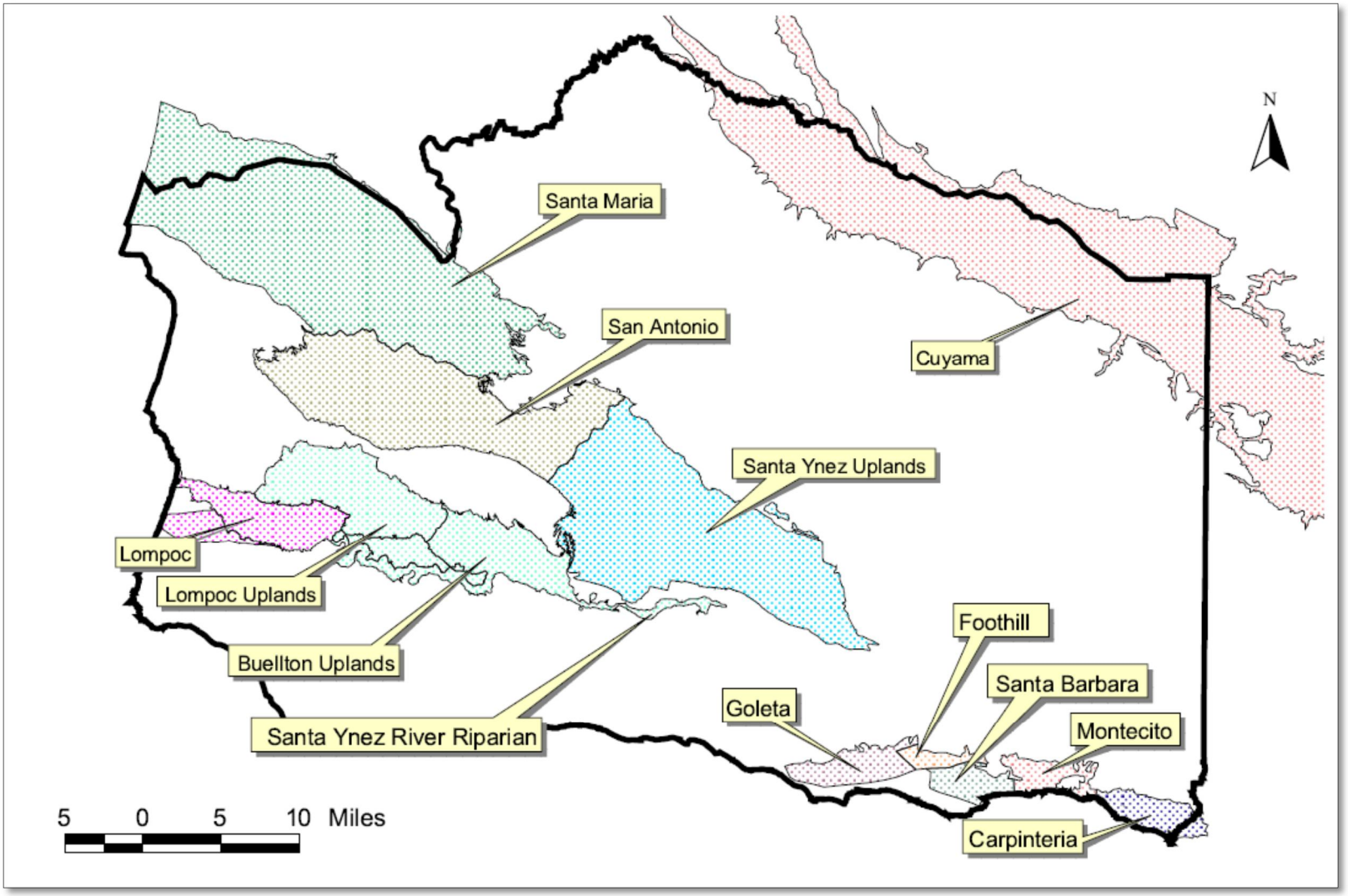
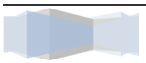


Table 3-1
Groundwater Resources

Region	Groundwater Basin	Area (acres)	Groundwater Uses	Land Uses	Number of Septic Systems*
South County Groundwater Basins	Carpinteria	6,700	Agricultural	Agricultural	655
	Montecito	4,300	Agricultural, residential	Agricultural, residential	876
	Santa Barbara	4,500	Municipal	Urban residential, industrial, commercial	146
	Foothill	3,000	Municipal	Residential	261
	Goleta (North/Central and West)	9,200	Agricultural	Urban residential, commercial, some agricultural	305
Santa Ynez River Groundwater Basins	Santa Ynez Uplands	83,200	Agriculture, some residential		2,245
	Buellton Uplands	16,400	Agricultural, municipal, and domestic	Agricultural, rural residential	526
	Lompoc	48,600	Agricultural, mining and processing, municipal	Agricultural, oil development, mining, sanitary landfill	121
North County Groundwater Basins	San Antonio	70,400	Agricultural, military, municipal	Agricultural (mostly vineyards), ranching, limited urban development	126
	Santa Maria Valley	110,000	Petroleum operations, agriculture, municipal	Agricultural, oil development, sanitary landfill, limited urban development	826
Cuyama Groundwater Basins	Cuyama	441,600	Agriculture, petroleum operations, commercial and domestic	Agricultural, oil development, sanitary landfill, limited urban development	159
Other Groundwater Basins and Extraction Areas	More Ranch	502	NA	Open space, limited residential and greenhouse agriculture	included in Goleta total
	Ellwood to Gaviota	67,200	Petroleum operations, agricultural, residential	Oil development, agricultural, residential, open space, sanitary landfill	included in Goleta total
	Gaviota to Point Conception	23,040	Ranching, limited agricultural, domestic	NA	
	Santa Ynez River Riparian Groundwater Basin	12,000	NA	Urban development, ranching, agricultural	included in Buellton Uplands total



Each major basin and EHS's proposed monitoring program is described below.

South Santa Barbara County

Carpinteria Groundwater Basin

This groundwater basin underlies approximately 6,700 acres in the Carpinteria Valley, measuring approximately 7 miles long and up to 2 miles wide between the Santa Ynez Mountains and the Pacific Ocean. South of U.S. Highway 101 into the foothills, the dominant land use in the valley is agricultural consisting of nurseries, orchards and greenhouses. The interior of the Carpinteria Valley consists of larger parcels that allow for agricultural use and consequently a low concentration or density of OWTS.

The coastal, more urban area is served by the public sewer operated by the Carpinteria Sanitary District. This system consists of approximately 40 linear miles of collection pipe and a 2.5 million gallon per day treatment plant. Treated effluent is discharged to the ocean**.** As was mentioned in Section II, the Carpinteria Sanitary District has extended the sewer to serve the beachfront residential areas located at Rincon Point, Sand Point Rd, Sandyland Cove and Padaro Lane and is in the process of completing the sewer extension to Rincon Point.

With the extension of the sewer to the beach communities, remaining parcels served by OWTS are located in the rural and inner rural areas. These parcels tend to be multiple acres in size with adequate area for an OWTS. Due to the low density of OWTS and the predominant agricultural land use in the valley, nitrate loading in surface or groundwater would likely be the result of agricultural practices. Therefore, EHS does not intend to collect groundwater monitoring data from this basin as part of this LAMP.

Montecito Groundwater Basin

This basin underlies approximately 4,300 acres along a narrow strip between the Santa Ynez Mountains and the Pacific Ocean. Predominant land use is residential with some agriculture north of U.S. Highway 101 and into the foothills of Santa Ynez Mountains.

The higher density urban areas adjacent to U.S. Highway 101 are served by the public sewer systems operated by the Montecito and Summerland Sanitary Districts. The two districts own and maintain approximately 80 linear miles of collection pipe and two treatment plants with a combined capacity of about 2 mgd. Both plants discharge treated effluent to the ocean.

OWTS are used by residences in the inner rural and rural areas located north of U. S. Highway 101 into the foothills. Parcels range in size from small to very large with a median area of approximately 2 acres. The poor soils and difficult terrain in the foothills make the siting and use of OWTS, challenging. Consequently, Toro Canyon, the Buena Vista and Cold Springs Creek drainages as well as Sycamore Canyon were identified as focus areas in the Sanitary Survey.

Groundwater from the basin supplies some semi-rural residences, several small public and semi-public water systems and a small amount of agricultural uses. The El Bosque Mutual Water Company is a State Small Water System operating under permit and inspection by EHS (please see **Figure 3-2**). Title 22 of the California Code of Regulations requires that State Small systems monitoring the bacteriological quality of their water on a quarterly basis. In addition, Chapter 34B of the Santa Barbara County Code requires that the water system operator monitor for nitrates and nitrites once every three (3) years. EHS proposes to use the water quality data from this water system as part of the LAMP's monitoring element.

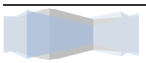
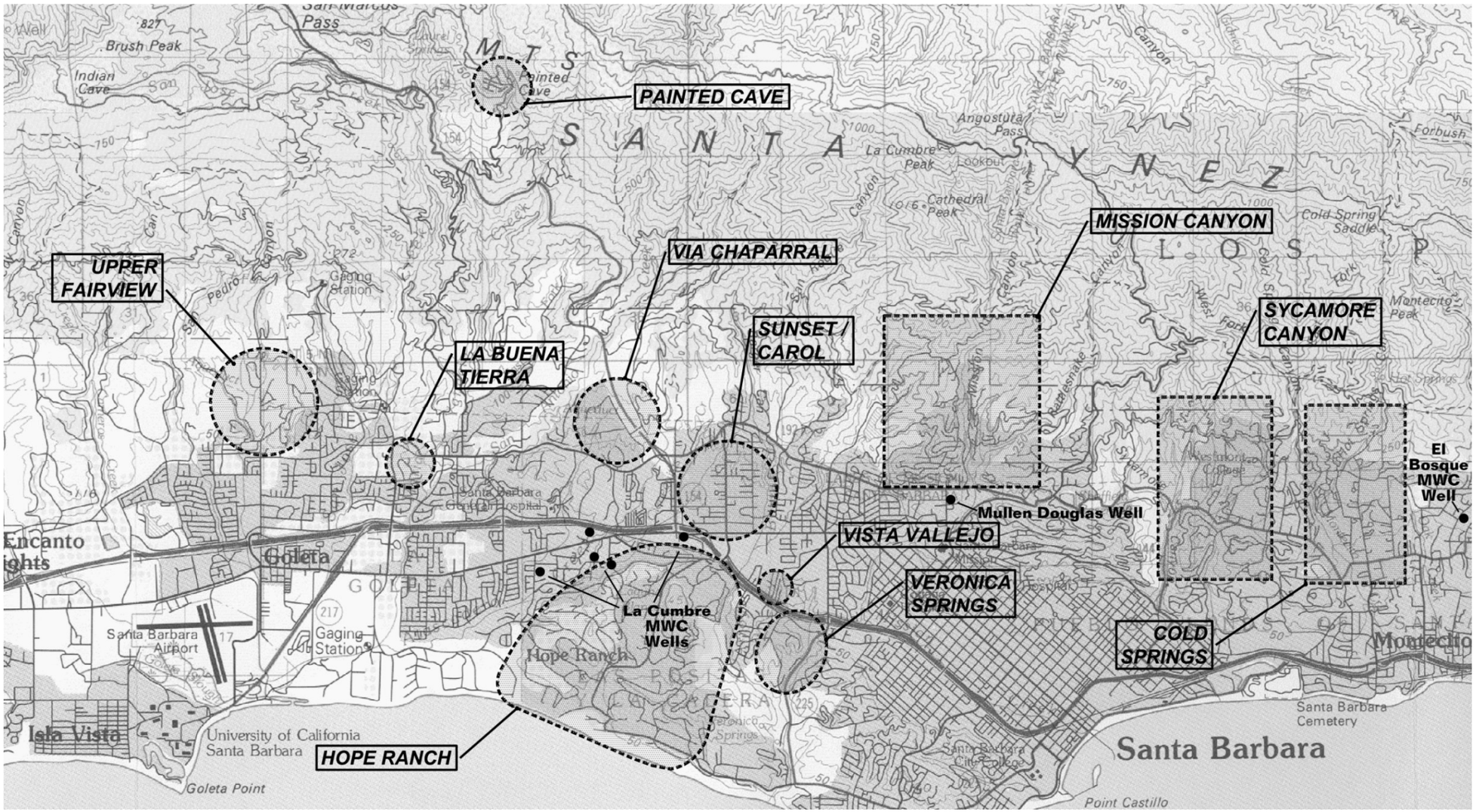


Figure 3-2
Water Quality Data Points



Santa Barbara, Foothill & Goleta Basins

The Santa Barbara, Foothill & Goleta basins and sub-basins cover approximately 16,700 acres collectively. There are some interspersed remnant agricultural parcels but generally the area is urbanized. The primary land use is residential, commercial and industrial.

The majority of this area is served by public sewer that are owned and operated by the City of Santa Barbara, the Goleta Sanitary District and the Goleta West Sanitary District. Located within this area is approximately 400 miles of pipe and two 8 million gallons per day wastewater treatment plants. One plant is operated by the City of Santa Barbara and the other by the Goleta Sanitary District. Both plants discharge treated effluent to the ocean.

The majority of OWTS above these groundwater basins are located on parcels in the Santa Ynez Mountain foothills north of the cities of Santa Barbara and Goleta. The generally poor soils and steep, hilly terrain in these semi-rural areas make the siting and use of OWTS challenging. OWTS in this area have a long history of failure. For these reasons, the Mission Canyon area was identified as a focus area in the Survey.

Aside from the foothill area the other significant concentration of OWTS is the Hope Ranch area. Like the foothills, Hope Ranch is semi-rural residential community on rolling hills and coastal terraces located west of the City of Santa Barbara. While the parcels are generally large, average lot size is 2.4 acres, with better soil and terrain than those found in the foothills, the area is crisscrossed by drainages and there are areas of perched high groundwater.

The closest active well to the Mission Canyon area is owned and operated by a state small water system (Mullen–Douglas) under permit and inspection by Environmental Health Services (please see **Figure 3-2**). As previously stated, the Santa Barbara County Code requires State Small water systems to monitor for nitrates and nitrites on a tri-annual basis and to forward the results to EHS. Additionally, state law requires quarterly bacteriological monitoring of the water supply.

The La Cumbre Mutual Water Company (LCMWC) owns and operates the water system that supplies potable water to the Hope Ranch community. This water system operates under a Domestic Water Supply Permit issued by the California Department of Public Health (CDPH). While the LCMWC utilizes some water from the state water project, it relies mostly on groundwater obtained from wells that the water company owns and maintains (please see **Figure 3-2**).

EHS will utilize the nitrate, nitrite and bacteriological analysis results from the Mullen-Douglas State Small water system and the La Cumbre Mutual Water Company as data points in the groundwater monitoring element of the LAMP. Please see **Figure 3-2** for the location of the water systems and sample points.

The remaining coastal area west of the City of Goleta is sparsely populated consisting primarily of large agricultural zoned parcels. While the soils and topography are generally not conducive to the use of OWTS, the large parcels and the corresponding low density indicates that the impact on water quality is considered to be minimal.

Santa Ynez River Groundwater Basins

Santa Ynez Uplands Groundwater Basin

The Santa Ynez Uplands basin encompasses approximately 83,000 acres bordered on the south by the Santa Ynez Mountains and by the San Rafael Mountains on the northeast. The primary land uses are agriculture (wine grape growing, cattle grazing) and residential.

Residential parcels are semi-rural to rural in nature with a median parcel size of 2.5 acres. Conditions for the use of OWTS vary, ranging from very good to poor with areas with restrictive soil characteristics, shallow groundwater and or difficult topographic features such as steep slopes and drainages.

The major "urban" centers consist of the City of Solvang and the unincorporated townships of Santa Ynez, Los Olivos and Ballard. The residents in Solvang are connected to a public sewer owned and operated by the City. Similarly, most of the residents in the township of Santa Ynez are connected to a sewer owned and operated by the Santa Ynez Community Services District. The District operates and maintains the collection system only. The effluent is directed to Solvang's treatment plant.

The residential and commercial structures in the townships of Los Olivos and Ballard are served by OWTS. The use of OWTS in these areas is problematic due to a combination of poor soils, high groundwater and small parcels. Both Los Olivos and Ballard were listed as Focus Areas in the Sanitary Survey.

Janin Acres is also listed as a Focus Area in the Survey. Janin Acres is a residential subdivision consisting of approximately 80 parcels located east of the City of Solvang along Highway 246. While the median parcel size is approximately 2 acres, poor shallow soil conditions generally result in the use deep trenches or seepage pits for effluent dispersal.

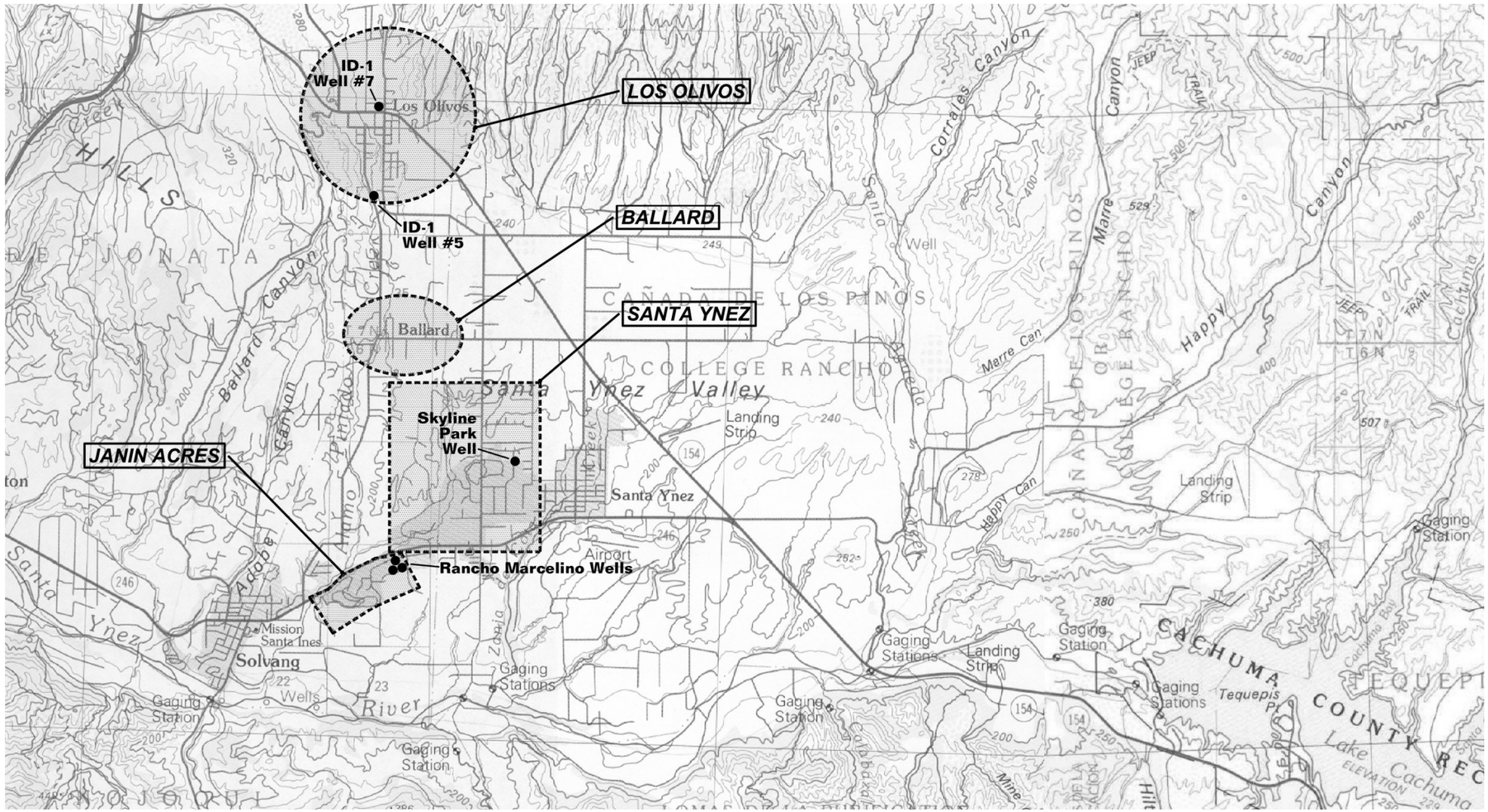
Examining a map of the Santa Ynez Valley shows that Los Olivos, Ballard and Janin Acres are located along a north-south line paralleling Alamo Pintado Creek. Consequently, EHS will use the water quality monitoring results from several public water systems located in this area as data points for the LAMP water quality monitoring element. Please see **Figure 3-2** for the locations of the water system and sample points. Please see **Figure 3-3** for the locations of the water systems and the wells that will be used as data points.

The Santa Ynez River Water Conservation District, Improvement District #1 (ID1) provides drinking water to large part of the unincorporated areas adjacent to the City of Solvang including Santa Ynez, Ballard and Los Olivos. ID1 operates under the authority of a Domestic Water Supply Permit issued by CDPH. As noted in **Figure 3-3**, ID1 has several wells in and around Los Olivos that will also be used as data points.

The Skyline Park Mutual Water Company is a small community water system supplying water to a residential subdivision located near the intersection of Highway 246 and Refugio Rd. in Santa Ynez. The Water Company serves 94 residential connections under the authority of a Domestic Water Supply Permit issued by EHS as the designated Local Primacy Agency. As a condition of its permit, the water company must perform routine water quality monitoring and submit the results of that monitoring to EHS. EHS proposes to use the data obtained from the Skyline Park Mutual Water Company as part of the LAMP water monitoring element.

The Rancho Marcelino Water & Service Company supplies drinking water to the aforementioned Janin Acres subdivision. Like the Skyline Park Mutual Water Company, it operates under a permit issued by EHS and similarly must complete routine water analysis. EHS proposes to use these results as its final data point for monitoring the water quality in the Santa Ynez Upland Basin.

Figure 3-3
Water Quality Data Points



Buellton Uplands Groundwater Basin

The Buellton Uplands Groundwater Basin underlies an area of 16,000 acres located between cities of Solvang and Lompoc. Agriculture, primarily in the form of cattle grazing and wine grape growing, is the dominant land use.

The City of Buellton is the largest urbanized area located within the basin's boundaries. Its 4,000 residents are connected to a sewer system owned, operated and maintained by the City. The remaining residential areas in the basin are semi-rural or rural in nature.

Due to the low density of OWTS in use in the Buellton Uplands Groundwater Basin, it is felt that any impact to groundwater quality by these systems is minimal.

Lompoc Groundwater Basin

The Lompoc Groundwater Basin is bounded by the Purisima, Santa Rosa and Lompoc Hills and covers approximately 48,000 acres. The primary land use in the valley is agriculture.

The major urban areas consist of the City of Lompoc and the unincorporated areas of Mission Hills and Vandenberg Village. The residents of these areas are connected to sewer systems operated and maintained by the City of Lompoc, the Mission Hills Community Services District and the Vandenberg Village Community Services District, respectively. The remaining residential development is rural in nature on multiple acre or large agricultural parcels.

Due to the low density of OWTS in the Lompoc Groundwater Basin, as with the Buellton Uplands, any impact to groundwater by these systems would be minimal.

North Santa Barbara County Groundwater Basins

San Antonio Groundwater Basin

The San Antonio Groundwater Basin encompasses approximately 70,000 acres and lies between the Solomon and Casmalia Hills to the north and the Purisima Hills to the south. The primary land uses consist of agriculture and some industrial uses in the form of oil extraction.

The only 'urbanized" area is the unincorporated town of Los Alamos. Its 1800 residents are connected to a sewer operated and maintained by the Los Alamos Community Services District. The remaining residential development in this basin is widely disseminated on multiple acre or large agricultural parcels.

Due to the small number of OWTS in this basin, any impact on groundwater from their use would be negligible.

Santa Maria Valley Groundwater Basin

The Santa Maria Groundwater Basin covers more than 100,000 acres in northwestern Santa Barbara County extending into the southwestern portions of San Luis Obispo County. The primary land uses are residential, agricultural and industrial (oil extraction).

The major urbanized areas consist of the Cities of Santa Maria and Guadalupe and the unincorporated area of Orcutt. All three areas are served by sewer operated and maintained by the Cities of Santa Maria, Guadalupe and the Laguna Sanitary District respectively. Smaller residential areas exist in the

unincorporated townships of Casmalia, Garey and Sisquoc. There is no sewer service available in these townships; consequently OWTS are used for wastewater treatment and dispersal.

The Santa Maria Valley is now and has historically been extensively utilized for the production of row crops and the subsequent application of nitrogen based fertilizers. The groundwater basin in the valley is experiencing an upward trend in nitrate concentrations. With the exception of the townships of Casmalia, Garey and Sisquoc, most of the OWTS in the valley are located on semi-rural, rural or large agricultural parcels. The RWQCB is currently establishing TMDL for the Santa Maria River Watershed and has indicated that the elevated nitrate levels are not from OWTS.

Cuyama Groundwater Basin

The Cuyama groundwater basin underlies approximately 160,000 acres in north eastern Santa Barbara County between the Caliente Range and the San Rafael Mountains. Only a portion of the basin is located in Santa Barbara County. The majority of it extends into San Luis Obispo, Kern and Ventura Counties. The predominant land use is agricultural with some industrial (oil) uses.

The Cuyama Valley is sparsely populated with three small communities located in the area, New Cuyama, Cuyama and Ventucopa. New Cuyama is the largest of the three. Its residents are connected to a sewer operated and maintained by the Cuyama Community Services District.

The Cuyama Groundwater Basin is experiencing an upward trend in nitrate concentrations. However, due to small number and low density of OWTS, it is believed that the increasing nitrates are not associated with OWTS.

In summary, the sites selected as data points for the groundwater monitoring element of this LAMP were chosen because they are located adjacent to and generally down gradient to designated Special Problem Areas or areas with large concentrations of OWTS as identified in the 2003 Sanitary Survey.

Groundwater quality will be monitored by tracking nitrate and nitrite levels. While nitrates may rarely be present from naturally occurring sources, elevated levels are usually the result of contamination from agricultural practices, high density livestock facilities or OWTS. Once consumed nitrates are converted to nitrites in the body. **Table 3-2** provides the most recent water quality analysis results for nitrates and nitrites from the wells specified as data points.

No monitoring points were chosen in the County's other watersheds due to the absence of significant numbers and concentrations OWTS. However, if in the future, there are areas in the County where increased urbanization based on the use of OWTS becomes a concern EHS may include additional monitoring points after consultation with the Central Coast Regional Water Quality Control Board.

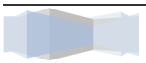
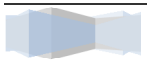


Table 3-2

Water Basins/ WaterSystems	Location	Nitrates	Last Analysis	Nitrites	Last Analysis
Montecito					
El Bosque	East Valley Rd. and El Bosque Rd.	5.9 ppm	5/2013	0.0 ppm	5/2013
Santa Barbara, Foothill, Goleta					
Mullen-Douglas	Mission Canyon Rd. and Foothill Rd.	9.0 ppm	2/2014	0.0 ppm	3/2014
La Cumbre MWC	Hope Ranch				
Well 16	Hwy 154 @ State St.	6.5 ppm	4/2013	0.0 ppm	4/2013
Well 17	Puente Dr. at Mint Ln.	9.7 ppm	4/2013	0.0 ppm	4/2013
Well 18	Juvenile Hall Rd. at Hollister Ave.	0.0 ppm	4/2013	0.0 ppm	4/2013
Well 19	Nueces Dr. at Arboleda Rd.	0.0 ppm	4/2013	0.0 ppm	4/2013
Well 21	Nogal Dr. at Nueces Dr.	0.0 ppm	4/2013	0.0 ppm	4/2013
Santa Ynez Uplands					
SYRWCD ID#1 Well 5	Santa Barbara Ave. at Alamo Pintado Rd.	 9.7 ppm	10/2013	0.0 ppm	10/2013
SYRWCD ID#1 Well 7	Hwy 154 at Grand Ave.	 5.6 ppm	9/2013	0.0 ppm	9/2013
Skyline Park Well 2 Well 3	Highland Rd. and Refugio Rd.	 33 ppm 31 ppm	 9/2013 12/2013	 0 ppm 0 ppm	 6/2012
Rancho Marcelino Well 1 Well 2 Well 3	Hwy 246 and Entrance Road	 36.7 ppm 45.6 ppm 6.3 ppm	 5/2013 5/2013 11/2013	 0 ppm 0 ppm 0 ppm	 7/2011 7/2011 11/2013



Section IV
Projected Onsite Wastewater Demand

The implementation of this LAMP will result in different work (new tasks, different procedures, different record keeping) than that performed in the past by Environmental Health Services. In order to estimate the resources needed to adequately administer this LAMP, a thorough workload analysis is necessary. That calculation involves a number of factors including an estimate of the number of new OWTS that could reasonably be expected to be constructed in the future.

State law requires that all cities and counties adopt a comprehensive, long-term general plan that outlines physical development of the county or city. The general plan consists of a number of mandated elements that cover a local jurisdiction's entire planning area so that it can adequately address the broad range of issues associated with the city or county's development. One of the mandated elements is the Housing Element.

The Housing Element of the General or Comprehensive Plan guides the determination of housing needs and establishes policy that facilitates the development of housing for all economic segments in the County. The California Department of Housing & Community Development requires that the Housing Element be updated every 8 years.

Using these criteria as a guideline and historical data, this LAMP includes a good faith effort to make a 10 year projection of future OWTS demand. While these are linear projections, as the following data illustrates, the actual numbers could vary significantly as a result of economic conditions and or regulatory changes.

Using data obtained from the Environmental Health Services comprehensive computer database (Envision), during the years from 2000-2008 1,213 applications to construct new OWTS were processed. This equates to an average 151 applications/year. It is important to note that for a variety of reasons, the submittal of an application does not automatically result in the actual construction on an OWTS. While in excess of 1200 applications were processed during this timeframe, 398 systems were completed. This equates to an average 50 new systems per year.

During the time period of 2009-2013, a total of 298 applications were received (average 60/year) and 275 OWTS were completed for an average 55 per year. Please see Figure 4-1.

The numbers discussed above represent permit applications received, permits issued and systems satisfactorily completed countywide. The Envision database can be modified to breakdown similar data by a defined geographic area. This capability is not currently used, but it could be activated in the future should it be necessary or desired.

While the data showed that the number of applications for new OWTS varied widely between the years leading up to and following the 2009 recession, the total number of new OWTS approved remained about the same (50 vs 55). Consequently it is reasonable to assume that permits for approximately 55 new OWTS will be approved in any given year in the future. Furthermore, extrapolating this figure out over a ten year period, it is reasonable to assume that approximately 550 new OWTS will be constructed over the course of the next 10 years. This represents an increase of approximately 5% in the total number of OWTS while the percentage of residents that use an OWTS will remain at about 10%.The increase in the number of OWTS may be offset by properties that connect to sewer as it becomes available and abandon existing onsite systems.

This number is in general conformity with the Housing Element of the County's Comprehensive Plan. The analysis of potential future development does not anticipate a large number of new housing units to be constructed in areas that are not served by a public sewer.

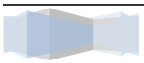
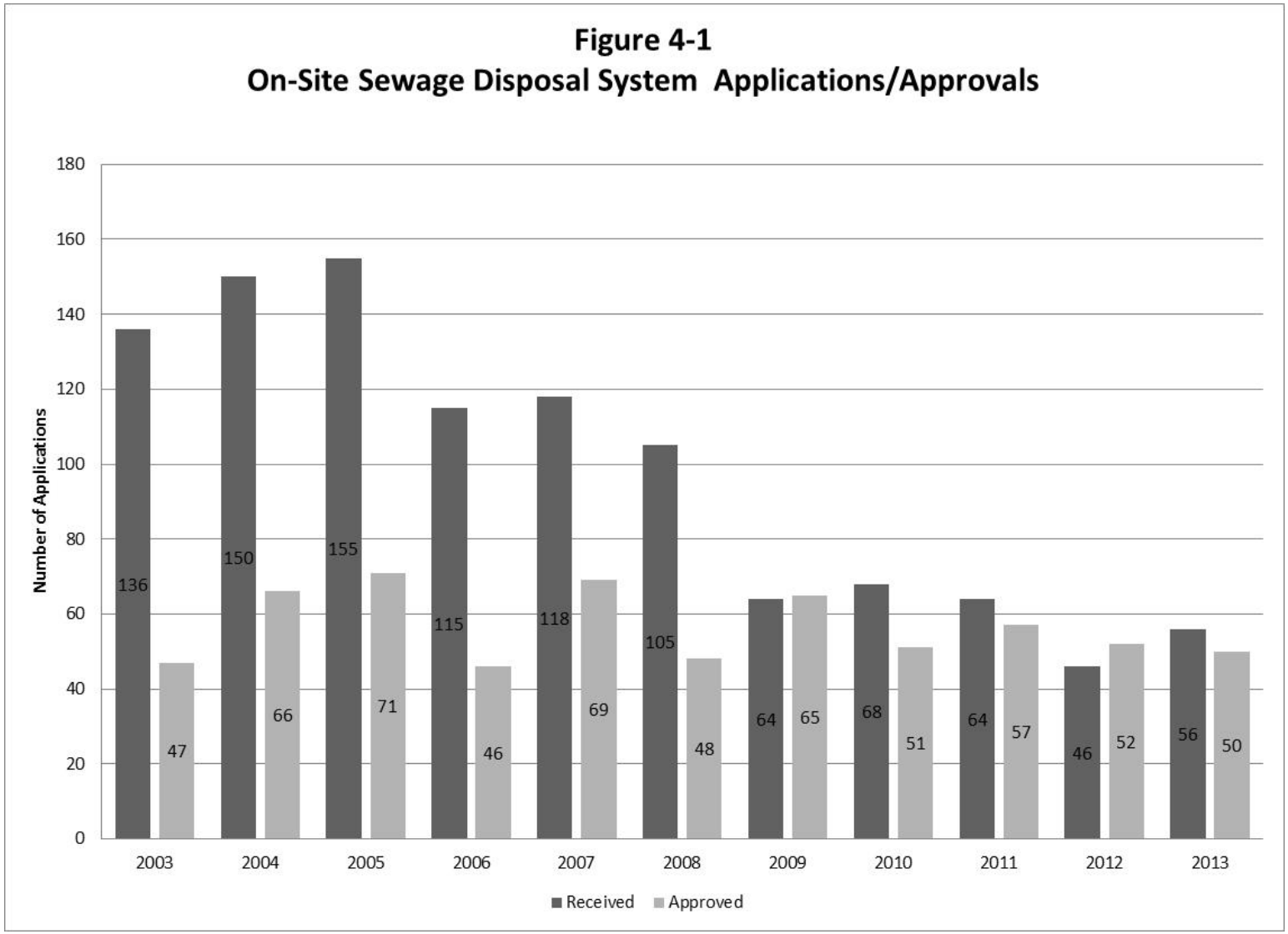


Figure 4-1
On-Site Sewage Disposal System Applications/Approvals



Section V
Requirements for Existing Onsite Wastewater Treatment Systems

Existing Functioning Onsite Wastewater Treatment Systems

Consistent with the criteria outlined in Tier 0 of the Policy, systems that are functioning properly will not be affected by this LAMP for as long for as they continue to function properly. Nevertheless, regular inspection and maintenance is necessary to ensure that an OWTS continues to operate satisfactorily and to extend the life of the system. OWTS that fail will be repaired consistent with the criteria outlined in Tier 4 of the Policy and County standards.

Santa Barbara County has an effective voluntary maintenance/mandatory reporting program for standard systems. In 1999, the Board of Supervisors approved County Ordinance 4356 that revised the County Code establishing local regulations for the construction, modification, repair and maintenance of OWTS. The ordinance did not require routine maintenance, however it did stipulate that whenever an OWTS was serviced, the system was to be thoroughly inspected and a written report was to be completed and submitted to EHS.

The current practice of voluntary maintenance for standard systems will be continued as the cornerstone of an ongoing inspection program for the vast majority of systems. As in the past, whenever an OWTS is serviced, a Qualified Inspector shall examine the tank to look for signs of deterioration, corrosion or evidence that the dispersal field has failed or is in the process of failing.

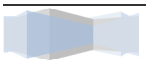
A Qualified Inspector prepares a written report that includes the property owner's name and address, a description of the system and any deficiencies noted during the inspection. The report must be submitted to EHS within 30 days of the date of the servicing/inspection. A copy of the approved inspection form can be found in Appendix IV. In those cases where the inspection has found that the system has failed, the report must be submitted within 24 hours.

When the report is received by EHS, it is reviewed and the information contained in the report is entered into the Envision database. If the report identifies any deficiencies, a notice is generated and mailed to the property owner. Depending on the severity of the problem, the notice will either recommend that corrective action be taken or direct that corrective action be taken. A list of the most common tank deficiencies is provided in Appendix IV.

Failed Onsite Wastewater Treatment Systems

The primary functions of the Voluntary Maintenance Program are to assure that the individuals who service and inspect OWTS are qualified to do so and that failing OWTS are identified and repaired. In addition to failures, the inspection may identify conditions that would lead to a determination that the system is in a state of failure. These conditions range from the most severe and obvious form of failure such as surfacing effluent, to the less obvious sign of effluent backing up into a structure.

As with the installation of a new system, all repairs to an existing OWTS must be performed by a Qualified Contractor and must meet current standards. In cases of a failure that creates a health & safety hazard or nuisance where effluent is discharging to the surface of the ground, repairs must be made immediately.



When it has been determined that a system is failing or has failed and EHS has a permit record, the replacement dispersal field is to be the same type, i.e., seepage pit or trenches, and the same size or larger than the existing field.

A replacement system that meets the requirements of the Ordinance shall be installed in those instances when the OWTS has failed and were previously permitted or considered legal non-conforming but the site is severely constrained. If site conditions preclude the installation of a new dispersal field that meets the adopted standards, supplemental treatment may be required if necessary to provide treatment equivalent to the adopted standard.

Onsite Wastewater Treatment System Repairs/Upgrades

Certain corrective measures shall be taken when an inspection finds a substandard OWTS or a component thereof that requires repair and or upgrade to meet current standards. Examples of typical failures or conditions that lead to failure (or in some cases to threats to human safety) include:

- *Hollow (non-gravel filled) seepage pits and cesspools*
    - *These are a significant threat to ground water and a physical threat due to the tendency to collapse. They should be properly abandoned, repaired or replaced upon discovery.*
- *Severely damaged or deteriorated tanks, bottomless tanks or otherwise non-watertight tanks shall be replaced with one that meets the County and State standards.*

Onsite Wastewater Treatment Systems in Degraded Basins

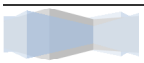
If the Central Coast Water Board identifies a groundwater basin or sub-basin in the County where the use of OWTS is causing or contributing to exceedances of nitrate or pathogen maximum contaminant levels (MCLs), the County will develop an Advanced Groundwater Protection Management Program (AGPMP) in close consultation with and approved by the Central Coast Water Board. The AGPMP shall provide the same level of protection as the Tier 3 standards in the Policy and may include but not be limited to: supplemental treatment for all new and replacement systems, mandatory, routine inspections and maintenance, connection to the public sewer, shallow groundwater monitoring or other appropriate actions.

The County will require conformance with current standards (Section 18C of the County Code), including supplemental treatment standards, to the greatest extent practicable. The requirements for existing systems will be consistent with Tier 4 of the Policy. Supplemental treatment standards will be equivalent to those contained in Tier 3. Variances from the prohibitions specified in sections 9.4.1 – 9.4.9 of the Policy are not allowed in areas covered by an AGPMP.

Onsite Wastewater Treatment System Evaluation/Modification

Existing functioning OWTS that would otherwise be expected to continue to function properly may become over taxed when homes are remodeled or expanded in a manner than increases the sewage flow or changes the characteristics of the sewage generated. When a building remodel will increase the flow, the OWTS should be upgraded so that the anticipated new flow can be received and treated reliably. Examples of changes that would indicate an increased flow to the system include the addition of a bedroom, increased population or fixtures.

Additionally, improvements on a property that intrude upon the physical location of the OWTS and the expansion area for the dispersal system would trigger the need for review.



The determination for the need for a system modification is made as part of an evaluation of the existing system by EHS. As part of the evaluation EHS reviews the proposed changes or project, any EHS records of the existing system as well as any additional information/data provided by the applicant. If it is concluded that there is no impact or that the existing system is adequate, no modification is required.

Onsite Wastewater Treatment System Abandonment Standards

Unless properly abandoned, an OWTS that is no longer used represents a safety hazard. The top and lids of a septic tank or the cement cover of a hollow seepage pit deteriorate over time and may collapse should a vehicle drive or an individual walk over it leading to a serious injury or death. Therefore, EHS makes it a priority to ensure that these structures are properly abandoned to prevent such accidents.

An existing OWTS or a portion thereof shall be properly abandoned, under the following conditions:

- *Upon the discovery of a hollow seepage pit or cesspool*
- *When the structure is connected to the public sewer or*
- *When the structure served by the OWTS is demolished unless the owner demonstrates their intention to use the system again.*

The abandonment standards for a septic tank include:

- *The tank or pit must be pumped to remove all contents.*
- *A tank may be removed entirely or*
- *If left in place, the top is removed, the bottom punctured or cracked to allow for drainage and the shell filled with inert material such as clean soil, sand, cement etc.*

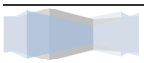
Standards for abandoning the dispersal field include:

- *Seepage pits are to be excavated to a depth of 2 feet below grade and the center pipe cut. The center pipe and the excavation are then to be backfilled with clean soil or other approved fill material.*
- *Leach lines composed of gravel and pipe may be abandoned in place.*
- *If hollow chambers were used, the chambers must be removed and the trench backfilled. Hollow leaching chambers may remain in place with EHS approval.*

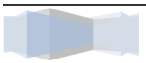
Advanced Protection Management Plan

The State Policy stipulates that existing, new and replacement OWTS that are located near a water body that has been listed as impaired due to Nitrogen or pathogens pursuant to Section 303(d) of the Clean Water Act may be addressed by a TMDL and its implementation program, by special provisions contained in a Local Agency Management Program or by the specific requirements of Tier 3.

If a water body in the county is designated by the Central Coast Water Board as “impaired” or significantly degraded as a result of the use of OWTS, Santa Barbara County will develop an Advanced Protection Management Program (APMP) in accordance with the established TMDL. In the absence of an approved TMDL, the APMP will be developed in close consultation with the Central Coast Regional Water Quality Control Board and may include but not be limited to requirements for supplemental treatment for existing systems and mandatory, routine inspections as determined by the Central Coast Water Board in order to be consistent with the Policy. In the absence of a TMDL or an APMP approved



by the Central Coast Water Board, the provisions of Tier 3 of the Policy shall apply to OWTS adjacent to water body segments listed in Attachment 2 of the Policy.



Section VI
Requirements for New OWTS

EHS review of OWTS can occur on two levels. An initial review to verify OWTS feasibility would occur as part of the discretionary process for proposals to create new lots with the County's Planning and Development Department. A second, more detailed review would happen when an application to construct an OWTS is submitted. The review of the application and the issuance of a permit are a ministerial process and act.

EHS staff in the Land Use program interacts with the Planning & Development Department as part of the discretionary review process. The role of the Land Use program is to review projects within the unincorporated portions of Santa Barbara County to ensure conformity with state and local regulations and policies enforced by Environmental Health Services as they relate to projects involving retail food, recreational health, vector control, solid waste, drinking water and for purposes of this LAMP, sewage or wastewater dispersal.

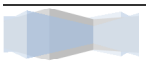
For projects that involve subdivisions, Development Plans and Conditional Use Permits a determination must be made as to whether adequate services (water & sewer) are available. If public services are available, EHS will recommend that as a condition of project approval, that the applicant be required to connect to the public water and or sewer system. For those projects where public services are not available and a private water system and/or use of an OWTS is proposed, Environmental Health Services reviews well and soil test data to confirm their feasibility for the proposed project.

OWTS feasibility is determined by reviewing the proposed site conditions and the preliminary engineering and layout of the system to ensure that adequate space for both the primary field as well as the 100% expansion area is available and that setbacks from watercourses and steep slopes are met. A deep boring is required in order to define soil strata, mottling and the presence or absence of groundwater or bedrock relative to the bottom of the dispersal field. In addition, the results of three percolation tests in the area of the proposed dispersal field must be provided in order to determine if the soils are suitable for long-term wastewater dispersal. In most cases a site visit is made to confirm the accuracy of the map and the location of any limiting features of the property.

If this review finds that the proposed project site is unsuitable for wastewater treatment and dispersal then the project could not move forward until a suitable site is found. For projects located in areas known to be problematic for the use of OWTSs, a strategy is developed to deal with those specific conditions and to mitigate impacts to ground or surface water. Additionally, if the onsite wastewater treatment system is inadequate for the proposed project, it is during the Land Use review that the necessary upgrades are communicated to the applicant.

If it is determined that the use of an OWTS is feasible, EHS will recommend that as a condition of project approval that the applicant be required to submit an application for a permit to construct or modify an OWTS.

The standards for new OWTS are contained in Sections 18C 3.0 & 18C 5.0 of the Ordinance. Section 3.0 outlines general provisions for both new systems and for the repair and or modification of existing systems while specific siting, design and construction criteria are listed in Section 5.0. The Tier 1 standards of the Policy apply unless otherwise specifically addressed in the Ordinance.



General Policy Recommendations/Provisions

Any structure, regardless of use, that produces wastewater, shall have adequate wastewater treatment and dispersal. When connecting to the public sewer is not possible, adequate treatment and dispersal shall be accomplished by means of an approved OWTS.

Chemical toilets are acceptable for temporary use during special events. They are not acceptable as a permanent method of waste management.

Composting or incinerating toilets would be considered only in those situations where site conditions preclude the use of standard or supplemental wastewater treatment. In those limited circumstances oversight would occur in one of the following manners:

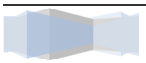
- If the proposal was part of a project under discretionary review, such as a Conditional Use Permit, a recommended conditional of approval of the permit would include a requirement for ongoing maintenance and inspection.
- If the proposal was part of a ministerial permit process, final approval of the permit would require that a Notice to Property Owner be recorded with the Title of the property stating that the property was served by a composting or incinerating toilet and that routine, ongoing inspection and maintenance of the system was required.

Environmental Health Services will continue the current practice of utilizing the Regional Water Quality Control Board recommended flow of 375 gallons per day (gpd) for a standard three bedroom house and 75 gpd for each additional bedroom for determining tank capacity & dispersal field sizing. Wastewater flow from commercial structures will be determined by peak design flow as listed in the most recent edition of the California Plumbing Code (CPC) or other flow calculations acceptable to the Environmental Health Services.

The 2003 Sanitary Survey identified a number of areas in the County that were developed using OWTS but where the use of these systems is problematic due to parcel size, soil conditions, topography or a combination of these factors. To address the impacts of OWTS in these areas and to prevent future problems related to increasing density of OWTS, supplemental treatment should be required. These identified areas include:

- *Areas designated by the Santa Barbara County Board of Supervisors as Special Problem Areas for wastewater dispersal.*
- *Areas identified by the Central Coast Regional Water Quality Control Board as having groundwater basins or waterbodies experiencing significant degradation as a result of the use of OWTS.*
- *When seepage pits are used on parcels of 5 acres or less and performance testing indicates an absorption capacity of between 500 – 1000 gpd or greater than 8000 gpd.*
- *When an existing OWTS on a severely constrained parcel requires repair but constructing a replacement system that meets current standards is not possible practical or feasible.*
- *For newly created parcels of 1 – 2.5 acres regardless of the type of dispersal field.*

As previously stated, the provisions of this LAMP and the Ordinance apply to wastewater flows of 10,000 gpd or less. Projects with flows calculated to exceed 10,000 gpd will be referred to the Central Coast Water Board for review and approval.



It is the intent of EHS to maintain an open dialogue with the Central Coast Water Board and to consult with them when necessary to ensure that this LAMP is implemented in a manner consistent with the goals and objectives of the Policy.

Protection of OWTS

All OWTS require regular maintenance to ensure that they are operating as designed and to prolong the useful life of the system. This is especially true for alternative systems and those that utilize supplemental treatment. In order to facilitate inspection and maintenance, OWTS components must be accessible.

Currently the primary dispersal field must be constructed and a 100% expansion area has to be set aside for future use. In some circumstance it may be beneficial to require the actual installation of the primary and secondary dispersal fields with a third 100% expansion area set aside for future use. Development in this expansion area that would preclude its future use as a dispersal field should not be allowed.

Prohibitions

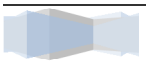
In 1999, the Board of Supervisors approved changes to the County Code that prohibited the use of hollow (non-gravel filled) seepage pits and cesspools and required that they be abandoned or repaired upon discovery. This prohibition should be continued and additional prohibitions should be added including the following:

- *The use of holding tanks as a permanent means of wastewater management.*
- *Sewage dispersal is not permitted in fill material unless it is fill material engineered for that purpose.*
- *A discharge to an OWTS that exceeds peek design flow or maximum permitted capacity.*
- *The creation of new parcels or lots of less than one acre using OWTS.*

Professional Qualifications

To ensure performance that is consistent with the goals and objectives of this LAMP, OWTS must be sited, designed and constructed properly. Once placed into operation, regular inspections and maintenance are necessary to keep the system functioning as designed and to prolong its useful life. Therefore, specific qualifications and licenses that are required in order to design, construct, maintain and or repair an OWTS in Santa Barbara County include:

- *Soil evaluations must be performed by a Registered Civil or Geotechnical Engineer*
- *OWTS must be designed by a Qualified Professional such as a Professional Engineer, Professional Geologist or a Registered Environmental Health Specialist.*
- *Construction, modification, repair and abandonment of an OWTS must be performed by a Qualified Contractor.*
- *Inspections, maintenance and servicing must be performed by a Qualified Inspector, a Qualified Contractor or Professional Engineer.*



Site/Soil Evaluation

A general site evaluation is to be completed that includes a geologic report that describes the soil conditions, depth to groundwater or bedrock and a slope stability study if it is proposed to place the dispersal field on a slope greater than 30%.

A soil evaluation is required in both the area designated as the primary dispersal area and the expansion area. Testing shall include one deep boring and 3 percolation tests within the proposed dispersal area. Results from the soil evaluation are used to determine the appropriate application rate and the subsequent size of the dispersal field.

Because the septic tank effluent is discharged at a shallow soil depth, the use of leach lines is the preferred method of dispersal. Seepage pits may be used but only when it has been determined by the project engineer that the site conditions are not conducive to the use of leach lines.

When seepage pits are used, the absorptive capacity of each pit must be determined using a slug test such as a constant head type test. Absorptive capacities ranging between 1000 – 8000 gpd are acceptable. When using seepage pits with this absorptive capacity, the Qualified Professional designing the system shall use an effluent application rate of .8 gallons per square foot per day (gal/sf/day) to calculate the number of seepage pits necessary to serve the proposed structure.

Seepage pits found to have absorptive capacities of 500 – 1000 gpd or greater than 8000 gpd may be used but supplemental treatment must be utilized. When using seepage pits with these capacities, the system designer shall use effluent application rates of .4 gal/sf/day and 1.2gal/sf/day respectively.

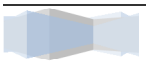
Wet Weather Borings

There are areas of Santa Barbara County that are known to experience seasonally high or perched groundwater. These areas include but are not limited to Los Olivos, sections of the Santa Ynez Valley and Hope Ranch Community near Santa Barbara. When available information or site/soil investigation indicates that fluctuations in groundwater levels may result in an inadequate distance between the bottom of the dispersal field and groundwater, EHS may require wet weather soil borings in addition to the soil borings and percolation tests previously described. To be reasonably sure that these borings will measure “worst case” conditions, they generally should be completed between March 1 and May 31.

Tank Requirements

The construction standards and sizing criteria for septic and treatment tanks (tanks) must be consistent with standards contained in the state regulations. As stipulated in the California Plumbing Code, all tanks are to be watertight and constructed of durable, corrosion resistant material such as reinforced concrete or fiberglass and must conform to International Association of Plumbing and Mechanical Officials (IAPMO), National Sanitation Foundation (NSF) or American Society for Testing and Materials (ASTM) standards.

If the OWTS design calls for placing a tank beneath areas subject to vehicular traffic such as a driveway, the tank must be rated to withstand such conditions or the installation is to be engineered to support the additional weight. The tank lids and risers used in such installations must be traffic rated as well.



Septic tanks must have a minimum of two compartments and a minimum capacity of three times the peak daily flow. Each compartment shall be accessible through a manway or port that is a minimum twenty inches in diameter.

In general, all tanks should be buried as shallow as practicable. Septic tanks should be installed no deeper than twelve inches below finish grade. If it is demonstrated that a septic tank must be placed deeper than twelve inches below finish grade, than each compartment is to be fitted with watertight risers that extend to within twelve inches of finish grade.

When it is necessary to extend septic tank risers to finish grade, corrosion resistant, tamper resistant fasteners shall be used to secure the lid to the riser.

There must be adequate separation from structures, patios and decks so that both compartments are accessible for inspection, servicing and maintenance.

Dispersal Fields

As in the past, EHS will require the installation of dual dispersal fields, interconnected by a diverter valve, for new OWTS serving commercial buildings. In addition a 100% expansion area must be designated for future use. There are several benefits to requiring the installation of dual fields.

1. Eliminates the possibility that suitable dispersal area would be lost to future development of the property.

2. Should one field fail, the second field is readily available. There would be little or no public exposure to sewage and no downtime for the commercial operation.

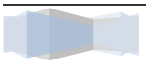
3. Switching from one dispersal field to the other on a regular basis allows one field to rest while the second is being used, prolonging the useful life of both fields.

The same dual dispersal field requirements should be applied to new residential OWTS located on parcels of 2.5 acres or less. On parcels of 2.5 acres and larger, installation of dual drain fields may not be strictly necessary when there is reasonable assurance the reserve area will not be covered or otherwise damaged. However, if the site is seriously constrained, EHS retains the authority to require the installation of dual fields and a designated 100% expansion area regardless of zone district or parcel size**.**

Leach Line Construction

Leach lines are the preferred method of OWTS effluent dispersal by Environmental Health Services for a number of reasons. Shallow trenches allow for both percolation and evaporation of liquid, soil microbes that breakdown or utilize the effluent are more numerous at shallow soil depth and nitrogen in the effluent is available for uptake by plants. Therefore the general policy should be that leach lines are the required means of dispersal unless exceptional circumstances of the site makes their use infeasible.

Leach line trenches may be a minimum of 18 inches in width to a maximum of 36 inches. The depth will vary according to soil characteristics however they are generally 4 – 6 ft. deep. Trenches may exceed 6 ft. in depth however the beneficial evaporation process is diminished. When parallel distribution is used for wastewater dispersal, trench lines shall be of equal length to the greatest extent possible.



A maximum of 4 square feet per lineal foot of trench may be used for calculating total absorption area. A maximum of 7 square feet per lineal foot of trench (when using pipe & rock) may be used when supplemental treatment is provided. Environmental Health Services will utilize the application rates listed in Tables 3 and 4 of the State Policy (Appendix II) that are based on stabilized percolation rates or from a determination of soil texture and structure.

To facilitate future inspections of the dispersal field, inspection ports are to be installed at the end of each trench. Depending on the circumstances, Environmental Health Services should retain the authority to require the installation of additional inspection ports at different locations of the dispersal field.

Seepage Pit Construction

In those cases where use of leach lines in not feasible Environmental Health Services may allow the use of seepage pits with conditions.

In general, each seepage pit is 4 – 6 ft. in diameter. The depth varies depending on the soil conditions and the depth to groundwater but typically is 30 – 40 ft. deep. Seepage pits that are greater than 60 ft. deep are not recommended and may require special review.

Each seepage pit typically is gravel filled and has a centrally located, perforated four inch diameter pipe that extends from the inlet to the bottom of the pit. The use of “hollow” seepage pits is prohibited under current code and should continue to be prohibited.

When soil testing indicates that multiple seepage pits are necessary in order to provide adequate dispersal capacity, it is important that the wastewater flow to each pit be as equal as possible. Consequently, an approved distribution method must be provided when multiple seepage pits are used.

Use of seepage pits should only be allowed in conjunction with supplemental treatment to reduce the risk of ground water contamination resulting from placement of untreated septic effluent in deep geologic strata.

Low Pressure Distribution

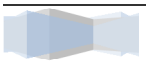
For cost considerations and simplicity the preferred method of wastewater dispersal is by gravity flow. However, when site conditions preclude the use of this method, effluent may be distributed to a dispersal field under pressure. Pressure distribution systems must be designed by a Qualified Professional.

The pump chamber or tank shall meet industry accepted standards, have a capacity equal to six hours of peak flow or 375 gallons, whichever is greater, and be equipped with an audible and visible high water alarm.

Subsurface Drip Systems

Subsurface drip systems are a special category of pressure distribution. When site conditions warrant, a subsurface drip system may be utilized in lieu of a standard dispersal field. Subsurface drip systems must be designed by a Qualified Professional.

All wastewater discharged to a drip system shall have supplemental treatment. The drip lines must be placed in native soil, as level as possible and parallel to elevation contours. Up to twelve inches of fill may be placed over the drip lines in order to meet the minimum cover requirements. The amount of soil cover may be reduced to six inches if the wastewater has been treated to a tertiary level.



Alternative Wastewater Treatment Systems

Alternative Wastewater Treatment Systems are onsite wastewater utilizing dispersal field consisting of components other than a conventional or supplemental treatment system such as “mound”, “at grade” and “evapo-transpiration” systems.

Alternative systems must be designed by a Qualified Professional in conformance with State guidelines. However, Environmental Health Services may adopt local design standards after consultation with the Central Coast Regional Water Quality Control Board.

Prior to final approval, the property owner should be required to record a notice stating that an alternative system has been installed on the property. This “Notice to Property Owner” shall run with the land and will act as constructive notice to any future property owner that the property is served by an alternative wastewater treatment system and is therefore subject to an operating permit with regular maintenance, monitoring and reporting requirements. A copy of the recorded document shall be provided to Environmental Health Services before final system approval.

To ensure that the system continues to function properly, it is should be inspected at least annually by a Qualified Inspector. Inspection reports should be submitted to Environmental Health Services detailing the findings of the inspection within thirty days of its completion so that routine inspections are tracked and required maintenance can be assured.

Supplemental Treatment

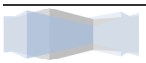
Environmental Health Services must approve any proposed method of supplemental treatment prior to installation. All Supplemental Treatment systems must be tested and certified by an independent testing organization such as NSF. Part of the testing must include an evaluation of the system’s effectiveness in reducing Total Suspended Solids (TSS), Bio-chemical Oxygen Demand (BOD) and Total Nitrogen (TN). Any supplemental treatment system shall be listed by testing organization and treatment standard before being considered for permitting. Listing standards include but are not limited to:

- *NSF Standard 40-Residential: Onsite Systems*
- *NSF Standard 41- Non-liquid Systems (composting toilets)*
- *NSF Standard 245- Nitrogen Reduction*
- *NSF Standard 350 & 350-1: Onsite Water Reuse*
- *NSF Standard 46: Components and Devices*

The treatment objectives dictated by the site limitations determines which standard or standards may be applicable.

Because Supplemental Treatment is usually provided as a mitigation factor, it is essential that the treatment system receive regular maintenance by a qualified technician to ensure that it is operating as designed. Therefore, Environmental Health Services requires that a maintenance contract be signed and in place prior to the systems installation. This agreement is to remain in force for the life of the Supplemental Treatment system.

Similar to the procedures for alternative systems, prior to final approval, a notice of the installation of the Supplemental Treatment system shall be recorded at the Santa Barbara County Clerk-Recorder’s Office. This “Notice to Property Owner” shall run with the land and shall serve as constructive notice to all future



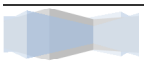
owners that the property is served by a wastewater treatment system that utilizes supplemental treatment and is subject to operating permits as well as maintenance, monitoring and reporting requirements. A copy of the recorded document shall be provided to Environmental Health Services.

Operating Permits

Supplemental Treatment is a newer technology that reduces constituents of concern in wastewater such as Bio-Chemical Oxygen Demand (BOD), Total Suspended Solids (TSS) and Total Nitrogen (TN). While this technology is very effective, systems utilizing supplemental treatment are more dependent on periodic inspections, maintenance and servicing than the passive, standard OWTS.

Alternative dispersal fields and or supplemental treatment would typically be used on constrained sites where standard setbacks from groundwater or a water course for example, could not be met. Because they are generally used as a mitigation measure, the failure of an OWTS using these methods of treatment and dispersal would likely have a greater potential to negatively impact the environment and public health.

Consequently, operating permits will be required for OWTS that utilize an alternative dispersal system or supplemental treatment to ensure that they are functioning properly and as designed. Permit conditions would require regular inspections of the system by a Qualified Inspector or a trained manufacturer's representative. In addition, a report detailing the findings of the inspection must be submitted to EHS for review.



Section VII
Alternative Means of Wastewater Disposal in the Event of an OWTS Failure or Groundwater Degradation

As previously described, OWTS must be located, designed, installed and operated in accordance with State and County standards. Systems built to these standards should last decades if they are regularly maintained. However, even a properly maintained OWTS will eventually fail and require repair. When repairs are necessary it is the general policy to upgrade the system to the standards in effect at the time of the failure to the extent feasible.

There are a number of OWTS in use in the County that pre-date current standards or in some cases, any standards. These systems are generally located on severely constrained parcels. These constraints include one or more of the following conditions:

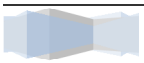
- *Inadequate area available for the dispersal field;*
- *Inadequate setback from drainages or watercourses;*
- *Inadequate setback from the well or surface water intake of a public water system;*
- *Inadequate setback from steep slopes;*
- *Inadequate vertical separation from groundwater or impervious surfaces.*

When the existing OWTS on these lots fail, it is often not possible to make repairs that meet all current standards. It has been and will remain the policy of Environmental Health Services to be flexible when dealing with systems on lots of record. Accordingly, the repairs are to be made in a manner so that the applicable standards are met to the maximum extent feasible. This approach results in the installation of an OWTS that is often better than the original, keeps the wastewater below the ground surface and protects water quality and public health.

There may be instances when a parcel has no viable area in which to install a competent standard dispersal field. With advances in OWTS technology, depending on the type of site constraint, there may be multiple alternative solutions available. For example, if it were not possible to provide adequate vertical separation between the bottom of the dispersal field and groundwater, the use of supplemental treatment with a shallow drip dispersal field or an alternative wastewater treatment system could be considered.

In almost all situations, it is possible to design an OWTS that will adequately serve the structure and be protective of the environment and public health. However, it is possible that there will be a site that it so constrained where no adequate OWTS can be located and installed. In such cases, when all options for subsurface dispersal are exhausted, then a haul away system may be utilized with concurrence of the building official.

In addition to repairs on lots with severe constraints there are other circumstances or conditions that would require the use of supplemental treatment as a mitigation factor in order to perform to a standard equivalent to or better than Tier I. This includes areas designated as “Special Problem Areas” for the use of OWTS by the Santa Barbara County Board of Supervisors. It also includes any areas identified by the Central Coast Regional Water Quality Control Board as having groundwater basins with significant degradation as a result of the use of OWTS. Supplemental treatment shall be required for all new and replacement systems in areas with these designations.



Section VIII
Education & Outreach

An onsite sewage system is a significant investment for the property owner and to the public that is potentially impacted from failing or poorly designed and installed systems. This is especially so with the increased costs of newer systems that depends on supplemental treatment. Yet, there is a lot of myth and mis-information about how to take care of and maintain onsite systems. Education and outreach is vital to supporting an informed consumer who is better able to assure proper maintenance that reduces the chance of failure.

Direct Staff Contact

The primary method of education and outreach is by direct interaction between EHS staff and the public. EHS routinely receives and responds to phone calls and office visits by private property owners, consultants and contractors with questions about the regulations and or the permit process. As part of EHS' role in the planning process, we will regularly answer questions and provide information to consultants, staff from other departments or agencies and occasionally directly to decision makers such as members of the Planning Commission and the Board of Supervisors.

EHS Website

All OWTS permit application forms and instructions are available on the EHS website. In addition to the forms, EHS posts or provides links to the various regulations such as the applicable sections of the Central Coast Regional Water Quality Control Board's Basin Plan and the County's OWTS ordinance. Additionally, there is general information on the website about proper OWTS maintenance.

Stakeholder/Community Meetings

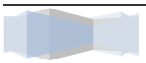
Stakeholder or community meetings are generally conducted as outreach efforts for significant or important projects such as the writing/implementation of new regulations or for projects such as the 2003 Sanitary Survey and this LAMP. The number of meetings will vary depending on the nature of the project that is being discussed however a general protocol is usually followed.

- *A meeting is convened at the outset to explain the goals and objectives of the project, answer questions and to gather comments and concerns from the attendees. If the project is area specific, the community meeting is held at a venue close to the area under discussion. If a project has county wide implications, multiple meetings are scheduled with one usually held in the southern part of the county and the other in the north county.*
- *Depending on the length of time that will be required to complete the project, status or progress meetings will be held to update interested parties. In lieu or a meeting, progress or status reports may be distributed electronically.*
- *When the project has been completed and a draft report prepared, a second round of meetings are scheduled to present the findings and to take questions and comments.*
- *Occasionally, extensive modifications of the draft report are necessary due to volume and or nature of the comments received. When this occurs, another round of meetings is convened to again present the report, highlight the changes and take questions and listen to comments.*

Ongoing Education

Environmental Health Services should look for opportunities to collaborate with other interest groups such as the California Onsite Wastewater Association (COWA), home owners' organizations, real estate groups and the building industry to provide reliable and accurate information about septic system functioning and proper maintenance. See Appendix 6 for a sample Septic System educational flyer.

EHS has proposed using Supplemental Treatment as a mitigating measure when seepage pits are used, for increasing OWTS density and in those instances when it is not possible to install a system that meets Santa Barbara County standards. While the use of such systems will require operating permits with routine, ongoing inspection and maintenance, owner education on how these systems work and the importance of maintenance will be necessary. Therefore EHS will work with representatives from the industry to develop appropriate education materials that will be provided to the property owner when the operating permit is issued.



Section IX
Enforcement

Santa Barbara County has a well-established ordinance and procedure related to OWTS code enforcement. Initiating enforcement action is generally used only when all other means to correct a problem or a violation have failed. However there are situations such as when there is a threat to public health and safety, that enforcement action must be implemented immediately. The circumstances or conditions that would result in EHS initiating enforcement are described below.

Failure to Obtain a Permit

The Ordinance requires that a permit be obtained before an OWTS is constructed, repaired, modified or abandoned. It further states that it is unlawful to cover, conceal or put into use an OWTS or any part thereof, without having first obtained an inspection and final approval from the Administrative Authority (EHS).

Should EHS be made aware of or discover that an OWTS is being installed, modified, repaired or abandoned without a permit, and the work is in progress, a Notice of Violation is issued to the property owner directing that all work cease and that he/she obtain the appropriate permit. All information required as part of the application as well as the established fee, must be submitted before work may commence.

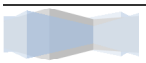
An OWTS that was installed, modified, repaired or abandoned without benefit of a permit and inspection has no legal standing. Should EHS discover or be made aware of a system that was constructed or modified “after the fact” the property owner would be required to submit the standard application and supporting documents (percolation tests, soil evaluation etc.) to obtain a permit. The owner would also have to provide evidence that the work met current standards or repeat the work in order to satisfy EHS that system meets all applicable provisions of the ordinance.

It is important to note that there was no requirement for a permit to construct an OWTS prior to 1958. While one would expect that a system that old would be in need of repair that may not be the case. Consequently, OWTS installed before 1958 are considered as prior non-conforming and may be used as long as it continues to function as intended except when it is determined that these antiquated systems are using a cesspool or a hollow seepage pit. These excavations must be abandoned or repaired immediately.

If an OWTS was repaired or abandoned without a permit, the property owner must provide “evidence” that the work was completed properly. Such evidence might include a letter from the contractor that performed the work, photographs of the work, bills for materials and supplies etc.

Inspection/Maintenance

Santa Barbara County’s Voluntary Maintenance Program was described in Section V of this LAMP. In short, the Ordinance does not require ongoing, routine inspections of standard OWTS. However, it does require that any time an OWTS is serviced the tank is to be inspected for signs of deterioration and other system deficiencies. In addition, a report detailing the results of the inspection is to be submitted to Environmental Health Services within 30 days unless the system is in a state of failure. Under those circumstances the report must be submitted within 24 hours.



If the report identifies any deficiencies, a tiered enforcement response is implemented. (Refer to the Program Process flowchart in Appendix V). Initially, a notice is generated and mailed to the property owner. Depending on the severity of the problem, the notice will either recommend corrective action or direct that a repair of the OWTS be completed by a specified date. Appendix IV lists the most common deficiencies. If the property owner makes the necessary repairs, then no further action is taken. Should the property owner not take the needed action, a second notice is sent.

The majority of property owners make the needed repairs after receiving the Second Notice. In those cases when the property owner fails to comply with the Second Notice by the stated deadline, EHS will implement the next enforcement tier and issue a Notice of Violation. The Notice of Violation contains essentially the same information as the previous notices but it more emphatically states that the property owner is in violation of the County Code and corrective action is necessary to avoid additional enforcement measures.

Section 24A-1 of the Santa Barbara County Code states that violations of Chapter 18C, Article I (Onsite Wastewater Treatment Systems) as well as other specified chapters of the County Code, are subject to an administrative fine or penalty as set forth in the California Government Code. Therefore, if a property owner fails to take remedial action after receiving a second Notice of Violation, EHS will issue a Notice of Determination of Fine (NDF).

The NDF lists the violation(s) and the dates and types of the previous notices that were sent to the owner. The NDF then states that as a result of the lack of compliance with those previous notices, an administrative fine of a specified amount has been assessed. The NDF explains that the recipient has ten days to appeal the assessment and outlines the steps to make an appeal. If no appeal is received by the deadline, the Determination of Fine is final.

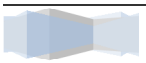
The goal of an enforcement action is to correct a violation. The assessment of a fine does not end the matter as abatement of the violation is still required. A continued failure to correct the violation would result in another enforcement action leading to a potential second fine or the initiation of civil action.

OWTS Failure

A failing onsite wastewater treatment system is defined in Section 18C-2(T) of the Ordinance. In general terms a system has failed when wastewater is no longer safely treated or discharged and therefore represents a health risk or a threat to the environment. Signs of a failing system may range from an elevated liquid level in the tank to a discharge of effluent to the surface of the ground.

EHS starts an enforcement action when made aware of a failing OWTS as a result of receiving a complaint that sewage from a particular property is surfacing. If during the subsequent investigation these allegations are confirmed, a Notice of Violation will be issued to the property owner directing them to take immediate action to stop the discharge and to repair the system under permit and inspection by EHS. Repairs must usually be made within thirty days of receiving the notice unless EHS and the property owner in question have agreed to a different compliance schedule but in all cases the discharge must be stopped.

EHS is most frequently made aware of a failing system when an inspection report is submitted to our office that states that the system is failing or has failed. The majority of property owners make repairs immediately when they are made aware of the condition of their system. In those instances when they are not, the procedures previously described in the **Inspection/Maintenance** section above are followed.



Section X
Septage Management

Septage is the partially treated waste from an OWTS. It generally consists of all the wastes that are disposed of through a structure's plumbing system that neither drain out into the soil nor are converted to gases by the bacteria in the tank. In the septic tank where primary treatment takes place the waste separates into three distinct layers; the upper scum layer, the middle clarified layer and the lower sludge layer.

Over time the scum and sludge layers accumulates to the point where the biologically active clarified area is minimized. When this occurs the tank should to be pumped. The liquid waste pumped from the tank is referred to as septage. Septage is essentially sewage and like sewage must disposed of in a manner that protects public health.

Voluntary Maintenance Program records indicate that approximately 900-1,000 septic tanks are pumped and inspected annually in Santa Barbara County. If the assumption is made that an average 1000 gallons of septage is removed during each one of these pump-outs (a 1000 gallon septic tank is standard for a three bedroom house) and inspections, approximately 900,000-1,000,000 gallons of septage is collected and disposed of annually in Santa Barbara County. The volume calculated above does not include septage from chemical toilets which is not directly reported. Due to increased inspection frequency for OWTS that utilize supplemental treatment the volume of septage could increase an incremental amount.

Once removed from the tank by a registered pumper, septage must be transported to a dispersal facility that operates under the authority of a permit by the Central Coast Regional Water Quality Control Board. Currently there are two facilities in Santa Barbara County that accept septage for treatment and dispersal.

The City of Santa Maria's Wastewater Treatment plant accepted 6.6 M gallons of septic system and chemical toilet septage during 2013. Please refer to **Table 10-1** and **Figure 10-1**. The source of this septage is not only from Santa Barbara County but from adjacent areas in San Luis Obispo County. The City of Santa Barbara's El Estero Wastewater Treatment Plant accepts an unknown quantity of septage through a contractual agreement with Marborg Industries that owns and operates a dumping station on their property at 23 N. Quarantina St. in Santa Barbara.

There are facilities in Kern County, King's County and Ventura County that can accept septage. However, due to distance from the source, the volume of material taken to these facilities is believed to be minimal. Finally, it is EHS' understanding that the City of Paso Robles is interested in accepting this material but it is unknown if the City will follow through with these plans. Again, because of the distance from the source, it is believed that any septage transported to Paso Robles from Santa Barbara County, would be minimal.

The City of Santa Maria's wastewater treatment plant is operated and managed by its Utilities Department. A representative of the Utilities Department has stated that the City recognizes the public benefit that the treatment plant provides by accepting septage, verified that Santa Maria has the capacity to handle the anticipated septage volumes into the foreseeable future and intends to continue to provide this service to the community.

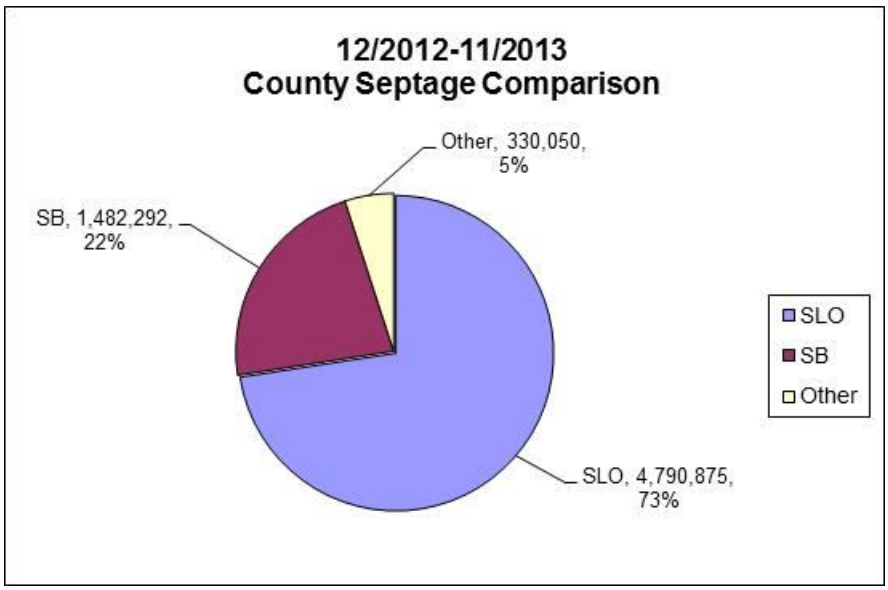
The City of Santa Maria's Wastewater Treatment plant accepted 6.6 M gallons of septic system and chemical toilet septage during 2013. Please refer to **Table 10-1** and **Figure 10-1**. The source of this

septage is not only from Santa Barbara County but from adjacent areas in San Luis Obispo County. In addition, the City of Guadalupe has a contractual agreement to accept this material from one pumping company amounting to approximately 8000 gallons per day.

Table 10-1

2012-2013	SLO	SB	Other	Monthly-All
Dec-12	348419	150200	13000	**511,619**
Jan-13	421294	147899	174600	**743,793**
Feb-13	409177	79800	14900	**503,877**
Mar-13	488749	120945	19600	**629,294**
Apr-13	501,125	155,339	10,600	**667,064**
May-13	448,699	108,610	16,500	**573,809**
Jun-13	355,117	105,997	15,800	**476,914**
Jul-13	402,349	135,682	14,300	**552,331**
Aug-13	408,480	99,142	14,400	**522,022**
Sep-13	352,400	132,739	12,000	**497,139**
Oct-13	354,498	104,994	21,950	**481,442**
Nov-13	300568	140945	2400	**443,913**
Annual Total	**4,790,875**	**1,482,292**	**330,050**	**6,603,217**

Figure 10-1



Section XI
Program Administration

Environmental Health Services is a division of the Santa Barbara County Public Health Department. Please see the department organization chart on in Appendix 7. EHS is responsible for thirteen separate programs that are distributed between three sections; Community Health, Technical Services and Hazardous Materials. The staff assigned to each of these sections report to a Supervisor that in turn report to the Environmental Health Services Director.

The Liquid Waste Program is assigned to the Technical Services section and is responsible for the oversight of the LAMP. All of the Technical Services staff are journey or senior level Registered Environmental Health Specialists. In addition, there are two Registered Geologists in the Hazardous Materials section that are available for consultation should the need arise.

Permit records are currently maintained in paper and electronic formats. The Ordinance requires that a permit be obtained to construct, modify, repair or abandon an OWTS. When a permit application is received the information contained in the application is entered into the Envision database. This includes the property owner's name, the site address, the Assessor's Parcel Number as well as the system specifications. When the project is completed and has received final approval, the application and supporting documents are maintained in EHS's hard files.

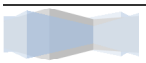
The use of operating permits will involve tracking required inspection and maintenance. Initially, hard files will be utilized for this function. However, EHS intends to implement an electronic reporting system in the future, hopefully eliminating the need to maintain paper files

For time accounting purposes, all staff complete Daily Activity Reports (DAR) that detail the tasks performed by an individual in a given program on a given day. A DAR consists of a series of numeric codes that identify the particular program, the permit or project, the activity or type of work performed and the time spent by the Environmental Health Specialist performing the specified activity. This information is entered into the Envision database and can be used to determine how much time staff spent in any element or elements within the Liquid Waste program.

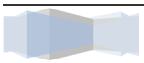
As stipulated in sections 3.3 and 9.3 in the Policy, SBCEHS shall submit an annual report by Feb 1 to the Central Coast Water Board. The annual report will summarize a number of local agency actions including permit activities and complaints received regarding OWTS and will be submitted in a format acceptable to the Central Coast Water Board. In addition, every fifth year, the annual report will include an evaluation of the water quality monitoring program. The "Report Builder" function of the Envision database will be used to comply with annual reporting requirement of the LAMP approval.

Over the course of the past three fiscal years, an average of 2455 hours was coded to the program. This equates to approximately 1.4 Full Time Equivalent positions. To provide adequate coverage and services, this workload is distributed primarily between three staff that also have responsibilities and duties in other programs. However, workload and staffing may be shifted depending on program needs.

The program is funded by a combination of permit fees and the County General Fund. All EHS fees, including the Liquid Waste Program, are established through time studies utilizing the data from staff Daily Activity Reports that is stored in Envision. The data from Envision allows PHD Administration to accurately determine the amount of staff time spent in the various Liquid Waste program elements and activities which is then used to establish the various permit fees.



The standards for the construction, operation and maintenance of OWTS are primarily contained in the County Code adopted by Ordinance by the Santa Barbara County Board of Supervisors after holding requisite public hearings. While the Ordinance is comprehensive, some aspects may be governed by administrative policy. This typically occurs when there is a need to clarify a procedure or address issues related to administration of the code. These policies will be approved by the Director of Environmental Health Services after consultation with staff and as appropriate, with Public Health Department Administration.



APPENDIX I
Ordinance

Ordinance Number _____

CHAPTER 18C – ENVIRONMENTAL HEALTH SERVICES

ARTICLE I. Onsite Wastewater Treatment Systems

Sec. 18C-1. Purpose and Intent
Sec. 18C-2. Definitions
Sec. 18C-3. General Provisions
Sec. 18C-4. Permits
Sec. 18C-5. New System Standards
Sec. 18C-6. Repair, Upgrades, Evaluation, Modification and Abandonment Standards
Sec. 18C-7. Servicing, Inspections and Reporting
Sec. 18C-8. Violations and Conflicting Provisions
Sec. 18C-9. Right of Entry
Sec. 18C-10. Remedies
Sec. 18C-11. Powers and Duties of the Administrative Authority

ARTICLE I. Onsite Wastewater Treatment Systems

Sec. 18C-1. Purpose and Intent

The purpose of this article is to regulate onsite wastewater treatment systems as defined herein. It is the intent of the Board of Supervisors, in adopting this article, to ensure that onsite wastewater treatment systems are constructed, modified, repaired, abandoned, maintained, inspected and serviced in a manner that prevents environmental degradation and protects the health, safety and general welfare of the people of Santa Barbara County. This article is intended to achieve the same policy purpose as the California State Onsite Wastewater Treatment System Policy, adopted June 19, 2012 and as may be amended, which is to protect water quality and public health.

Sec. 18C-2. Definitions

The definitions set forth in this section shall govern the construction of this article.

(A) "Accessible" means being readily reached and located and opened for purposes of servicing, inspection, repair, upgrade or modification, as defined in this article.

(B) "Accessory Structure" is any structure, which is subordinate to a main structure. Examples include, but are not limited to, residential second units, guesthouses, decks, cabanas, pools, tennis courts, greenhouses and paved or impervious driveways.

(C) "Adequate Access" means an unobstructed tank port with a minimum of a twenty inch inside diameter.

(D) “Administrative Authority” is the Director of the Environmental Health Services division of the Santa Barbara County Public Health Department, or a duly authorized representative.

(E) **“**Alluvium” means unconsolidated rock and/or soil that has been redeposited and typically lies above consolidated bedrock.

(F) “Alternative Wastewater Treatment System” is an onsite wastewater dispersal field that consists of components other than a conventional or supplemental treatment system as defined in this article. Examples include, but are not limited to, “mound”, “evapotranspiration”, and “at grade” systems.

(G) “ANSI” means the American National Standards Institute.

(H) “Bedroom” is any room in a dwelling that has a door for privacy, a closet and an egress window.

(I) “Bedrock” is any consolidated rock, either weathered or not, which usually underlies alluvium. Bedrock would include sedimentary rocks excluding alluvium. Examples include, but are not limited to, Rincon Formation, Sespe Formation, Coldwater Formation, Sisquoc Formation, and Monterey Formation.

(J) “Cesspool” is an excavation with permeable sides and/or bottom that receives sewage, wastewater, or drainage and is designed to retain organic matter or solids but permits liquids to seep through the bottom or sides.

(K) “Community System” is a residential wastewater treatment system for more than five units or more than five parcels; or commercial, industrial or institutional systems that treat 2,500 gallons or more of domestic/sanitary wastewater per day (peak daily flow).

(L) “Conventional Onsite Wastewater Treatment System” is an onsite wastewater treatment system composed of a septic tank and a dispersal field that uses leach lines, a leaching bed or seepage pits**,** a shallow drip or pressurized drain field and does not include alternative onsite wastewater treatment systems.

(M) “Dispersal Area” is the location of a dispersal field and expansion area.

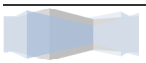
(N) “Dispersal Field” means a location used for discharge of liquid sewage effluent from a septic tank, dosing tank or treatment tank. Standard dispersal fields include, but are not limited to, leach lines, leach beds, and seepage pits.

(O) “Drywell” is synonymous with the term “Seepage Pit”.

(P) “Dual Dispersal Field” consists of two dispersal fields, connected by a diverter valve, each of which is designed to accommodate the full volume of effluent received from other components of an onsite wastewater treatment system.

(Q) “Effluent” means the partially treated wastewater discharge from an onsite wastewater treatment system.

(R) “Emergency Repair” is a repair that is intended to immediately remedy a failing onsite wastewater treatment system where wastewater has surfaced and is a threat to health and safety or creates a nuisance as defined in this article.



(S) "Expansion Area" means an undeveloped area designated as a location for an additional dispersal field.

(T) "Failing Onsite Wastewater Treatment System," is any onsite wastewater treatment system where wastewater is no longer safely treated or discharged and presents a health risk to humans or adversely impacts the environment, as determined by the Administrative Authority. Evidence of a failing system includes, but may not be limited to:

(1) A backup of sewage into a structure which is caused by a septic tank or dispersal area problem other than a plumbing blockage;

(2) A discharge of sewage or onsite wastewater treatment system effluent to the surface of the ground that creates a health and safety concern, creates a nuisance, or contaminates the waters of the state;

(3) A septic tank that requires pumping more frequently than once a year in order to provide adequate dispersal of sewage;

(4) Inability to use the system as intended.

(U) "Graywater System" means an onsite wastewater treatment system as defined by the California Plumbing Code.

(V) "Groundwater" is water located below the land surface in the saturated zone of the soil or rock. Groundwater includes perched water tables, shallow water tables, and zones that are seasonally or permanently saturated.

(W) "Inspection" means checking, observing, testing, and/or evaluating an onsite wastewater treatment system to determine the condition of the onsite wastewater treatment system.

(X) IAPMO means the International Association of Plumbing and Mechanical Officials.

(Y) "Inspection Port" is a pipe installed directly into a leaching trench, mound system and/or other dispersal field to monitor the performance of the system through visual inspection and collection of samples.

(Z) "LAMP" is an acronym for a "Local Agency Management Program" used for implementation of the Tier 2 standards in the State Water Resources Control Board's Policy for Siting, Design, Operation and Management of Onsite Wastewater Treatment Systems.

(AA) "Leach Line," is a subsurface soil absorption wastewater dispersal system installed in a trench, usually consisting of a perforated distribution pipe placed over gravel or other media and backfilled with native material.

(BB) "Limiting Conditions" are geological, hydrological or soil conditions that restrict the ability of the soil in a dispersal field to eliminate effluent. Examples of limiting conditions may include but are not limited to: impervious material, bedrock, high groundwater, fractured rock, consolidated rock, and extreme percolation rates (less than one minute per inch or greater than 120 minutes per inch).

(CC) "Low Pressure Distribution" means a wastewater dispersal system of small diameter pipes equally distributing effluent throughout a trench or bed at greater than atmospheric pressure.

(DD) "Maintenance" means work related to the upkeep of a wastewater treatment system. Examples include, but are not limited to, any installation, repair or replacement of septic tank baffles, risers, tees, ells, tops, access port lids, pumps and blowers.

(EE) "Modification" means replacement or enlargement of any component of an onsite wastewater treatment system, not defined as maintenance or repair in this article, which results in a change in flow, capacity or design of the system.

(FF) "NSF" means the National Sanitation Foundation or NSF International, a not-for-profit, non-governmental organization that develops health and safety standards and performs product certification.

(GG) "Nuisance" is an onsite wastewater treatment system that has created an obnoxious situation such as, but not limited to, unpleasant odors, saturated surface soils or surfacing effluent.

(HH) "Onsite Wastewater Treatment System" (OWTS) is a system composed of a septic tank and a dispersal field and related equipment and appurtenances. Onsite wastewater treatment systems are also referred to as septic systems, onsite sewage disposal systems, individual sewage disposal systems or private sewage disposal systems and may include alternative and supplemental treatment systems.

(II) "Operating Permit" is a written authorization to operate an onsite wastewater treatment system issued by the Administrative Authority.

(JJ) "Parallel Distribution" means a dispersal field in which the onsite wastewater treatment system effluent is distributed simultaneously through a distribution box.

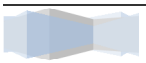
(KK) "Percolation Test" means a subsurface test conducted to measure the absorption rate of water in soil strata. The test is conducted after initial presaturation and is usually expressed as minutes per inch.

(LL) "Performance Test" means a test conducted to determine the absorptive capacity of a seepage pit by measuring the maximum rate of water absorption after initial presaturation usually expressed as gallons per day.

(MM) "Person" means any individual, firm, partnership, association, corporation, estate, trust, joint venture, receiver, county, or other political subdivision, or any other group or combination acting as a unit.

(NN) "Primary Treatment" means temporary holding of wastewater in a septic tank where heavy solids can settle to the bottom while oil, grease and lighter solids float to the surface.

(OO) "Qualified Contractor" means a contractor holding a license that is current and active from the Contractors State License Board for Plumbing (C-36), Sanitation System (C-42), or General Engineering Contractor (A). A contractor holding a license as a General Building Contractor (B) shall be considered a qualified contractor when constructing, modifying or abandoning an onsite wastewater treatment system as part of a larger construction project involving a new structure or major addition to an existing structure.



(PP) "Qualified Inspector" means a Registered Environmental Health Specialist, Professional Engineer, or Qualified Contractor or an individual that meets the requirements of the State OWTS Policy.

(QQ) "Qualified Professional" means an individual licensed or certified by a State of California agency to design onsite wastewater treatment systems and practice as professionals for other associated reports, as allowed under their license or registration. Depending on the work to be performed and various licensing and registration requirements, this may include an individual who possesses a Registered Environmental Health Specialist certificate or is currently licensed as a Professional Engineer or Professional Geologist.

(RR) "Registered Pumper" is a firm or person that pumps and/or hauls septage or wastewater from chemical toilets and has been issued a registration by the Administrative Authority.

(SS) "Repair" means restoration, replacement, or alteration of any malfunctioning or damaged component of an onsite wastewater treatment system except those defined in this article as maintenance. The alteration of a hollow seepage pit to a rock filled seepage pit for the purposes of this article shall be considered a repair.

(TT) "Secondary Treatment" means wastewater treatment which removes dissolved and suspended biological matter. Secondary treatment is typically performed by indigenous, water-borne micro-organisms in a septic tank or treatment tank.

(UU) "Seepage Pit" means an excavation, typically cylindrical in shape and filled with rock, constructed for the purpose of disposing of sewage effluent from a septic tank or treatment tank.

(VV) "Septic Tank" means a water tight, compartmentalized, covered receptacle designed and constructed to: receive the discharge of sewage; separate the solids from the liquid; digest organic matter; store digested solids for a period of retention; and allow the resultant effluent to discharge from the tank to the dispersal field.

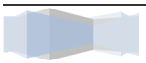
(WW) "Serial Distribution" means the distribution of septic tank effluent by gravity flow that progressively loads one section of a dispersal system to a predetermined level before overflowing to the succeeding section.

(XX) "Servicing," means inspection pumping and cleaning of a septic tank, dispersal field, or other system components.

(YY) "Severely Constrained Lot" is a lot of record that contains limiting conditions that prevent the installation of an onsite wastewater treatment system that conforms to the provisions of this article.

(ZZ) "Sewage" is any and all waste substance, liquid or solid, associated with human habitation, or which contains or may contain human or animal excreta or excrement, offal or any feculent matter. Industrial wastewater shall not be considered as sewage.

(AAA) "Shallow Drip System" means a treated wastewater dispersal system using filters, flexible tubing, drip emitters and a flushing mechanism to disperse directly to the soil without stone aggregate or chambers.



(BBB) "Special Problems Area" is an area designated by the Board of Supervisors, in Chapter 10, Article XV of the Santa Barbara County Code as having severe constraints to development that include, but are not limited to, access, drainage and wastewater disposal.

(CCC) "Subdrain" is an underground passage for the re-direction of water, typically made by filling a trench with loose stones and/or a perforated pipe and covering with earth. Subdrains are also called curtain drains, rubble drains or French drains.

(DDD) "Supplemental Treatment System" is an onsite wastewater treatment system that utilizes engineered designs and/or technology to treat effluent to reduce one or more constituents of concern in wastewater. It may also be referred to as an Advanced Treatment System or Enhanced Treatment System. Examples include, but are not limited to, sand filters, textile filters and aerobic treatment units but do not include composting or incinerating toilets.

(EEE) "Tertiary Treatment" means wastewater that has already undergone primary and secondary treatment and will be disinfected prior to discharge.

(FFF) "Treatment Tank" is a tank other than a septic tank in which wastewater is acted on either by chemical or biological means, to reduce the concentrations of constituents of concern.

Sec. 18C-3. General Provisions

(A) Requirement for Adequate Wastewater Treatment

(1) Any structure, regardless of use, that produces wastewater shall have adequate wastewater treatment as required by the California Plumbing Code, as amended and adopted by the County of Santa Barbara in Chapter 10, Article IV. Wastewater treatment shall either be accomplished by means of an approved onsite wastewater treatment system or connection to a public sewer.

(2) The minimum daily design flow for residences shall be three hundred-seventy five gallons per day for up to three bedrooms. Each additional bedroom above three shall increase the daily design flow by seventy-five gallons per day.

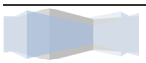
(3) Chemical toilets may be used only on a temporary or occasional basis.

(4) A supplemental treatment system for new or replacement onsite wastewater treatment systems shall be required under any one of the following conditions:

a) The following shall apply to areas designated by the Board of Supervisors as a "Special Problem Area" for the use of onsite wastewater treatments systems due to treatment and dispersal constraints:

i) If the existing onsite wastewater treatment system is found to no longer meet minimum standards to serve a proposed project that requires a Land Use Permit, Coastal Development Permit, or Building Permit, then a supplemental treatment system shall be installed.

ii) If the existing onsite wastewater treatment system dispersal field has failed, then a supplemental treatment system shall be installed. Replacement of tanks and



repairs not requiring permits do not trigger the requirement for supplemental treatment.

iii) For projects that require onsite wastewater treatment system modifications, including but not limited to, bedroom additions, intensification of use and major remodels, then supplemental treatment shall be installed. Projects and uses that add development area but not additional flow will not be required to install supplemental treatment.

iv) If the project is located within the designated Special Problems Area on a parcel with the AG-I, AG-II, RR, 3-E-1, 5-E-1, 10-E-1, or 3.5-EX-1 zone district, and the parcel is equal to or greater than 2.5 gross acres, the project will need to meet minimum state and county standards but will not be required to install supplemental treatment.

b) Areas identified by the Regional Water Quality Control Board as having groundwater basins experiencing significant groundwater degradation due to onsite wastewater treatment systems.

c) When the seepage pit method of wastewater dispersal is used on parcels of five acres or less or where the seepage pit has a maximum absorptive capacity greater than or equal to 8,000 gallons per day or absorptive rates between 500 and 1000 gallons per day.

d) On previously developed severely constrained lots where a repair is required but no conforming onsite wastewater treatment system can be constructed.

e) For the creation of parcels of 1-2 ½ acres in size irrespective of the type of dispersal field. A Notice to Property Owner shall be recorded with the map indicating that an OWTS utilizing a supplemental treatment system shall be required when development occurs.

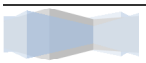
(5) Composting and incinerating toilets may only be utilized with written permission from the Administrative Authority where site constraints preclude standard wastewater treatment and dispersal or use of supplemental treatment. Composting and incinerating toilets shall conform to the standards of NSF/ANSI Standard 41 and NSF P157 respectively.

(6) Graywater systems are allowed as per the requirements of the California Plumbing Code.

(7) For OWTS utilizing parallel distribution for wastewater dispersal, each trench line shall be of equal length to the maximum extent practical. For dispersal systems using serial distribution, trenches shall be maintained at the shallowest depth possible and no deeper than five feet below ground surface. Seepage pits must be connected in a manner that balances the volume of effluent received not to exceed the required application rate.

(B) Protection of Onsite Wastewater Treatment Systems

(1) Onsite wastewater treatment systems shall be located so as to be accessible for servicing, inspection, upgrades, modification and repairs.



(2) Designated expansion areas shall not be developed in a manner that precludes their availability for the new dispersal field.

(3) Each onsite wastewater treatment system shall be designed, installed and maintained so as to prevent infiltration and exfiltration.

(4) If subdrains discharge diverted water to subsurface soils, the minimum upslope separation from any dispersal field shall be twenty feet and the minimum down slope separation shall be fifty feet. If the subdrain is provided for the sole purpose of protecting the integrity of a structure, such as a retaining wall, then the Administrative Authority may modify the separation requirements provided above.

(C) Permit Issuance Does Not Allow Continued Violation

The issuance of a permit or approval of plans shall not be deemed or construed to allow a violation of any of the provisions of the Santa Barbara County Code or California State Law. The issuance of a permit or approval of plans shall not prevent the Administrative Authority from requiring the correction of errors in said permit or approved plans when a condition allowed in the approval is found to be in violation of the Santa Barbara County Code or California State Law. Continued violation may result in administrative fines assessed to the responsible party pursuant to Chapter 24A.

(D) Prohibitions

(1) Discharges from new onsite sewage treatment systems are prohibited if they could result in noncompliance with state and county regulations.

(2) Hollow seepage pits and any form of cesspool are prohibited. Upon discovery, cesspools shall be properly abandoned and replaced with an onsite wastewater treatment system that meets the requirements of this article. Hollow seepage pits shall be properly abandoned or rock filled.

(3) Holding tanks are prohibited as a permanent method of sewage disposal unless specifically approved in writing by the Building Official and Environmental Health Services has been notified.

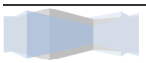
(4) Sewage dispersal shall not be permitted in fill material unless it is specifically designed by a Registered Civil Engineer to accommodate the discharge without creating a nuisance or public health hazard as approved by the Administrative Authority.

(5) Discharge from an onsite wastewater treatment system that exceeds peak design flow or maximum permitted capacity is prohibited.

(6) Dispersal fields are prohibited in roadways but may be allowed in designated parking areas only if they are designed to withstand vehicle load ratings and are covered with a permeable surface with prior approval of the Administrative Authority.

(E) Industrial Operations

(1) Any industrial operation which generates wastewater other than, or in addition to, domestic wastewater shall have separate onsite wastewater treatment systems for the domestic and the industrial wastewater unless a single system is approved by the



Regional Water Quality Control Board. Separate applications, plans and specifications must be submitted for each system.

(2) Industrial wastewater may be subject to regulation by the Regional Water Quality Control Board.

(F) Inspections

(1) Inspections shall be scheduled with the Administrative Authority a minimum of two working days in advance of the time requested. Inspections are required prior to final covering of any components of the system.

(2) A qualified professional shall conduct periodic inspections of onsite wastewater treatment systems after excavation and prior to the placement of any rock or fill material. Prior to final approval, a signed report shall be submitted to the Administrative Authority confirming that the OWTS installation has been completed in accordance with the approved design. This does not preclude the normal inspection process associated with any building permit.

(3) When the system is installed outside the permitted/approved area, additional testing will be required, or approved by the qualified professional that designed the OWTS. The previously approved plans shall be revised to reflect the new location or design change.

(G) Permit Suspension and Revocation.

(1) The Administrative Authority may suspend or revoke a permit whenever it is determined that the permittee has violated any provisions of this article; has misrepresented any material fact in the permit application or supporting documents for such permit; and/or performed any work under the permit that has resulted in a nuisance.

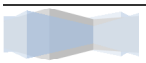
(2) No person whose permit has been suspended or revoked shall continue to perform the work for which the permit was granted until, in the case of a suspension, the permit has been reinstated by the Administrative Authority. The permit shall not be reinstated until the violation causing the suspension has been abated.

(3) Upon suspension or revocation of any permit, if any work already done by the permittee has left an onsite wastewater treatment system in such a condition as to constitute an emergency, the Administrative Authority may order the permittee to perform any work reasonably necessary to protect the health and safety of the public. No permittee or person who has held any permit issued pursuant to this article shall fail to comply with any such order.

(H) Professional Qualifications, Signatures and Stamps

(1) An onsite wastewater treatment system shall be designed by a qualified professional as defined by this article.

(2) In order to construct, modify, repair, abandon or replace any onsite wastewater treatment system, a person must be a qualified contractor as defined by this article. However, a property owner may construct, repair or modify a system on his/her own property provided the owner complies with all the provisions of this article.



(3) A qualified inspector, qualified contractor or professional engineer shall perform inspection, maintenance and servicing required by this article.

(4) Prior to approval by the Administrative Authority, percolation and performance test reports and final onsite wastewater treatment system plans, shall have an original signature and stamp of the professional engineer or the Registered Geotechnical Engineer who performed the tests, wrote the reports and designed the onsite sewage treatment system.

Sec. 18C-4. Permits

No person shall construct, reconstruct, repair, modify, destroy or abandon any onsite wastewater treatment system or graywater system, or any portion thereof, without having first obtained a permit from the Administrative Authority. It shall be unlawful for any person to cover, abandon, destroy, modify, repair, conceal, or put into use an onsite wastewater treatment system or graywater system, or any portion thereof, without having first obtained a permit and final approval from the Administrative Authority.

Alternative systems and systems with supplemental treatment require an operating permit in conformance with section 18C-5(l) of this code which shall be issued by the Administrative Authority prior to the final approval of the construction of the system.

(A) Applications

(1) An onsite wastewater treatment system permit application shall be submitted on a form approved by the Administrative Authority for new construction, repair, abandonment or modification of an onsite wastewater treatment system, alternative system or graywater system. The application shall be accompanied by plans and specifications submitted in a format prescribed by the Administrative Authority. The approved application shall be deemed a permit to construct and may contain conditions that apply to the construction, operation and maintenance of the system. The permit conditions shall be binding upon the property owner and successive property owners for the life of the system.

(2) When an evaluation of an existing onsite wastewater treatment system is required, an application shall be completed and submitted to the Administrative Authority.

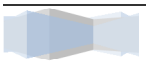
(B) Fees

(1) Submission of an application shall be accompanied by payment of all appropriate fees. The Board of Supervisors may, by resolution, adopt such fees as are allowed under § 101325 of the California Health and Safety Code and may prescribe such terms and conditions as may be necessary to enable the County of Santa Barbara to recover the reasonable and necessary costs incurred by the County in administering this article.

(2) The Board of Supervisors shall determine fees for operating permits.

(C) Expiration

Construction permits shall expire by limitation and become null and void if the work authorized is not commenced within one year from the date of issuance of the permit. If the work authorized by such permit is started and then suspended or abandoned for a period of one year or longer, the work shall not be recommenced until a new permit is obtained. Upon written request from the applicant the Administrative Authority may renew the permit for a maximum of one year beyond the initial expiration date if the plans, specifications, and site conditions have not changed for a maximum of two renewals.



The renewal request must be received by the Administrative Authority prior to the expiration of the previously approved permit. When such renewal is authorized the work must comply with current requirements. Upon the expiration of a permit no further work shall be performed unless a new permit is issued.

(D) Exemption for Routine Maintenance and Servicing

Onsite wastewater treatment system maintenance and servicing, as defined in this article, may be performed by a Qualified Contractor without a permit as long as a written report of work performed is submitted to the Administrative Authority and such work complies with all codes, regulations and procedures applicable in Santa Barbara County at the time the maintenance is performed. The written report shall be submitted on a form approved by the Administrative Authority within thirty days of completion of the maintenance. If the report is not received by the Administrative Authority within 30 days of the completion of the maintenance or servicing the qualified contractor may be subject to administrative fines.

(E) Transfers

An onsite wastewater treatment system operation, construction, modification, repair, abandonment or evaluation permit is not transferable. If there is a sale or transfer of a property upon which a permit has been issued and the work authorized in the permit has not been completed the new property owner must submit a new application.

(F) Zoning Clearance

A Land Use Permit or a Coastal Development Permit shall be issued by the Santa Barbara County Planning and Development Department for any new structure utilizing an onsite wastewater treatment system prior to the issuance of a permit to construct the onsite wastewater treatment system.

(G) Administrative Fines and Penalties

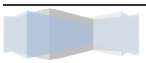
Any person who commences work on an onsite sewage treatment system for which a permit is required, without first having obtained a permit, shall be required to obtain a permit and pay double the permit application fee established by the Board of Supervisors and may be subject to administrative fines as provided in chapter 24A of the Santa Barbara County Code.

(H) Suspension and Revocation

(1) The Administrative Authority may suspend or revoke any permit to construct, repair, modify, or abandon and onsite sewage treatment system, or any component of the system, issued pursuant to this article, whenever the permittee has violated any provisions of this article, misrepresented any material fact in the permit application or supporting documents for such permit, and/or performed any work that was not authorized under the permit or has created a nuisance.

(2) Any permittee whose permit has been suspended or revoked shall discontinue work for which the permit was granted until such permit has been reinstated or reissued.

(3) If the work halted by the suspension or revocation of a permit, has left an onsite wastewater treatment system in a condition that constitutes a safety hazard, a nuisance or threatens public health, the Administrative Authority may order the permittee to perform



any work reasonably necessary to protect public health and safety or mitigate the nuisance as allowed by Section 18-3 of the County Code. If the permittee fails to mitigate the hazard or nuisance, the Administrative Authority may have the construction completed at the expense of the permit holder through the administrative fines process noted in chapter 24A of the Santa Barbara County Code.

(I) Right to a Hearing

Any person, whose application for a permit has been denied, suspended, or revoked, may submit a request for an office hearing to appeal the denial, suspension, or revocation, to the Administrative Authority. The request must be submitted in writing within fifteen working days after receiving notification of the permit denial, suspension, or revocation. The request must specify the grounds upon which the appeal is submitted and should contain documentation that substantiates the reason for the appeal. The Administrative Authority shall set an office hearing for such appeal within fifteen working days of receipt of the request and shall notify the appellant in writing, of the time and place of the hearing at least five days prior to the date of the hearing. The Environmental Health Services Director, or his designee, acting as the Hearing Officer shall notify the appellant of his/her decision in writing within ten working days after the hearing is concluded.

Sec. 18C-5. New System Standards

The following requirements shall be met to ensure that all new onsite wastewater treatment systems are installed at locations that have been adequately evaluated and that methods used to conduct those evaluations meet specified minimum standards.

(A) General Site Evaluation

(1) The Administrative Authority shall require the submission of all information necessary to thoroughly evaluate the suitability of a site for wastewater treatment and dispersal and to asses any limiting conditions. At a minimum, the site evaluation information shall include but is not limited to:

a) The Administrative Authority may require a geologic report, prepared by a Certified Engineering Geologist, describing any soil or bedrock formations encountered and addressing slope stability when the proposed dispersal field is located on a slope greater than thirty percent.

b) The minimum separation from the bottom of the dispersal field to groundwater shall be confirmed by soil borings pursuant to §18C-5(B) and §18C-5(C) of this article. Where fluctuations in groundwater levels may impact the dispersal field, the highest recorded depth shall be utilized.

c) Minimum site requirements shall be those provided in the California Plumbing Code as amended and adopted by the County and/or the OWTS Policy, whichever are more stringent.

(B) Soil Evaluation for Leach lines and Seepage Pits

(1) Leach lines:

a) At least one deep soil boring or trench shall be required within the primary dispersal area and expansion area. Deep borings or trenches shall be a minimum of ten feet beneath the proposed maximum depth of the dispersal field.

b) When using percolation tests to determine site suitability, not less than three percolation tests shall be conducted in the primary dispersal field and expansion areas. Percolation tests shall be completed with adequate separation to characterize the primary dispersal field and the expansion area. The tests shall be performed at a depth corresponding to the bottom of the subsurface dispersal field.

c) Percolation tests shall be valid for five years after completion. A professional engineer or soils engineer may recertify the tests for an additional term of five years. After ten years, the original percolation tests are no longer valid and must be repeated.

(2) Seepage Pits:

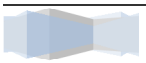
a) Maximum absorptive capacity of each seepage pit shall be determined using a slug test such as a constant head type test after initial presaturation. Only the sidewall may be used for the purpose of calculating the absorption area using the following criteria:

Absorptive Capacity (gpd)	Application Rate (gpd/square foot)
<500 gallons per day	Discharge prohibited
500-1000 gallons per day	.4 (treatment required)
1000-8000 gallons per day	.8
>8000 gallons per day	1.2 (treatment required)

b) Seepage pit testing shall be valid for five years. A qualified professional may recertify the test once for an additional term of five years.

(3) Seepage pits may be utilized only if limiting conditions make leach lines infeasible, as determined by a qualified professional or registered geotechnical engineer with the concurrence of the Administrative Authority. A determination of leach line infeasibility must be provided and shall include a written statement that has been signed and stamped by the qualified professional or registered geotechnical engineer that specifies the unfavorable conditions, which render effluent dispersal using leach lines infeasible. A determination of leach line infeasibility shall be based on poor absorptive capacity or a lack of separation to a required setback. The encroachment of proposed accessory structures on otherwise suitable dispersal areas shall not be used to determine infeasibility for purposes of this article.

(4) Leach beds may be installed only if leaching trenches are not feasible, as determined by a qualified professional or registered geotechnical engineer with concurrence from the Administrative Authority. A determination of leach line infeasibility must be provided and shall include a certified written statement by the qualified professional or registered geotechnical engineer, which specifies the unfavorable conditions that render leach lines infeasible.



(5) Alternative systems may be utilized only if limiting conditions make leach lines infeasible, as determined by a qualified professional or registered geotechnical engineer with the concurrence of the Administrative Authority. A determination of leach line infeasibility must be provided and shall include a written statement that has been signed and stamped by the qualified professional or registered geotechnical engineer that specifies the unfavorable conditions, which render effluent dispersal using leach lines infeasible.

(C) Wet Weather Borings

(1) Wet weather borings may be required by the Administrative Authority when available information indicates that variations in groundwater levels occur that may result in a failure to maintain the minimum separation required between the bottom of the dispersal field and groundwater. Wet weather borings may also be required when there is reasonable cause to believe that groundwater is less than sixty feet below the natural ground surface for seepage pits and twenty feet for leach lines and such information is required to confirm adequate separation to groundwater during wet seasons.

(2) Additional requirements for wet weather borings:

a) The depth to groundwater shall be measured from the first encounter of water in the boring. A subsequent measurement shall be made within three days to determine if the water level is static or dynamic.

b) The boring shall be performed after seventy five percent of the average annual rainfall has occurred as determined by the County Water Agency.

c) In the event of a drought or the project is constructed in the dry times of the year, the Administrative Authority may accept additional hydrologic or geologic information provided by a professional engineer experienced in soil mechanics, a registered geotechnical engineer, a professional geologist, a certified engineering geologist, or a certified hydrogeologist that estimates the highest anticipated elevation of groundwater based on soil or historic data.

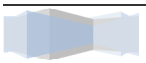
(D) Tank Requirements

(1) Septic tanks and treatment tanks must be watertight. Water tightness shall be ensured prior to backfilling the excavation around the tank.

(2) Septic tanks and treatment tanks shall be constructed of reinforced concrete, fiberglass, or other durable, corrosion resistant, synthetic material and shall conform to IAPMO, NSF or ASTM standards or similar criteria.

(3) Septic tanks and treatment tanks installed beneath surfaces subject to vehicular traffic (e.g., driveways and vehicle turnarounds) shall be traffic rated or engineered to support the additional load. Septic tanks and treatment tanks placed in areas subject to vehicular traffic shall be provided with lids or risers that are rated for traffic loading.

(4) Septic tanks shall have a minimum capacity of three times the peak daily flow.



(5) All septic tanks for new systems and replacement tanks for existing systems shall be equipped with an effluent filter that is an American National Standards Institute (ANSI) listed. The filter must be accessible for cleaning, replacement and maintenance.

(6) Septic tanks and treatment tanks shall be installed by a qualified contractor according to the manufacturer's specifications. Earth cover over the tank shall be clean fill material, free of debris and rock.

(7) Septic tanks shall have a minimum of two compartments with access to each compartment and a lid with a minimum of twenty inches in diameter for each compartment. Access lids shall have a maximum separation of ten feet. Treatment tanks may consist of a single tank if required by the manufacturer of the approved supplemental treatment system.

(8) Septic tanks and treatment tanks shall be installed so as to be accessible for servicing, inspection, maintenance, upgrades or replacement.

(9) Septic tanks shall be installed with the top of the tank no deeper than twelve inches below finish grade. If it is demonstrated that the top of a septic tank must be deeper than twelve inches below grade, each compartment of a septic tank shall be provided with a watertight riser, capable of withstanding anticipated structural loads and extending to within twelve inches of finish grade. Septic tanks and treatment tanks shall be installed as shallow as practical and in no case at a depth greater than factory recommendations.

(10) The qualified professional responsible for the approved design shall provide written certification that the installation has been completed per the approved plans.

(11) Risers shall be installed within twelve inches of grade to enhance access for maintenance.

(12) Distribution boxes, drop boxes, pump chambers and stilling chambers shall be watertight and commercially manufactured with corrosion resistant materials.

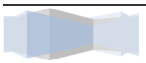
(13) When necessary to extend septic tank risers to finish grade, access lids shall be gas-tight, securely fastened with stainless steel or other corrosion resistant fasteners and be resistant to vandals, tampering, and access by children.

(14) Surface water shall be diverted away from the riser cover or septic tank lid by providing a sloping surface away from the riser, or extending the riser at least six inches above grade.

(E) Dual Dispersal Area Requirements for Onsite Wastewater Treatment Systems

(1) For new onsite wastewater treatment systems serving commercial projects installation of dual dispersal fields connected with a diverter valve is required. A third area of adequate size shall be set aside for future expansion of the onsite wastewater treatment system.

(2) Residential OWTS shall have dual fields installed with a 100% set aside if the project is located on a parcel equal to or less than 2.5 gross acres. If the project is located within the AG-I, AG-II, RR, 3-E-1, 5-E-1,10-E-1, or 3.5-EX-1 zone district, and on a parcel equal to or greater than 2.5 gross acres the OWTS will need to meet minimum state and county standards but will not be required to install dual fields. The Administrative Authority may



require that dual fields be installed and have a 100% expansion area set aside if the dispersal field area is found to be severely constrained irrespective of parcel size or zoning designation.

(F) Seepage Pit Construction

(1) Seepage pits shall be cylindrical in shape with a diameter of not less than four feet or more than six feet. Construction of a seepage pit with a diameter less than four feet or greater than six feet may be permitted with written approval of the Administrative Authority.

(2) Seepage pits shall have a centrally located four inch diameter perforated pipe which extends from the inlet to the bottom of the pit and the space around the pipe shall be filled with washed gravel which may vary in size from 3/4 inch to 2-1/2 inches. A smaller gravel size may be used if the design engineer can provide justification for its use and written approval is obtained from the Administrative Authority. When necessary to meet minimum slope setback requirements, the upper portion of the central pipe shall be unperforated.

(3) Rock fill in seepage pits shall be covered with building paper or equivalent, and backfilled with a minimum of eighteen inches of clean earth cover, free of debris and rock.

(4) Seepage pits shall have an effective dispersal depth of at least ten feet. Effective dispersal depth is defined as total depth minus the distance below the grade to the uppermost dispersal pipe perforation.

(5) The maximum depth of a seepage pit shall be sixty feet, unless the Administrative Authority provides written approval for a greater depth.

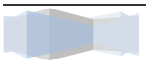
(6) Multiple seepage pit installations shall receive septic tank effluent via an approved distribution method.

(G) Leach Line Construction

(1) Four square feet of absorption area per lineal foot of trench shall be the maximum allowable absorption area for systems without supplemental treatment. Seven square feet per lineal foot of trench may be allowed for systems using supplemental treatment and the dispersal fields are constructed using pipe and rock.

(2) Application rates shall be in conformity with Table 3 in State Water Resources Control Board OWTS policy.

(3) Inspection ports shall be installed at the end of each trench and at other locations if required by the Administrative Authority. Inspection ports shall extend to the bottom of the trench or bed and must be anchored to prevent disturbance or removal. The portion of the inspection port within the rock filter material shall be perforated to permit the free flow of liquid. The inspection ports shall have removable caps and may either extend above grade or set to grade if enclosed in a service box with removable lid. The boxes shall be made of non-degradable material such as PVC, fiberglass or concrete.



(H) Low Pressure Distribution

(1) When required by site conditions, onsite wastewater treatment system effluent may be distributed to a dispersal field under pressure. Dispersal utilizing pressure distribution shall meet the following requirements:

a) Pressure distribution systems shall be fully engineered. A qualified professional shall submit a stamped and signed letter to the Administrative Authority stating that the pressure distribution system has been constructed per the previously submitted plans.

b) The pump chamber shall include a visual and audible high water alarm.

c) Emergency storage capacity shall be required equal to six hours of peak flow or three hundred seventy-five gallons whichever is greater.

d) The dispersal field shall be dosed in compliance with design requirements.

e) The distribution network shall be accessible for inspection, testing, flushing and adjustment.

(I) Shallow Drip Systems

(1) Shallow Drip Systems shall conform to the following requirements:

a) Drip lines shall be installed in native soil. The minimum depth to a limiting soil condition shall be in conformity with State standards.

b) Up to twelve inches of fill may be placed above the drip line to satisfy minimum soil cover requirements. The soil cover may be reduced to six inches when the wastewater has been treated to a tertiary level.

c) Measures shall be taken to avoid collection or ponding of rainfall or runoff in the dispersal field area. Soil erosion in the drip field shall be minimized.

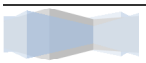
d) All subsurface drip system dispersal fields shall be preceded by a supplemental treatment system that meets the requirements of §18C-5(K) of this article.

e) Drip lines shall be installed as level as possible and parallel to elevation contours.

f) Drip field design shall be fully engineered and in accordance with manufacturer recommendations. Within thirty days of the completion of the construction of the subsurface drip irrigation system, a qualified professional shall submit a stamped and signed letter to the Administrative Authority stating that the system was installed per the previously approved plans.

(J) Alternative Wastewater Treatment Systems

(1) Onsite wastewater treatment systems utilizing an alternative dispersal field that may be approved for installation include mound, evapo-transpiration and at-grade systems. The Administrative Authority may approve other types of systems.



(2) The Administrative Authority may adopt design standards for alternative systems after consultation with the Regional Water Quality Control Board.

(3) Alternative dispersal fields shall be engineered in conformance with the *Guidelines for Evapotranspiration Systems* published by the State Water Resources Control Board. Upon completion of the installation and prior to final approval, a qualified professional shall submit a stamped and signed letter to the Administrative Authority stating that the alternative dispersal field has been constructed per the previously approved plans.

(4) Operation, maintenance and monitoring specifications shall be provided for review and approval for any alternative dispersal system

(5) A notice of the installation of an alternative onsite sewage dispersal field shall be recorded with the Santa Barbara County Clerk-Recorder's office. Said notice shall run with the land and serve as constructive notice to any future owner, heirs, executors, administrators or successors that the onsite wastewater treatment system serving the subject property has an alternative dispersal field for wastewater dispersal and is subject to an operating permit, regular monitoring, maintenance and reporting requirements.

(6) The property owner shall ensure that a qualified inspector, acceptable to the Administrative Authority, conducts a visual and operational inspection of the system once every year to ensure that the system is functioning properly.

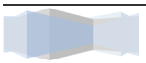
(7) The property owner shall submit a report a minimum of once a year, prepared by a qualified contractor or qualified professional in a form prescribed by the Administrative Authority. The report shall include the results of any inspections, a check of the high water alarm, and any other requirements specified by the Administrative Authority. Reports shall be submitted within 30 days of the completion of the inspection.

(K) Supplemental Treatment Systems

(1) The Administrative Authority shall review and approve the method of supplemental treatment proposed prior to construction. Treatment systems and their components shall be tested and certified by an independent testing agency, such as IAPMO, ANSI or NSF or similar, and shall be tested for the removal of total suspended solids, bio-chemical oxygen demand (BOD) and total nitrogen.

(2) A notice of the installation of a Supplemental Treatment System shall be recorded with the Santa Barbara County Clerk-Recorder office. Said notice shall run with the land and serve as constructive notice to any future owner, heirs, executors, administrators or successors that the onsite wastewater treatment system serving the subject property has supplemental treatment and is subject to an operating permit with monitoring, reporting and maintenance requirements.

(3) A maintenance contract between the property owner and the supplier of the supplemental treatment system or their representative shall be in force for the supplemental treatment unit and dispersal field prior to installation. The maintenance agreement shall be in force for the life of the supplemental treatment system.



(L) Operating Permits

(1) An operating permit issued by the Administrative Authority is required for the operation of alternative and supplemental treatment systems. All onsite wastewater treatment systems requiring operating permits shall be operated, maintained and monitored pursuant to the requirements of this article and the permit. The operating permit shall be renewed every five years following the review of satisfactory annual reports submitted to the Administrative Authority. The Administrative Authority may suspend or revoke an operating permit for failure to comply with any monitoring, maintenance or other requirements of the permit. If a permit is suspended or revoked, operation of the system shall cease until the suspension or revocation is lifted or a new permit issued. Continued use of an OWTS where the operating permit has expired or has been suspended may cause the responsible party be subject to administrative fines as provided in chapter 24A of the Santa Barbara County Code.

(2) Operation, maintenance and monitoring specifications shall be provided for review and approval for any supplemental treatment.

(3) The property owner shall ensure that a qualified contractor, qualified professional, Registered Environmental Health Specialist or manufacturer's representative conducts a visual and operational inspection of the system at the frequency specified by the manufacturer or a minimum of once per year to determine if the system is functioning properly.

(4) The property owner shall submit a report for every inspection or a minimum of once a year, within thirty days of inspection, prepared by a qualified contractor, qualified professional, Registered Environmental Health Specialist or manufacturer's representative in a form prescribed by the Administrative Authority. The report shall include the inspection results, analysis of the wastewater from the inspection ports for total suspended solids, biochemical oxygen demand and nitrogen series, and any other requirements specified by the Administrative Authority.

Sec. 18C-6. Repair, Upgrades, Evaluation, Modification and Abandonment Standards

(A) Failed Onsite Wastewater Treatment Systems

(1) A qualified contractor as defined in this article shall perform all repairs. An owner-builder may perform the work in lieu of the qualified contractor but all repairs shall meet the provisions of this article.

(2) Upon failure of an onsite wastewater treatment system, the system shall be repaired and shall conform to the provisions of this article. Failures in which there is surfacing of effluent shall be repaired immediately.

(3) If the onsite wastewater treatment system to be repaired was constructed under a valid permit and the approved expansion area is known, then the replacement dispersal field shall be of equal or larger size. The permittee shall verify the size, type and location of the existing dispersal field. This information shall be submitted to the Administrative Authority as part of the repair application.

(4) If the replacement dispersal field was previously approved, an adjacent “like for like” or larger dispersal field shall be installed under permit and inspection of the Administrative Authority.

(5) Onsite wastewater treatment systems that have failed and for which a replacement dispersal field that cannot meet current standards, shall meet the requirements of section 18C-5(K) of this article.

(6) Onsite wastewater treatment systems that have failed and were not constructed under a valid permit or were legal non-conforming, shall be replaced with a system that meets all the requirements of this article for a new onsite wastewater treatment system to the maximum extent feasible.

(7) Unless specifically required by the Administrative Authority, a statement of infeasibility of leach lines is not required for a new seepage pit that conforms to the standards of this article, and is constructed to replace an existing seepage pit.

(8) It is the intent of this code that when a dispersal field is repaired, a dual field consisting of two new dispersal fields be installed. However, if the existing dispersal field is serviceable and does not create a nuisance or a health and safety hazard, it may be utilized as one of the dual fields with concurrence from the Administrative Authority.

(B) Upgrades

(1) Upon discovery, all existing hollow seepage pits shall be properly abandoned or repaired, to conform to the construction standards for seepage pits included in this article. Abandonment or repair shall be completed under permit and inspection within thirty days of discovery. However, an application to abandon an existing seepage pit must meet the provisions specified in section 18C-6(E)(2) of this article.

(2) Upon discovery, all cesspools and bottomless septic tanks or otherwise non-watertight tanks shall be properly abandoned and replaced with a septic tank that conforms to the provisions of this article.

(3) Cesspools or onsite wastewater treatment systems without adequate dispersal fields shall install a dispersal field approved by the Administrative Authority.

(4) Upon discovery, septic tanks made of wood, metal or brick tanks with cracked or missing mortar, must be replaced with a septic tank that meets the requirements specified in section 18C-5(D) of this article.

(5) Replacement septic tanks and treatment tanks shall meet the standards noted in section 18C-5(D) of this article.

(6) Septic tanks and treatment tanks and all components must be constructed to provide adequate access so that all compartments can be inspected and pumped.

(7) Septic or treatment tanks constructed of concrete shall be replaced or structurally modified when the narrowest section of the lid or wall is found to have a remaining thickness of 2-1/2” or less at its narrowest point or if the remaining concrete is less than

half the original thickness. Risers shall be removed and reinstalled after the tank top is repaired.

(8) Septic tanks shall be replaced or repaired when the height of the baffle between compartments is equal to the water depth within the tank or when the baffle between compartments deteriorates to the point where it no longer provides compartment separation as designed.

(9) Any septic tank or treatment tank, which has more than two feet of cover and is uncovered for purposes of servicing, repair or modification shall be retrofitted with risers that have a minimum inside diameter of twenty inches and manhole covers as specified in this article.

(10) If the septic tank or treatment tank is located at greater than five feet beneath ground surface, then the riser shall be a minimum of thirty inches in diameter. Risers must be installed to allow for the measurement of the thickness of the tank top.

(11) Septic tanks or treatment tanks that are found to be located within the required setback distance from a structure shall be evaluated for adequate access. If it is determined that the septic tank or treatment tank is inaccessible, they shall be relocated to provide the required setback.

(12) Missing, deteriorated or damaged components, including but not limited to, tees, ells, risers, and lids, must be repaired or replaced.

(13) Single compartment septic tanks requiring repair or modification must be replaced, with a tank that meets the requirements of section 18C-5(B) of this article.

(14) Fiberglass or plastic tanks which have warped, collapsed, deflected or have a damaged baffle, shall be replaced.

(C) Onsite Wastewater Treatment System Evaluation

An OWTS evaluation permit is required for projects that remodel the interior of a structure, changes the footprint of the structure or changes the use of a structure. An evaluation can only be approved when it is determined by the Administrative Authority that the proposed improvements or change in use will not encroach into required setbacks or the one hundred percent expansion area and the existing system will accommodate the proposed changes.

(D) Modification

(1) Modification of an existing onsite wastewater treatment system shall be required by the Administrative Authority when:

a) Improvements to a property intrude upon the physical location of the system or the expansion area;

b) The existing septic system does not meet required setbacks;

c) The septic tank or treatment tank does not meet the minimum capacity requirements contained in this article;

d) The dispersal area including the 100 percent expansion area is not adequately sized or functioning properly;

e) A project increases flow to the dispersal field.

(2) The modification permit approval shall be based on field testing, engineering calculations and other information deemed necessary by the Administrative Authority in order to determine the adequacy of the dispersal project.

(3) Modifications that require replacement or expansion of the dispersal field shall meet the requirements for a new system to the maximum extent feasible.

(4) A modification permit is required when the proposed construction or change in use:

a) Adds a bedroom as defined in this chapter to a residential structure;

b) Increases peak daily design flow or the number of plumbing fixture units to a non-residential structure.

(5) A modification shall not be required if adequate information, as determined by the Administrative Authority, is provided to confirm that the existing system meets current requirements for the proposed project.

(E) General Abandonment Standards

(1) An existing onsite wastewater treatment system, or portion thereof, shall be properly abandoned under permit and inspection by the Administrative Authority within thirty days of the occurrence of any of the following:

a) The discovery of a hollow seepage pit not modified to meet the criteria for seepage pits, as provided in this article;

b) Connection of the served structure(s) to the public sewer;

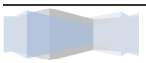
c) Removal or demolition of the served structure(s), unless the owner demonstrates his/her intent to use the system to serve a replacement structure and demonstrates to the satisfaction of the Administrative Authority that the system can be maintained in a safe and secure manner until completion of the replacement structure.

(2) Prior to abandonment of any onsite wastewater treatment system or portion thereof, the property owner shall identify the replacement method of sewage treatment and dispersal or specifically identify the structure(s) to be demolished.

(3) The abandonment of the OWTS shall not occur prior to obtaining the required permit from the Administrative Authority.

(4) During abandonment of an onsite wastewater treatment system, the property owner shall provide evidence of the type of sewage dispersal field present on the property.

(5) All sewage plumbing lines leading to and from the septic tank shall be removed or capped with watertight fittings.



(6) Abandonment standards for septic tanks, treatment tanks, cesspools and seepage pits are as follows:

a) Prior to abandonment, a registered septic tank pumper shall pump the septic tank, treatment tank, cesspool or hollow seepage pit to remove any standing wastewater;

b) The top of the septic tank, treatment tank, cesspool or hollow seepage pit shall be removed;

c) The bottom of the tank shall be cracked or perforated, or at least one wall of the tank shall be removed, prior to inspection;

d) The tank, cesspool or hollow seepage pit shall be filled with clean earth, sand, gravel, concrete or other material approved by the Administrative Authority. In the event the abandoned septic tank is filled with concrete or cement slurry, perforation of the bottom or removal of a wall shall not be required;

e) The Building Official shall be consulted regarding the abandonment of a septic tank, treatment tank or hollow seepage pit located within the setback distance of a structure.

(7) Abandonment standards for dispersal fields are as follows:

a) Seepage pits shall be excavated to a minimum depth of two feet below grade and the inspection / vent pipe cut a minimum of eighteen inches below grade. The perforated pipe and the excavation shall be backfilled with clean earth or other fill material approved by the Administrative Authority.

b) Gravel-filled leach lines may be abandoned in place without structural modification. Leach lines utilizing hollow chambers shall have the chambers removed and the trench backfilled with clean fill, or be evaluated by a qualified professional or geotechnical engineer, with the concurrence of the Administrative Authority, if the chambers are to be abandoned in place.

Sec. 18C-7. Servicing, Inspections and Reporting

(A) Servicing and Pumping

(1) Any individual who inspects onsite wastewater treatment systems shall be a qualified inspector as defined by this article. Inspections shall include a visual evaluation of the system to detect any deficiencies and a review of any documents in the files of the qualified inspector to identify previous inspections, servicing, or work performed on the system.

(2) Whenever an onsite wastewater treatment system is serviced, the qualified inspector shall inspect the system in accordance with procedures adopted by the Administrative Authority. Such procedures shall include, but not be limited to:

a) A registered pumper shall pump the contents of all compartments of the septic tank;

b) The septic tank or treatment tank shall be inspected for signs of deterioration, corrosion, elevated liquid level or damage and the dispersal field examined for failure;

c) Ascertain the existence of a hollow seepage pit or cesspool if the structure is served by a substandard septic tank (e.g. made of wood, steel or bottomless).

d) The onsite wastewater treatment system inspection report shall be fully completed, legible and submitted to the Administrative Authority and in conformity with section 18C-7(B) of this article.

(B) Reporting

(1) A report on forms or in a manner approved by the Administrative Authority shall be submitted by qualified inspectors to the Administrative Authority and the property owner no later than thirty days following inspection, servicing or maintenance of an onsite sewage treatment system. If an inspection has determined that an onsite wastewater treatment system has failed, as defined in this article, the written report shall be provided within twenty-four hours of servicing or maintenance. The report shall include:

a) The name, address and telephone number of the property owner as well as the street address of the property on which the onsite wastewater treatment system is located.

b) The name, address and telephone number of the company that provided the service and conducted the inspection.

c) A description of the system including the type and size of the septic tank, treatment tank, other system components as well as the type and location of the dispersal field.

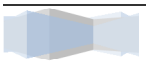
d) A description of the maintenance performed including the date of the service, the volume of material pumped from the septic and or treatment tank(s), an assessment of the condition of the tank(s) and other system components and a description of any repairs, modifications or upgrades provided;

e) A description of any uncorrected deficiencies in the onsite wastewater treatment system. Reported deficiencies shall include, but not be limited to, damaged, corroded deteriorated septic system components, failed dispersal field, backflow of effluent from the dispersal field back into the septic tank or treatment tank, lack of access risers or other upgrades required by this article, or other condition determined to be a significant deficiency or not in compliance with the provisions of this article.

(C) Property Owner Notification

(1) Upon receiving an inspection report identifying an uncorrected deficiency or required maintenance, repair or upgrade of an onsite wastewater treatment system, the Administrative Authority shall notify the property owner in writing of the corrections required to comply with the applicable standards in this article.

(2) All corrective actions necessary to comply with the standards of this article shall be completed within thirty days of the date that a notification has been sent, unless otherwise directed by the Administrative Authority.



(D) Registered Pumper Requirements

(1) Septage haulers shall register with the Administrative Authority.

(2) Septage haulers shall have vehicles that meet the following minimum standards, which shall be verified at the Administrative Authorities request:

a) The pumper vehicle, its holding tank(s) and all related appurtenances shall be watertight, functional and maintained in good operating condition;

b) Each pumper vehicle shall be identified with the business name and phone number with letters and numbers of at least three inches in height;

c) Holding tanks shall be constructed of durable, corrosion resistant material and shall meet the following criteria:

i) All hoses and related equipment shall be stored in covered containers or otherwise secured to the vehicle or holding tank;

ii) Man-ways and cleanouts shall be covered with secured, tight fitting lids;

d) Appropriate safety equipment is to be provided and shall include, but not limited to, a fire extinguisher, heavy-duty rubber gloves, bleach, disinfectant and eye protection;

e) The current registration decal shall be posted in the rear of the vehicle in a conspicuous location.

(3) The Administrative Authority may suspend or revoke a septage hauler's registration issued pursuant to this article and California Health & Safety Code Section 117445 whenever it finds that the registrant or its employees performing the work has done any of the following:

a) Violated any provision of this article;

b) Misrepresented any material facts in the application or supporting documents for such a registration;

c) Misrepresented facts in reports or failed to submit reports to the Administrative Authority as required by this article.

(4) No hauler whose registration has been suspended or revoked shall continue to perform the work for which the registration was granted until such time that the Administrative Authority reinstates the registration.

(5) Any hauler whose registration has been suspended or revoked may appeal the denial or suspension to the Environmental Health Services Director or the appointed representative in writing within 10 working days after notification of the imposition of suspension or revocation. Such an appeal must specify the grounds upon which it is taken. The Administrative Authority shall set the appeal hearing at the earliest practicable time and shall notify the appellant, in writing of the established date and time at least 10 days prior to the hearing date.

Sec. 18C-8. Violations and Conflicting Provisions

(A) Violations

(1) In the event of a violation of the provisions of this article, the property owner of the parcel where the violation exists shall be given notice of such violation and a reasonable time for its correction. In the event that all required corrections are not completed in the time noted on the notice of violation, the property owner shall be subject to administrative fines as provided in chapter 24A of the Santa Barbara County Code.

(2) If the Administrative Authority performs an inspection after notice of violation has been given and the violation has not been corrected, the property owner shall be subject to a violation reinspection fee at a rate approved by the Board of Supervisors.

(B) Conflicting Provisions

(1) If any of the provisions of this article conflict with any of the provisions of other codes adopted by the County of Santa Barbara, the provisions of this code shall control unless expressly stated to the contrary

(2) If any part of this article or its application is deemed invalid by a court of competent jurisdiction, the Board of Supervisors intend that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this article are severable.

Sec. 18C-9. Right of Entry

(A) Whenever it is necessary to make an inspection to enforce any of the provisions or perform any duty imposed by this article or by the County Codes adopted by reference hereby or other applicable law, the Administrative Authority is hereby authorized to enter such property at any reasonable time and to inspect the same and perform any duty imposed upon the Administrative Authority by this article or other applicable law, provided that if such property be occupied, the Administrative Authority shall first present proper credentials to the occupant and request entry, explaining the reasons therefore. If such entry is refused or cannot be obtained because the owner or other person having charge or control of the property cannot be found after due diligence, the Administrative Authority shall have recourse to every remedy provided by law to secure lawful entry and inspect the property.

(B) Notwithstanding subsection (a) of this section, if the Administrative Authority has reasonable cause to believe that the onsite sewage dispersal system or premises is so unsafe, offensive, or dangerous as to require immediate inspection to safeguard the public health or safety, the Administrative Authority shall have the right to immediately enter and inspect such property and use any reasonable means required to effect such entry and make such inspection, whether such property be occupied or unoccupied and whether or not permission to inspect has been obtained. If the property is occupied, the Administrative Authority shall first present proper credentials to the occupant and demand entry, explaining the reasons therefore and the purpose of the inspection.

Sec. 18C-10. Remedies

(A) Any violation of the provisions of this article by any person is subject to administrative fines as provided in chapter 24A of the Santa Barbara County Code. These remedies are not exclusive of any other remedies available under other federal, state or local laws and it is within the discretion of the Administrative Authority to seek cumulative remedies.

(B) The County Health Officer or his designee may order the public water supply to any premises or property to be discontinued upon finding by the County Health Officer or his designee that the continuation of such supply may endanger the public health. These may include but are not limited to:

(1) When sewage is overflowing or being discharged on the ground surface, the Director of Environmental Health Services may order the occupant or occupants thereof who contribute to such overflow or discharge to abate the same forthwith.

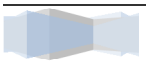
(2) If such occupant or occupants fail to abate such overflow or discharge as ordered, the County Health Officer may order such occupant or occupants to vacate the premises within 24 hours.

Sec. 18C-11. Powers and Duties of the Administrative Authority

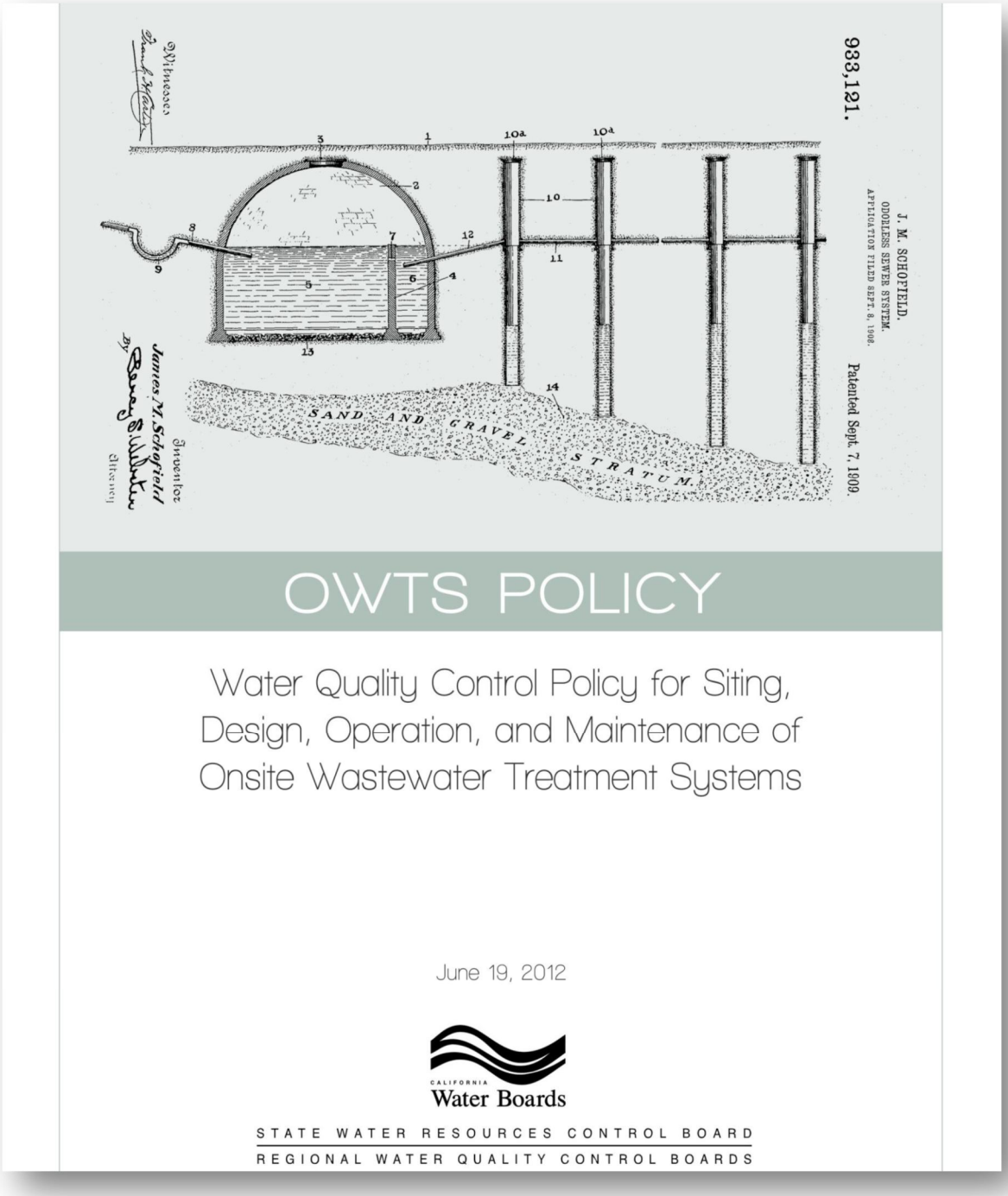
(A) The Administrative Authority may adopt policies and procedures to implement and administer this article.

(B) Within the unincorporated area of Santa Barbara County, the Administrative Authority is authorized and directed to enforce the provisions of this article. It is authorized to consult with qualified experts in any matter concerning the construction, operation, maintenance and repair of onsite wastewater treatment systems to the extent that it deems it necessary to assist in carrying out its duties under this article. The Administrative Authority may request and shall receive the assistance and cooperation of other officials of the County of Santa Barbara, so far as may be necessary in the discharge of its duties.

(C) The Administrative Authority may approve requests for variances from the provisions of this article if it is determined that complete compliance with the prescribed standards is not possible or practical and that the variance is not counter to the purposes and intent of this article.



APPENDIX 2
State Water Resources Control Board
Onsite Wastewater Treatment System Policy



State of California
Edmund G. Brown Jr., Governor

California Environmental Protection Agency
Matthew Rodriquez, Secretary

State Water Resources Control Board
http://www.waterboards.ca.gov

Charles R. Hoppin, Chair
Frances Spivy-Weber, Vice Chair
Tam M. Doduc, Member
Steven Moore, Member

Thomas Howard, Executive Director
Jonathan Bishop, Chief Deputy Director
Caren Trgovcich, Chief Deputy Director

Adopted by the State Water Resources Control Board on June 19, 2012
Approved by the Office of Administrative Law on November 13, 2012
Effective Date of the Policy: May 13, 2013

Preamble – Purpose and Scope – Structure of the Policy

Preamble

Onsite wastewater treatment systems (OWTS) are useful and necessary structures that allow habitation at locations that are removed from centralized wastewater treatment systems. When properly sited, designed, operated, and maintained, OWTS treat domestic wastewater to reduce its polluting impact on the environment and most importantly protect public health. Estimates for the number of installations of OWTS in California at the time of this Policy are that more than 1.2 million systems are installed and operating. The vast majority of these are functioning in a satisfactory manner and meeting their intended purpose.

However there have been occasions in California where OWTS for a varied list of reasons have not satisfactorily protected either water quality or public health. Some instances of these failures are related to the OWTS not being able to adequately treat and dispose of waste as a result of poor design or improper site conditions. Others have occurred where the systems are operating as designed but their densities are such that the combined effluent resulting from multiple systems is more than can be assimilated into the environment. From these failures we must learn how to improve our usage of OWTS and prevent such failures from happening again.

As California's population continues to grow, and we see both increased rural housing densities and the building of residences and other structures in more varied terrain than we ever have before, we increase the risks of causing environmental damage and creating public health risks from the use of OWTS. What may have been effective in the past may not continue to be as conditions and circumstances surrounding particular locations change. So necessarily more scrutiny of our installation of OWTS is demanded of all those involved, while maintaining an appropriate balance of only the necessary requirements so that the use of OWTS remains viable.

Purpose and Scope of the Policy

The purpose of this Policy is to allow the continued use of OWTS, while protecting water quality and public health. This Policy recognizes that responsible local agencies can provide the most effective means to manage OWTS on a routine basis. Therefore as an important element, it is the intent of this policy to efficiently utilize and improve upon where necessary existing local programs through coordination between the State and local agencies. To accomplish this purpose, this Policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements and sets the level of performance and protection expected from OWTS. In particular, the Policy requires actions for water bodies specifically identified as part this Policy where OWTS contribute to water quality degradation that adversely affect beneficial uses.

This Policy only authorizes subsurface disposal of domestic strength, and in limited instances high strength, wastewater and establishes minimum requirements for the permitting, monitoring, and operation of OWTS for protecting beneficial uses of waters

1

Preamble – Purpose and Scope – Structure of the Policy

of the State and preventing or correcting conditions of pollution and nuisance. And finally, this Policy also conditionally waives the requirement for owners of OWTS to apply for and receive Waste Discharge Requirements in order to operate their systems when they meet the conditions set forth in the Policy. Nothing in this Policy supersedes or requires modification of Total Maximum Daily Loads or Basin Plan prohibitions of discharges from OWTS.

This Policy also applies to OWTS on federal, state, and Tribal lands to the extent authorized by law or agreement.

Structure of the Policy

This Policy is structured into ten major parts:

Definitions
Definitions for all the major terms used in this Policy are provided within this part and wherever used in the Policy the definition given here overrides any other possible definition.
[Section 1]

Responsibilities and Duties
Implementation of this Policy involves individual OWTS owners; local agencies, be they counties, cities, or any other subdivision of state government with permitting powers over OWTS; Regional Water Quality Control Boards; and the State Water Resources Control Board.
[Sections 2, 3, 4, and 5]

Tier 0 – Existing OWTS
Existing OWTS that are properly functioning, and do not meet the conditions of failing systems or otherwise require corrective action (for example, to prevent groundwater impairment) as specifically described in Tier 4, and are not determined to be contributing to an impairment of surface water as specifically described in Tier 3, are automatically included in Tier 0.
[Section 6]

Tier 1 – Low-Risk New or Replacement OWTS
New or replacement OWTS that meet low risk siting and design requirements as specified in Tier 1, where there is not an approved Local Agency Management Program per Tier 2.
[Sections 7 and 8]

Tier 2 – Local Agency Management Program for New or Replacement OWTS
California is well known for its extreme range of geological and climatic conditions. As such, the establishment of a single set of criteria for OWTS would either be too restrictive so as to protect for the most sensitive case, or would have broad allowances that would not be protective enough under some circumstances. To accommodate this

Preamble – Purpose and Scope – Structure of the Policy

extreme variance, local agencies may submit management programs ("Local Agency Management Programs") for approval, and upon approval then manage the installation of new and replacement OWTS under that program.

Local Agency Management Programs approved under Tier 2 provide an alternate method from Tier 1 programs to achieve the same policy purpose, which is to protect water quality and public health. In order to address local conditions, Local Agency Management Programs may include standards that differ from the Tier 1 requirements for new and replacement OWTS contained in Sections 7 and 8. As examples, a Local Agency Management Program may authorize different soil characteristics, usage of seepage pits, and different densities for new developments. Once the Local Agency Management Program is approved, new and replacement OWTS that are included within the Local Agency Management Program may be approved by the Local Agency. A Local Agency, at its discretion, may include Tier 1 standards within its Tier 2 Local Agency Management Program for some or all of its jurisdiction. However, once a Local Agency Management Program is approved, it shall supersede Tier 1 and all future OWTS decisions will be governed by the Tier 2 Local Agency Management Program until it is modified, withdrawn, or revoked.
[Section 9]

Tier 3 – Impaired Areas
Existing, new, and replacement OWTS that are near impaired water bodies may be addressed by a TMDL and its implementation program, or special provisions contained in a Local Agency Management Program. If there is no TMDL or special provisions, new or replacement OWTS within 600 feet of impaired water bodies listed in Attachment 2 must meet the specific requirements of Tier 3.
[Section 10]

Tier 4 – OWTS Requiring Corrective Action
OWTS that require corrective action or are either presently failing or fail at any time while this Policy is in effect are automatically included in Tier 4 and must follow the requirements as specified.
[Section 11]

Conditional Waiver of Waste Discharge Requirements
The requirement to submit a report of waste discharge for discharges from OWTS that are in conformance with this policy is waived.
[Section 12]

Effective Date
When this Policy becomes effective.
[Section 13]

Financial Assistance
Procedures for local agencies to apply for funds to establish low interest loan programs for the assistance of OWTS owners in meeting the requirements of this Policy.
[Section 14]

3

Preamble – Purpose and Scope – Structure of the Policy

Attachment 1
AB 885 Regulatory Program Timelines.

Attachment 2

Tables 4 and 5 specifically identify those impaired water bodies that have Tier 3 requirements and must have a completed TMDL by the date specified.

Attachment 3

Table 6 shows where one Regional Water Board has been designated to review and, if appropriate, approve new Local Agency Management Plans for a local agency that is within multiple Regional Water Boards' jurisdiction.

What Tier Applies to my OWTS?

Existing OWTS that conform to the requirements for Tier 0 will remain in Tier 0 as long as they continue to meet those requirements. An existing OWTS will temporarily move from Tier 0 to Tier 4 if it is determined that corrective action is needed. The existing OWTS will return to Tier 0 once the corrective action is completed if the repair does not qualify as major repair under Tier 4. Any major repairs conducted as corrective action must comply with Tier 1 requirements or Tier 2 requirements, whichever are in effect for that local area. An existing OWTS will move from Tier 0 to Tier 3 if it is adjacent to an impaired water body listed on Attachment 2, or is covered by a TMDL implementation plan.

In areas with no approved Local Agency Management Plan, new and replacement OWTS that conform to the requirements of Tier 1 will remain in Tier 1 as long as they continue to meet those requirements. A new or replacement OWTS will temporarily move from Tier 1 to Tier 4 if it is determined that corrective action is needed. The new or replacement OWTS will return to Tier 1 once the corrective action is completed. A new or replacement OWTS will move from Tier 1 to Tier 3 if it is adjacent to an impaired water body, or is covered by a TMDL implementation plan.

In areas with an approved Local Agency Management Plan, new and replacement OWTS that conform to the requirements of the Tier 2 Local Agency Management Plan will remain in Tier 2 as long as they continue to meet those requirements. A new or replacement OWTS will temporarily move from Tier 2 to Tier 4 if it is determined that corrective action is needed. The new or replacement OWTS will return to Tier 2 once the corrective action is completed. A new or replacement OWTS will move from Tier 2 to Tier 3 if it is adjacent to an impaired water body, or is covered by a TMDL implementation plan, or is covered by special provisions for impaired water bodies contained in a Local Agency Management Program.

4

Existing, new, and replacement OWTS in specified areas adjacent to water bodies that are identified by the State Water Board as impaired for pathogens or nitrogen and listed in Attachment 2 are in Tier 3. Existing, new, and replacement OWTS covered by a TMDL implementation plan, or covered by special provisions for impaired water bodies contained in a Local Agency Management Program are also in Tier 3. These OWTS will temporarily move from Tier 3 to Tier 4 if it is determined that corrective action is needed. The new or replacement OWTS will return to Tier 3 once the corrective action is completed.

Existing, new, and replacement OWTS that do not conform with the requirements to receive coverage under any of the Tiers (e.g., existing OWTS with a projected flow of more than 10,000 gpd) do not qualify for this Policy's conditional waiver of waste discharge requirements, and will be regulated separately by the applicable Regional Water Board.

5

1.0 Definitions. The following definitions apply to this Policy:

"303 (d) list" means the same as **"Impaired Water Bodies."**

"At-grade system" means an OWTS dispersal system with a discharge point located at the preconstruction grade (ground surface elevation). The discharge from an at-grade system is always subsurface.

"Average annual rainfall" means the average of the annual amount of precipitation for a location over a year as measured by the nearest National Weather Service station for the preceding three decades. For example the data set used to make a determination in 2012 would be the data from 1981 to 2010.

"Basin Plan" means the same as "water quality control plan" as defined in Division 7 (commencing with Section 13000) of the Water Code. Basin Plans are adopted by each Regional Water Board, approved by the State Water Board and the Office of Administrative Law, and identify surface water and groundwater bodies within each Region's boundaries and establish, for each, its respective beneficial uses and water quality objectives. Copies are available from the Regional Water Boards, electronically at each Regional Water Boards website, or at the State Water Board's *Plans and Policies* web page (http://www.waterboards.ca.gov/plans_policies/).

"Bedrock" means the rock, usually solid, that underlies soil or other unconsolidated, surficial material.

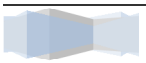
"CEDEN" means California Environmental Data Exchange Network and information about it is available at the State Water Boards website or http://www.ceden.org/index.shtml.

"Cesspool" means an excavation in the ground receiving domestic wastewater, designed to retain the organic matter and solids, while allowing the liquids to seep into the soil. Cesspools differ from seepage pits because cesspool systems do not have septic tanks and are not authorized under this Policy. The term cesspool does not include pit-privies and out-houses which are not regulated under this Policy.

"Clay" means a soil particle; the term also refers to a type of soil texture. As a soil particle, clay consists of individual rock or mineral particles in soils having diameters <0.002 mm. As a soil texture, clay is the soil material that is comprised of 40 percent or more clay particles, not more than 45 percent sand and not more than 40 percent silt particles using the USDA soil classification system.

"Cobbles" means rock fragments 76 mm or larger using the USDA soil classification systems.

"Dispersal system" means a leachfield, seepage pit, mound, at-grade, subsurface drip field, evapotranspiration and infiltration bed, or other type of system for final wastewater treatment and subsurface discharge.



Definitions

"Domestic wastewater" means wastewater with a measured strength less then high-strength wastewater and is the type of wastewater normally discharged from, or similar to, that discharged from plumbing fixtures, appliances and other household devices including, but not limited to toilets, bathtubs, showers, laundry facilities, dishwashing facilities, and garbage disposals. Domestic wastewater may include wastewater from commercial buildings such as office buildings, retail stores, and some restaurants, or from industrial facilities where the domestic wastewater is segregated from the industrial wastewater. Domestic wastewater may include incidental RV holding tank dumping but does not include wastewater consisting of a significant portion of RV holding tank wastewater such as at RV dump stations. Domestic wastewater does not include wastewater from industrial processes.

"Dump Station" means a facility intended to receive the discharge of wastewater from a holding tank installed on a recreational vehicle. A dump station does not include a full hook-up sewer connection similar to those used at a recreational vehicle park.

"Domestic well" means a groundwater well that provides water for human consumption and is not regulated by the California Department of Public Health.

"Earthen material" means a substance composed of the earth's crust (i.e. soil and rock).

"EDF" see "electronic deliverable format."

"Effluent" means sewage, water, or other liquid, partially or completely treated or in its natural state, flowing out of a septic tank, aerobic treatment unit, dispersal system, or other OWTS component.

"Electronic deliverable format" or **"EDF"** means the data standard adopted by the State Water Board for submittal of groundwater quality monitoring data to the State Water Board's internet-accessible database system Geotracker (http://geotracker.waterboards.ca.gov/).

"Escherichia coli" means a group of bacteria predominantly inhabiting the intestines of humans or other warm-blooded animals, but also occasionally found elsewhere. Used as an indicator of human fecal contamination.

"Existing OWTS" means an OWTS that was constructed and operating prior to the effective date of this Policy, and OWTS for which a construction permit has been issued prior to the effective date of the Policy.

"Flowing water body" means a body of running water flowing over the earth in a natural water course, where the movement of the water is readily discernible or if water is not present it is apparent from review of the geology that when present it does flow, such as in an ephemeral drainage, creek, stream, or river.

"Groundwater" means water below the land surface that is at or above atmospheric pressure.

Definitions

"High-strength wastewater" means wastewater having a 30-day average concentration of biochemical oxygen demand (BOD) greater than 300 milligrams-per-liter (mg/L) or of total suspended solids (TSS) greater than 330 mg/L or a fats, oil, and grease (FOG) concentration greater than 100 mg/L prior to the septic tank or other OWTS treatment component.

"IAPMO" means the International Association of Plumbing and Mechanical Officials.

"Impaired Water Bodies" means those surface water bodies or segments thereof that are identified on a list approved first by the State Water Board and then approved by US EPA pursuant to Section 303(d) of the federal Clean Water Act.

"Local agency" means any subdivision of state government that has responsibility for permitting the installation of and regulating OWTS within its jurisdictional boundaries; typically a county, city, or special district.

"Major repair" means either: (1) for a dispersal system, repairs required for an OWTS dispersal system due to surfacing wastewater effluent from the dispersal field and/or wastewater backed up into plumbing fixtures because the dispersal system is not able to percolate the design flow of wastewater associated with the structure served, or (2) for a septic tank, repairs required to the tank for a compartment baffle failure or tank structural integrity failure such that either wastewater is exfiltrating or groundwater is infiltrating.

"Mottling" means a soil condition that results from oxidizing or reducing minerals due to soil moisture changes from saturated to unsaturated over time. Mottling is characterized by spots or blotches of different colors or shades of color (grays and reds) interspersed within the dominant color as described by the USDA soil classification system. This soil condition can be indicative of historic seasonal high groundwater level, but the lack of this condition may not demonstrate the absence of groundwater.

"Mound system" means an aboveground dispersal system (covered sand bed with effluent leachfield elevated above original ground surface inside) used to enhance soil treatment, dispersal, and absorption of effluent discharged from an OWTS treatment unit such as a septic tank. Mound systems have a subsurface discharge.

"New OWTS" means an OWTS permitted after the effective date of this Policy.

"NSF" means NSF International (a.k.a. National Sanitation Foundation), a not for profit, non-governmental organization that develops health and safety standards and performs product certification.

"Oil/grease interceptor" means a passive interceptor that has a rate of flow exceeding 50 gallons-per-minute and that is located outside a building. Oil/grease interceptors are used for separating and collecting oil and grease from wastewater.

8

"Onsite wastewater treatment system(s)" (**OWTS**) means individual disposal systems, community collection and disposal systems, and alternative collection and disposal systems that use subsurface disposal. The short form of the term may be singular or plural. OWTS do not include "graywater" systems pursuant to Health and Safety Code Section 17922.12.

"Percolation test" means a method of testing water absorption of the soil. The test is conducted with clean water and test results can be used to establish the dispersal system design.

"Permit" means a document issued by a local agency that allows the installation and use of an OWTS, or waste discharge requirements or a waiver of waste discharge requirements that authorizes discharges from an OWTS.

"Person" means any individual, firm, association, organization, partnership, business trust, corporation, company, State agency or department, or unit of local government who is, or that is, subject to this Policy.

"Pit-privy" (a.k.a. outhouse, pit-toilet) means self-contained waterless toilet used for disposal of non-water carried human waste; consists of a shelter built above a pit in the ground into which human waste falls.

"Policy" means this Policy for Siting, Design, Operation and Management of OWTS.

"Pollutant" means any substance that alters water quality of the waters of the State to a degree that it may potentially affect the beneficial uses of water, as listed in a Basin Plan.

"Projected flows" means wastewater flows into the OWTS determined in accordance with any of the applicable methods for determining average daily flow in the *USEPA Onsite Wastewater Treatment System Manual, 2002,* or for Tier 2 in accordance with an approved Local Agency Management Program.

"Public Water System" is a water system regulated by the California Department of Public Health or a Local Primacy Agency pursuant to Chapter 12, Part 4, California Safe Drinking Water Act, Section 116275 (h) of the California Health and Safety Code.

"Public Water Well" is a ground water well serving a public water system. A spring which is not subject to the California Surface Water Treatment Rule (SWTR), CCR, Title 22, sections 64650 through 64666 is a public well.

"Qualified professional" means an individual licensed or certified by a State of California agency to design OWTS and practice as professionals for other associated reports, as allowed under their license or registration. Depending on the work to be performed and various licensing and registration requirements, this may include an individual who possesses a registered environmental health specialist certificate or is currently licensed as a professional engineer or professional geologist. For the purposes of performing site evaluations, Soil Scientists certified by the Soil Science Society of America are considered qualified professionals. A local agency may modify this definition as part of its Local Agency Management Program.

9

designated by Water Code Section 13200. Any reference to an action of the Regional Water Board in this Policy also refers to an action of its Executive Officer, including the conducting of public hearings, pursuant to any general or specific delegation under Water Code Section 13223.

"Replacement OWTS" means an OWTS that has its treatment capacity expanded, or its dispersal system replaced or added onto, after the effective date of this Policy.

"Sand" means a soil particle; this term also refers to a type of soil texture. As a soil particle, sand consists of individual rock or mineral particles in soils having diameters ranging from 0.05 to 2.0 millimeters. As a soil texture, sand is soil that is comprised of 85 percent or more sand particles, with the percentage of silt plus 1.5 times the percentage of clay particles comprising less than 15 percent.

"Seepage pit" means a drilled or dug excavation, three to six feet in diameter, either lined or gravel filled, that receives the effluent discharge from a septic tank or other OWTS treatment unit for dispersal.

"Septic tank" means a watertight, covered receptacle designed for primary treatment of wastewater and constructed to:

1. Receive wastewater discharged from a building;
2. Separate settleable and floating solids from the liquid;
3. Digest organic matter by anaerobic bacterial action;
4. Store digested solids; and
5. Clarify wastewater for further treatment with final subsurface discharge.

"Service provider" means a person capable of operating, monitoring, and maintaining an OWTS in accordance to this Policy.

"Silt" means a soil particle; this term also refers to a type of soil texture. As a soil particle, silt consists of individual rock or mineral particles in soils having diameters ranging from between 0.05 and 0.002 mm. As a soil texture, silt is soil that is comprised as approximately 80 percent or more silt particles and not more than 12 percent clay particles using the USDA soil classification system.

"Single-family dwelling unit" means a structure that is usually occupied by just one household or family and for the purposes of this Policy is expected to generate an average of 250 gallons per day of wastewater.

"Site" means the location of the OWTS and, where applicable, a reserve dispersal area capable of disposing 100 percent of the design flow from all sources the OWTS is intended to serve.

"Site Evaluation" means an assessment of the characteristics of the site sufficient to determine its suitability for an OWTS to meet the requirements of this Policy.

10

Definitions

"Soil" means the naturally occurring body of porous mineral and organic materials on the land surface, which is composed of unconsolidated materials, including sand-sized, silt-sized, and clay-sized particles mixed with varying amounts of larger fragments and organic material. The various combinations of particles differentiate specific soil textures identified in the soil textural triangle developed by the United States Department of Agriculture (USDA) as found in Soil Survey Staff, USDA; *Soil Survey Manual, Handbook 18,* U.S. Government Printing Office, Washington, DC, 1993, p. 138. For the purposes of this Policy, soil shall contain earthen material of particles smaller than 0.08 inches (2 mm) in size.

"Soil Structure" means the arrangement of primary soil particles into compound particles, peds, or clusters that are separated by natural planes of weakness from adjoining aggregates.

"Soil texture" means the soil class that describes the relative amount of sand, clay, silt and combinations thereof as defined by the classes of the soil textural triangle developed by the USDA (referenced above).

"State Water Board" is the State Water Resources Control Board

"Supplemental treatment" means any OWTS or component of an OWTS, except a septic tank or dosing tank, that performs additional wastewater treatment so that the effluent meets a predetermined performance requirement prior to discharge of effluent into the dispersal field.

"SWAMP" means Surface Water Ambient Monitoring Program and more information is available at: http://www.waterboards.ca.gov/water_issues/programs/swamp/

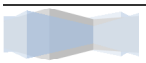
"Telemetric" means the ability to automatically measure and transmit OWTS data by wire, radio, or other means.

"TMDL" is the acronym for "total maximum daily load." Section 303(d)(1) of the Clean Water Act requires each State to establish a TMDL for each impaired water body to address the pollutant(s) causing the impairment. In California, TMDLs are usually adopted as Basin Plan amendments and contain implementation plans detailing how water quality standards will be attained.

"Total coliform" means a group of bacteria consisting of several *genera* belonging to the family *Enterobacteriaceae*, which includes Escherichia coli bacteria.

"USDA" means the U.S. Department of Agriculture.

"Waste discharge requirement" or **"WDR"** means an operation and discharge permit issued for the discharge of waste pursuant to Section 13260 of the California Water Code.



Responsibilities and Duties

Responsibilities and Duties

2.0 OWTS Owners Responsibilities and Duties

2.1 All new, replacement, or existing OWTS within an area that is subject to a Basin Plan prohibition of discharges from OWTS, must comply with the prohibition. If the prohibition authorizes discharges under specified conditions, the discharge must comply with those conditions and the applicable provisions of this Policy.

2.2 Owners of OWTS shall adhere to the requirements prescribed in local codes and ordinances. Owners of new and replacement OWTS covered by this Policy shall also meet the minimum standards contained in Tier 1, or an alternate standard provided by a Local Agency Management Program per Tier 2, or shall comply with the requirements of Tier 3 if near an impaired water body and subject to Tier 3, or shall provide corrective action for their OWTS if their system meets conditions that place it in Tier 4.

2.3 Owners of OWTS shall comply with any and all permitting conditions imposed by a local agency that do not directly conflict with this Policy, including any conditions that are more stringent than required by this Policy.

2.4 To receive coverage under this Policy and the included waiver of waste discharges, OWTS shall only accept and treat flows of domestic wastewater. In addition, OWTS that accept high-strength wastewater from commercial food service buildings are covered under this Policy and the waiver of waste discharge requirements if the wastewater does not exceed 900 mg/L BOD and there is a properly sized and functioning oil/grease interceptor (a.k.a grease trap).

2.5 Owners of OWTS shall maintain their OWTS in good working condition including inspections and pumping of solids as necessary, or as required by local ordinances, to maintain proper function and assure adequate treatment.

2.6 The following owners of OWTS shall notify the Regional Water Board by submitting a Report of Waste Discharge for the following:

2.6.1 a new or replacement OWTS that does not meet the conditions and requirements set forth in either a Local Agency Management Program if one is approved, an existing local program if it is less than 60 months from the effective date of the Policy and a Local Agency Management Program is not yet approved, or Tier 1 if no Local Agency Management Program has been approved and it is more than 60 months after the effective date of this Policy;

2.6.2 any OWTS, not under individual waste discharge requirements or a waiver of individual waste discharge requirements issued by a Regional Water Board, with the projected flow of over 10,000 gallons-per-day;

12

2.6.3 any OWTS that receives high-strength wastewater, unless the waste stream is from a commercial food service building;

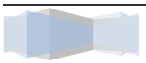
2.6.4 any OWTS that receives high-strength wastewater from a commercial food service building: (1) with a BOD higher than 900 mg/L, or (2) that does not have a properly sized and functioning oil/grease interceptor.

2.7 All Reports of Waste Discharge shall be accompanied by the required application fee pursuant to California Code of Regulations, title 23, section 2200.

3.0 Local Agency Requirements and Responsibilities

3.1 Local agencies, in addition to implementing their own local codes and ordinances, shall determine whether the requirements within their local jurisdiction will be limited to the water quality protection afforded by the statewide minimum standards in Tier 0, Tier 1, Tier 3, and Tier 4, or whether the local agency will implement a Local Agency Management Program in accordance with Tier 2. Except for Tier 3, local agencies may continue to implement their existing OWTS permitting programs in compliance with the Basin Plan in place at the effective date of the Policy until 60 months after the effective date of this Policy, or approval of a Local Agency Management Program, whichever comes first, and may make minor adjustments as necessary that are in compliance with the applicable Basin Plan and this Policy. Tier 3 requirements take effect on the effective date of this Policy. In the absence of a Tier 2 Local Agency Management Program, to the extent that there is a direct conflict between the applicable minimum standards and the local codes or ordinances (such that it is impossible to comply with both the applicable minimum standards and the local ordinances or codes), the more restrictive standards shall govern.

3.2 If preferred, the local agency may at any time provide the State Water Board and all affected Regional Water Board(s) written notice of its intent to regulate OWTS using a Local Agency Management Program with alternative standards as authorized in Tier 2 of this Policy. A proposed Local Agency Management Program that conforms to the requirements of that Section shall be included with the notice. A local agency shall not implement a program different than the minimum standards contained in Tier 1 and 3 of this Policy after 60 months from the effective date of this Policy until approval of the proposed Local Agency Management Program is granted by either the Regional Water Board or State Water Board. All initial program submittals desiring approval prior to the 60 month limit shall be received no later than 36 months from the effective date of this Policy. Once approved, the local agency shall adhere to the Local Agency Management Program, including all requirements, monitoring, and reporting. If at any time a local agency wishes to modify its Local Agency Management Program, it shall provide the State Water Board and all affected Regional Water Board(s) written notice of its intended modifications and will continue to implement its existing Local Agency Management Program until the modifications are approved.



Responsibilities and Duties

3.3 All local agencies permitting OWTS shall report annually to the Regional Water Board(s). If a local agency's jurisdictional area is within the boundary of multiple Regional Water Boards, the local agency shall send a copy of the annual report to each Regional Water Board. The annual report shall include the following information (organized in a tabular spreadsheet format) and summarize whether any further actions are warranted to protect water quality or public health:

3.3.1 number and location of complaints pertaining to OWTS operation and maintenance, and identification of those which were investigated and how they were resolved;

3.3.2 shall provide the applications and registrations issued as part of the local septic tank cleaning registration program pursuant to Section 117400 et seq. of the California Health and Safety Code;

3.3.3 number, location, and description of permits issued for new and replacement OWTS and which Tier the permit is issued.

3.4 All local agencies permitting OWTS shall retain permanent records of their permitting actions and will make those records available within 10 working days upon written request for review by a Regional Water Board. The records for each permit shall reference the Tier under which the permit was issued.

3.5 A local agency shall notify the owner of a public well or water intake and the California Department of Public Health as soon as practicable, but not later than 72 hours, upon its discovery of a failing OWTS as described in sections 11.1 and 11.2 within the setbacks described in sections 7.5.6 through 7.5.10.

3.6 A local agency may implement this Policy, or a portion thereof, using its local authority to enforce the policy, as authorized by an approval from the State Water Board or by the appropriate Regional Water Board.

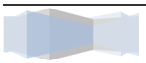
3.7 Nothing in the Policy shall preclude a local agency from adopting or retaining standards for OWTS in an approved Local Agency Management Program that are more protective of the public health or the environment than are contained in this Policy.

3.8 If at any time a local agency wishes to withdraw its previously submitted and approved Tier 2 Local Agency Management Program, it may do so upon 60 days written notice. The notice of withdrawal shall specify the reason for withdrawing its Tier 2 program, the effective date for cessation of the program and resumption of permitting of OWTS only under Tiers 1, 3, and 4.

4.0 Regional Water Board Functions and Duties

4.1 The Regional Water Boards have the principal responsibility for overseeing the implementation of this Policy.

4.2 Regional Water Boards shall incorporate the requirements established in this Policy by amending their Basin Plans within 12 months of the effective date of this Policy, pursuant to Water Code Section 13291(e). The Regional Water



Responsibilities and Duties

Boards may also consider whether it is necessary and appropriate to retain or adopt any more protective standards. To the extent that a Regional Water Board determines that it is necessary and appropriate to retain or adopt any more protective standards, it shall reconcile those region-specific standards with this Policy to the extent feasible, and shall provide a detailed basis for its determination that each of the more protective standards is necessary and appropriate.

4.2.1 Notwithstanding 4.2 above, the North Coast Regional Water Board will continue to implement its existing Basin Plan requirements pertaining to OWTS within the Russian River watershed until it adopts the Russian River TMDL, at which time it will comply with section 4.2 for the Russian River watershed.

4.3 The Regional Water Board designated in Attachment 3 shall review, and if appropriate, approve a Local Agency Management Program submitted by the local agency pursuant to Tier 2 in this Policy. Upon receipt of a proposed Local Agency Management Program, the Regional Water Board designated in Attachment 3 shall have 90 days to notify the local agency whether the submittal contains all the elements of a Tier 2 program, but may request additional information based on review of the proposed program. Approval must follow a noticed hearing with opportunity for public comment. If a Local Agency Management Program is disapproved, the Regional Water Board designated in Attachment 3 shall provide a written explanation of the reasons for the disapproval. A Regional Water Board may approve a Local Agency Management Program while disapproving any proposed special provisions for impaired water bodies contained in the Local Agency Management Program. If no action is taken by the respective Regional Water Board within 12 months of the submission date of a complete Local Agency Management Program, the program shall be forwarded to the State Water Board for review and approval pursuant to Section 5 of this Policy.

4.3.1 Where the local agency's jurisdiction lies within more than one Regional Water Board, staff from the affected Regional Water Boards shall work cooperatively to assure that water quality protection in each region is adequately protected. If the Regional Water Board designated in Attachment 3 approves the Local Agency Management Program over the written objection of an affected Regional Water Board, that Regional Water Board may submit the dispute to the State Water Board under Section 5.3.

4.3.2 Within 30 days of receipt of a proposed Local Agency Management Program, a Regional Water Board will forward a copy to and solicit comments from the California Department of Public Health regarding a Local Agency Management Program's proposed policies and procedures, including notification to local water purveyors prior to OWTS permitting.

4.4 Once a Local Agency Management Program has been approved, any affected Regional Water Board may require modifications or revoke authorization of a local agency to implement a Tier 2 program, in accordance with the following:

15

4.4.1 The Regional Water Board shall consult with any other Regional Water Board(s) having jurisdiction over the local agency before providing the notice described in section 4.4.2.

4.4.2 Written notice shall be provided to the local agency detailing the Regional Water Board's action, the cause for such action, remedies to prevent the action from continuing to completion, and appeal process and rights. The local agency shall have 90 days from the date of the written notice to respond with a corrective action plan to address the areas of non-compliance, or to request the Regional Water Board to reconsider its findings.

4.4.3 The Regional Water Board shall approve, approve conditionally, or deny a corrective action plan within 90 days of receipt. The local agency will have 90 days to begin implementation of a corrective action plan from the date of approval or 60 days to request reconsideration from the date of denial. If the local agency fails to submit an acceptable corrective action plan, fails to implement an approved corrective action plan, or request reconsideration, the Regional Water Board may require modifications to the Local Agency Management Program, or may revoke the local agency's authorization to implement a Tier 2 program.

4.4.4 Requests for reconsideration by the local agency shall be decided by the Regional Water Board within 90 days and the previously approved Local Agency Management Program shall remain in effect while the reconsideration is pending.

4.4.5 If the request for reconsideration is denied, the local agency may appeal to the State Water Board and the previously approved Local Agency Management Program shall remain in effect while the appeal is under consideration. The State Water Board shall decide the appeal within 90 days. All decisions of the State Water Board are final.

4.5 The appropriate Regional Water Board shall accept and consider any requests for modification or revocation of a Local Agency Management Program submitted by any person. The Regional Water Board will notify the person making the request and the local agency implementing the Local Agency Management Program at issue by letter within 90 days whether it intends to proceed with the modification or revocation process per Section 4.4 above, or is dismissing the request. The Regional Water Board will post the request and its response letter on its website.

4.6 A Regional Water Board may issue or deny waste discharge requirements or waivers of waste discharge requirements for any new or replacement OWTS within a jurisdiction of a local agency without an approved Local Agency Management Program if that OWTS does not meet the minimum standards contained in Tier 1.

4.7 The Regional Water Boards will implement any notifications and enforcement requirements for OWTS determined to be in Tier 3 of this Policy.

16

Responsibilities and Duties

4.8 Regional Water Boards may adopt waste discharge requirements, or conditional waivers of waste discharge requirements, that exempt individual OWTS from requirements contained in this Policy.

5.0 State Water Board Functions and Duties

5.1 As the state agency charged with the development and adoption of this Policy, the State Water Board shall periodically review, amend and/or update this Policy as required.

5.2 The State Water Board may take any action assigned to the Regional Water Boards in this Policy.

5.3 The State Water Board shall resolve disputes between Regional Water Boards and local agencies as needed within 12 months of receiving such a request by a Regional Water Board or local agency, and may take action on its own motion in furtherance of this Policy. As part of this function, the State Water Board shall review and, if appropriate, approve Local Agency Management Programs in cases where the respective Regional Water Board has failed to consider for approval a Local Agency Management Program. The State Water Board shall approve Local Agency Management Programs at a regularly noticed board hearing and shall provide for public participation, including notice and opportunity for public comment. Once taken up by the State Water Board, Local Agency Management Programs shall be approved or denied within 180 days.

5.4 A member of the public may request the State Water Board to resolve any dispute regarding the Regional Water Board's approval of a Local Agency Management Program if the member of the public timely raised the disputed issue before the Regional Water Board. Such requests shall be submitted within 30 days after the Regional Water Board's approval of the Local Agency Management Program. The State Water Board shall notify the member of the public, the local agency, and the Regional Water Board within 90 days whether it intends to proceed with dispute resolution.

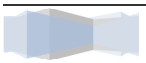
5.5 The State Water Board shall accept and consider any requests for modification or revocation of a Local Agency Management Program submitted by any person, where that person has previously submitted said request to the Regional Water Board and has received notice from the Regional Water Board of its dismissal of the request. The State Water Board will notify the person making the request and the local agency implementing the Local Agency Management Program at issue by letter within 90 days whether it intends to proceed with the modification or revocation process per Section 4.4 above, or is dismissing the request. The State Water Board will post the request and its response letter on its website.

5.6 The State Water Board or its Executive Director, after approving any Impaired Water Bodies [303 (d)] List, and for the purpose of implementing Tier 3 of this Policy, shall update Attachment 2 to identify those water bodies where: (1) it is likely that operating OWTS will subsequently be determined to be a contributing

17

source of pathogens or nitrogen and therefore it is anticipated that OWTS would receive a loading reduction, and (2) it is likely that new OWTS installations discharging within 600 feet of the water body would contribute to the impairment. This identification shall be based on information available at the time of 303 (d) listing and may be further updated based on new information. Updates to Attachment 2 will be processed as amendments to this Policy.

5.7 The State Water Board will make available to local agencies funds from its Clean Water State Revolving Fund loan program for mini-loan programs to be operated by the local agencies for the making of low interest loans to assist private property owners with complying with this Policy.



Tier 0 – Existing OWTS

Tier 0 – Existing OWTS

Existing OWTS that are properly functioning and do not meet the conditions of failing systems or otherwise require corrective action (for example, to prevent groundwater impairment) as specifically described in Tier 4, and are not determined to be contributing to an impairment of surface water as specifically described in Tier 3, are automatically included in Tier 0.

6.0 Coverage for Properly Operating Existing OWTS

6.1 Existing OWTS are automatically covered by Tier 0 and the herein included waiver of waste discharge requirements if they meet the following requirements:

6.1.1 have a projected flow of 10,000 gallons-per-day or less;

6.1.2 receive only domestic wastewater from residential or commercial buildings, or high-strength wastewater from commercial food service buildings that does not exceed 900 mg/L BOD and has a properly sized and functioning oil/grease interceptor (a.k.a. grease trap);

6.1.3 continue to comply with any previously imposed permitting conditions;

6.1.4 do not require supplemental treatment under Tier 3;

6.1.5 do not require corrective action under Tier 4; and

6.1.6 do not consist of a cesspool as a means of wastewater disposal.

6.2 A Regional Water Board or local agency may deny coverage under this Policy to any OWTS that is:

6.2.1 Not in compliance with Section 6.1;

6.2.2 Not able to adequately protect the water quality of the waters of the State, as determined by the Regional Water Board after considering any input from the local agency. A Regional Water Board may require the submission of a report of waste discharge to receive Region specific waste discharge requirements or waiver of waste discharge requirements so as to be protective.

6.3 Existing OWTS currently under waste discharge requirements or individual waiver of waste discharge requirements will remain under those orders until notified in writing by the appropriate Regional Water Board that they are covered under this Policy.

19

Tier 1 – Low Risk New or Replacement OWTS

Tier 1 – Low Risk New or Replacement OWTS

New or replacement OWTS meet low risk siting and design requirements as specified in Tier 1, where there is not an approved Local Agency Management Program per Tier 2.

7.0 Minimum Site Evaluation and Siting Standards

7.1 A qualified professional shall perform all necessary soil and site evaluations for all new OWTS and for existing OWTS where the treatment or dispersal system will be replaced or expanded.

7.2 A site evaluation shall determine that adequate soil depth is present in the dispersal area. Soil depth is measured vertically to the point where bedrock, hardpan, impermeable soils, or saturated soils are encountered or an adequate depth has been determined. Soil depth shall be determined through the use of soil profile(s) in the dispersal area and the designated dispersal system replacement area, as viewed in excavations exposing the soil profiles in representative areas, unless the local agency has determined through historical or regional information that a specific site soil profile evaluation is unwarranted.

7.3 A site evaluation shall determine whether the anticipated highest level of groundwater within the dispersal field and its required minimum dispersal zone is not less than prescribed in Table 2 by estimation using one or a combination of the following methods:

7.3.1 Direct observation of the highest extent of soil mottling observed in the examination of soil profiles, recognizing that soil mottling is not always an indicator of the uppermost extent of high groundwater; or

7.3.2 Direct observation of groundwater levels during the anticipated period of high groundwater. Methods for groundwater monitoring and determinations shall be decided by the local agency; or

7.3.3 Other methods, such as historical records, acceptable to the local agency.

7.3.4 Where a conflict in the above methods of examination exists, the direct observation method indicating the highest level shall govern.

7.4 Percolation test results in the effluent disposal area shall not be faster than one minute per inch (1 MPI) or slower than one hundred twenty minutes per inch (120 MPI). All percolation test rates shall be performed by presoaking of percolation test holes and continuing the test until a stabilized rate is achieved.

7.5 Minimum horizontal setbacks from any OWTS treatment component and dispersal systems shall be as follows:

7.5.1 5 feet from parcel property lines and structures;

7.5.2 100 feet from water wells and monitoring wells, unless regulatory or legitimate data requirements necessitate that monitoring wells be located closer;

20

7.5.3 100 feet from any unstable land mass or any areas subject to earth slides identified by a registered engineer or registered geologist; other setback distance are allowed, if recommended by a geotechnical report prepared by a qualified professional.

7.5.4 100 feet from springs and flowing surface water bodies where the edge of that water body is the natural or levied bank for creeks and rivers, or may be less where site conditions prevent migration of wastewater to the water body;

7.5.5 200 feet from vernal pools, wetlands, lakes, ponds, or other surface water bodies where the edge of that water body is the high water mark for lakes and reservoirs, and the mean high tide line for tidally influenced water bodies;

7.5.6 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet;

7.5.7 Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.

7.5.8 Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.

7.6 Prior to issuing a permit to install an OWTS the permitting agency shall determine if the OWTS is within 1,200 feet of an intake point for a surface water treatment plant for drinking water, is in the drainage catchment in which the intake point is located, and located such that it may impact water quality at the intake point such as being upstream of the intake point for a flowing water body. If the OWTS is within 1,200 feet of an intake point for a surface water treatment plant for drinking water, is in the drainage catchment in which the intake point is located, and is located such that it may impact water quality at the intake point:

7.6.1 The permitting agency shall provide a copy of the permit application to the owner of the water system of their proposal to install an OWTS within 1,200 feet of an intake point for a surface water treatment. If the owner of the water system cannot be identified, then the permitting agency will notify California Department of Public Health Drinking Water Program.

7.6.2 The permit application shall include a topographical plot plan for the parcel showing the OWTS components, the property boundaries, proposed structures, physical address, and name of property owner.

21

Tier 1 – Low Risk New or Replacement OWTS

7.6.3 The permit application shall provide the estimated wastewater flows, intended use of proposed structure generating the wastewater, soil data, and estimated depth to seasonally saturated soils.

7.6.4 The public water system owner shall have 15 days from receipt of the permit application to provide recommendations and comments to the permitting agency.

7.7 Natural ground slope in all areas used for effluent disposal shall not be greater than 25 percent.

7.8 The average density for any subdivision of property made by Tentative Approval pursuant to the Subdivision Map Act occurring after the effective date of this Policy and implemented under Tier 1 shall not exceed the allowable density values in Table 1 for a single-family dwelling unit, or its equivalent, for those units that rely on OWTS.

Table 1: Allowable Average Densities per Subdivision under Tier 1.

Average Annual Rainfall (in/yr)	Allowable Density (acres/single family dwelling unit)
0 - 15	2.5
>15 - 20	2
>20 - 25	1.5
>25 - 35	1
>35 - 40	0.75
>40	0.5

8.0 Minimum OWTS Design and Construction Standards

8.1 OWTS Design Requirements

8.1.1 A qualified professional shall design all new OWTS and modifications to existing OWTS where the treatment or dispersal system will be replaced or expanded. A qualified professional employed by a local agency, while acting in that capacity, may design, review, and approve a design for a proposed OWTS, if authorized by the local agency.

8.1.2 OWTS shall be located, designed, and constructed 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.

8.1.3 The design of new and replacement OWTS shall be based on the expected influent wastewater quality with a projected flow not to exceed 3,500 gallons per day, the peak wastewater flow rates for purposes of sizing hydraulic components, the projected average daily flow for purposes of sizing the dispersal system, the characteristics of the site, and the required level of treatment for protection of water quality and public health.

22

8.1.4 All dispersal systems shall have at least twelve (12) inches of soil cover, except for pressure distribution systems, which must have at least six (6) inches of soil cover.

8.1.5 The minimum depth to the anticipated highest level of groundwater below the bottom of the leaching trench, and the native soil depth immediately below the leaching trench, shall not be less than prescribed in Table 2.

Table 2: Tier 1 Minimum Depths to Groundwater and Minimum Soil Depth from the Bottom of the Dispersal System

Percolation Rate	Minimum Depth
Percolation Rate ≤1 MPI	Only as authorized in a Tier 2 Local Agency Management Program
1 MPI< Percolation Rate ≤ 5 MPI	Twenty (20) feet
5 MPI< Percolation Rate ≤ 30 MPI	Eight (8) feet
30 MPI< Percolation Rate ≤ 120 MPI	Five (5) feet
Percolation Rate > 120 MPI	Only as authorized in a Tier 2 Local Agency Management Program
MPI = minutes per inch	

8.1.6 Dispersal systems shall be a leachfield, designed using not more than 4 square-feet of infiltrative area per linear foot of trench as the infiltrative surface, and with trench width no wider than 3 feet. Seepage pits and other dispersal systems may only be authorized for repairs where siting limitations require a variance. Maximum application rates shall be determined from stabilized percolation rate as provided in Table 3, or from soil texture and structure determination as provided in Table 4.

8.1.7 Dispersal systems shall not exceed a maximum depth of 10 feet as measured from the ground surface to the bottom of the trench.

23

Table 3: Application Rates as Determined from Stabilized Percolation Rate

Percolation Rate (minutes per inch)	Application Rate (gallons per day per square foot)		Percolation Rate (minutes per inch)	Application Rate (gallons per day per square foot)		Percolation Rate (minutes per inch)	Application Rate (gallons per day per square foot)
<1	Requires Local Manage-ment Program		31	0.522		61	0.197
1	1.2		32	0.511		62	0.194
2	1.2		33	0.5		63	0.19
3	1.2		34	0.489		64	0.187
4	1.2		35	0.478		65	0.184
5	1.2		36	0.467		66	0.18
6	0.8		37	0.456		67	0.177
7	0.8		38	0.445		68	0.174
8	0.8		39	0.434		69	0.17
9	0.8		40	0.422		70	0.167
10	0.8		41	0.411		71	0.164
11	0.786		42	0.4		72	0.16
12	0.771		43	0.389		73	0.157
13	0.757		44	0.378		74	0.154
14	0.743		45	0.367		75	0.15
15	0.729		46	0.356		76	0.147
16	0.714		47	0.345		77	0.144
17	0.7		48	0.334		78	0.14
18	0.686		49	0.323		79	0.137
19	0.671		50	0.311		80	0.133
20	0.657		51	0.3		81	0.13
21	0.643		52	0.289		82	0.127
22	0.629		53	0.278		83	0.123
23	0.614		54	0.267		84	0.12
24	0.6		55	0.256		85	0.117
25	0.589		56	0.245		86	0.113
26	0.578		57	0.234		87	0.11
27	0.567		58	0.223		88	0.107
28	0.556		59	0.212		89	0.103
29	0.545		60	0.2		90	0.1
30	0.533					>90 - 120	0.1

24

Tier 1 – Low Risk New or Replacement OWTS

Table 4: Design Soil Application Rates

(Source: USEPA Onsite Wastewater Treatment Systems Manual, February 2002)

Soil Texture (per the USDA soil classification system)	Soil Structure Shape	Grade	Maximum Soil Application Rate(gallons per day per square foot) [1]
Coarse Sand, Sand, Loamy Coarse Sand, Loamy Sand	Single grain	Structureless	0.8
Fine Sand, Very Fine Sand, Loamy Fine Sand, Loamy Very Fine Sand	Single grain	Structureless	0.4
Coarse Sandy Loam, Sandy Loam	Massive	Structureless	0.2
	Platy	Weak	0.2
		Moderate, Strong	Prohibited
	Prismatic, Blocky, Granular	Weak	0.4
		Moderate, Strong	0.6
Fine Sandy Loam, very fine Sandy Loam	Massive	Structureless	0.2
	Platy	Weak, Moderate, Strong	Prohibited
	Prismatic, Blocky, Granular	Weak	0.2
		Moderate, Strong	0.4
Loam	Massive	Structureless	0.2
	Platy	Weak, Moderate, Strong	Prohibited
	Prismatic, Blocky, Granular	Weak	0.4
		Moderate, Strong	0.6
Silt Loam	Massive	Structureless	Prohibited
	Platy	Weak, Moderate, Strong	Prohibited
	Prismatic, Blocky, Granular	Weak	0.4
		Moderate, Strong	0.6
Sandy Clay Loam, Clay Loam, Silty Clay Loam	Massive	Structureless	Prohibited
	Platy	Weak, Moderate, Strong	Prohibited
	Prismatic, Blocky, Granular	Weak	0.2
		Moderate, Strong	0.4
Sandy Clay, Clay, or Silty Clay	Massive	Structureless	Prohibited
	Platy	Weak, Moderate, Strong	Prohibited
	Prismatic, Blocky, Granular	Weak	Prohibited
		Moderate, Strong	0.2

[1] Soils listed as prohibited may be allowed under the authority of the Regional Water Board, or as allowed under an approved Local Agency Management Program per Tier 2.

25

Tier 1 – Low Risk New or Replacement OWTS

8.1.8 All new dispersal systems shall have 100 percent replacement area that is equivalent and separate, and available for future use.

8.1.9 No dispersal systems or replacement areas shall be covered by an impermeable surface, such as paving, building foundation slabs, plastic sheeting, or any other material that prevents oxygen transfer to the soil.

8.1.10 Rock fragment content of native soil surrounding the dispersal system shall not exceed 50 percent by volume for rock fragments sized as cobbles or larger and shall be estimated using either the point-count or line-intercept methods.

8.1.11 Increased allowance for IAPMO certified dispersal systems is not allowed under Tier 1.

8.2 OWTS Construction and Installation

8.2.1 All new or replacement septic tanks and new or replacement oil/grease interceptor tanks shall comply with the standards contained in Sections K5(b), K5(c), K5(d), K5(e), K5(k), K5(m)(1), and K5(m)(3)(ii) of Appendix K, of Part 5, Title 24 of the 2007 California Code of Regulations.

8.2.2 All new septic tanks shall comply with the following requirements:

8.2.2.1 Access openings shall have watertight risers, the tops of which shall be set at most 6 inches below finished grade; and

8.2.2.2 Access openings at grade or above shall be locked or secured to prevent unauthorized access.

8.2.3 New and replacement OWTS septic tanks shall be limited to those approved by the International Association of Plumbing and Mechanical Officials (IAPMO) or stamped and certified by a California registered civil engineer as meeting the industry standards, and their installation shall be according to the manufacturer's instructions.

8.2.4 New and replacement OWTS septic tanks shall be designed to prevent solids in excess of three-sixteenths (3/16) of an inch in diameter from passing to the dispersal system. Septic tanks that use a National Sanitation Foundation/American National Standard Institute (NSF/ANSI) Standard 46 certified septic tank filter at the final point of effluent discharge from the OWTS and prior to the dispersal system shall be deemed in compliance with this requirement.

Tier 1 – Low Risk New or Replacement OWTS

8.2.5 A Licensed General Engineering Contractor (Class A), General Building Contractor (Class B), Sanitation System Contractor (Specialty Class C-42), or Plumbing Contractor (Specialty Class C-36) shall install all new OWTS and replacement OWTS in accordance with California Business and Professions Code Sections 7056, 7057, and 7058 and Article 3, Division 8, Title 16 of the California Code of Regulations. A property owner may also install his/her own OWTS if the as-built diagram and the installation are inspected and approved by the Regional Water Board or local agency at a time when the OWTS is in an open condition (not covered by soil and exposed for inspection).

27

Tier 2 – Local Agency OWTS Management Program

Tier 2 – Local Agency OWTS Management Program

Local agencies may submit management programs for approval, and upon approval then manage the installation of new and replacement OWTS under that program. Local Agency Management Programs approved under Tier 2 provide an alternate method from Tier 1 programs to achieve the same policy purpose, which is to protect water quality and public health. In order to address local conditions, Local Agency Management Programs may include standards that differ from the Tier 1 requirements for new and replacement OWTS contained in Sections 7 and 8. As examples, a Local Agency Management Program may authorize different soil characteristics, usage of seepage pits, and different densities for new developments. Once the Local Agency Management Program is approved, new and replacement OWTS that are included within the Local Agency Management Program may be approved by the Local Agency. A Local Agency, at its discretion, may include Tier 1 standards within its Tier 2 Local Agency Management Program for some or all of its jurisdiction. However, once a Local Agency Management Program is approved, it shall supersede Tier 1 and all future OWTS decisions will be governed by the Tier 2 Local Agency Management Program until it is modified, withdrawn, or revoked.

9.0 Local Agency Management Program for Minimum OWTS Standards

The Local Agency Management Program for minimum OWTS Standards is a management program where local agencies can establish minimum standards that are differing requirements from those specified in Tier 1 (Section 7 and Section 8), including the areas that do not meet those minimum standards and still achieve this Policy's purpose. Local Agency Management Programs may include any one or combination of the following to achieve this purpose:

- Differing system design requirements;
- Differing siting controls such as system density and setback requirements;
- Requirements for owners to enter monitoring and maintenance agreements; and/or
- Creation of an onsite management district or zone.

9.1 Where different and/or additional requirements are needed to protect water quality the local agency shall consider the following, as well as any other conditions deemed appropriate, when developing Local Agency Management Program requirements:

9.1.1 Degree of vulnerability to pollution from OWTS due to hydrogeological conditions.

9.1.2 High Quality waters or other environmental conditions requiring enhanced protection from the effects of OWTS.

9.1.3 Shallow soils requiring a dispersal system installation that is closer to ground surface than is standard.

9.1.4 OWTS is located in area with high domestic well usage.

28

Tier 2 – Local Agency OWTS Management Program

9.1.5 Dispersal system is located in an area with fractured bedrock.

9.1.6 Dispersal system is located in an area with poorly drained soils.

9.1.7 Surface water is vulnerable to pollution from OWTS.

9.1.8 Surface water within the watershed is listed as impaired for nitrogen or pathogens.

9.1.9 OWTS is located within an area of high OWTS density.

9.1.10 A parcel's size and its susceptibility to hydraulic mounding, organic or nitrogen loading, and whether there is sufficient area for OWTS expansion in case of failure.

9.1.11 Geographic areas that are known to have multiple, existing OWTS predating any adopted standards of design and construction including cesspools.

9.1.12 Geographic areas that are known to have multiple, existing OWTS located within either the pertinent setbacks listed in Section 7.5 of this Policy, or a setback that the local agencies finds is appropriate for that area.

9.2 The Local Agency Management Program shall detail the scope of its coverage, such as the maximum authorized projected flows for OWTS, as well as a clear delineation of those types of OWTS included within and to be permitted by the program, and provide the local site evaluation, siting, design, and construction requirements, and in addition each of the following:

9.2.1 Any local agency requirements for onsite wastewater system inspection, monitoring, maintenance, and repairs, including procedures to ensure that replacements or repairs to failing systems are done under permit from the local governing jurisdiction.

9.2.2 Any special provisions applicable to OWTS within specified geographic areas near specific impaired water bodies listed for pathogens or nitrogen. The special provisions may be substantive and/or procedural, and may include, as examples: consultation with the Regional Water Board prior to issuing permits, supplemental treatment, development of a management district or zone, special siting requirements, additional inspection and monitoring.

9.2.3 Local Agency Management Program variances, for new installations and repairs in substantial conformance, to the greatest extent practicable. Variances are not allowed for the requirements stated in sections 9.4.1 through 9.4.9.

9.2.4 Any educational, training, certification, and/or licensing requirements that will be required of OWTS service providers, site evaluators, designers, installers, pumpers, maintenance contractors, and any other person relating to OWTS activities.

9.2.5 Education and/or outreach program including informational materials to inform OWTS owners about how to locate, operate, and maintain their

29

Tier 2 – Local Agency OWTS Management Program

OWTS as well as any Water Board order (e.g., Basin Plan prohibitions) regarding OWTS restrictions within its jurisdiction. The education and/or outreach program shall also include procedures to ensure that alternative onsite system owners are provided an informational maintenance or replacement document by the system designer or installer. This document shall cite homeowner procedures to ensure maintenance, repair, or replacement of critical items within 48 hours following failure. If volunteer well monitoring programs are available within the local agency's jurisdiction, the outreach program shall include information on how well owners may participate.

9.2.6 An assessment of existing and proposed disposal locations for septage, the volume of septage anticipated, and whether adequate capacity is available.

9.2.7 Any consideration given to onsite maintenance districts or zones.

9.2.8 Any consideration given to the development and implementation of, or coordination with, Regional Salt and Nutrient Management Plans.

9.2.9 Any consideration given to coordination with watershed management groups.

9.2.10 Procedures for evaluating the proximity of sewer systems to new or replacement OWTS installations.

9.2.11 Procedures for notifying the owner of a public water system prior to issuing an installation or repair permit for an OWTS, if the OWTS is within 1,200 feet of an intake point for a surface water treatment plant for drinking water, is in the drainage area catchment in which the intake point is located, and is located such that it may impact water quality at the intake point such as upstream of the intake point for a flowing water body, or if the OWTS is within a horizontal sanitary setback from a public well.

9.2.12 Policies and procedures that will be followed when a proposed OWTS dispersal area is within the horizontal sanitary setback of a public well or a surface water intake point. These policies and procedures shall either indicate that supplemental treatment as specified in 10.9 and 10.10 of this policy are required for OWTS that are within a horizontal sanitary setback of a public well or surface water intake point, or will establish alternate siting and operational criteria for the proposed OWTS that would similarly mitigate the potential adverse impact to the public water source.

9.2.13 Any plans for the phase-out or discontinuance of cesspool usage.

9.3 The minimum responsibilities of the local agency for management of the Local Agency Management Program include:

9.3.1 Maintain records of the number, location, and description of permits issued for OWTS where a variance is granted.

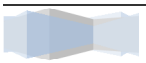
30

Tier 2 – Local Agency OWTS Management Program

9.3.2 Maintain a water quality assessment program to determine the general operation status of OWTS and to evaluate the impact of OWTS discharges, and assess the extent to which groundwater and local surface water quality may be adversely impacted. The focus of the assessment should be areas with characteristics listed under section 9.1. The assessment program will include monitoring and analysis of water quality data, review of complaints, variances, failures, and any information resulting from inspections. The assessment may use existing water quality data from other monitoring programs and/or establish the terms, conditions, and timing for monitoring done by the local agency. At a minimum this assessment will include monitoring data for nitrates and pathogens, and may include data for other constituents which are needed to adequately characterize the impacts of OWTS on water quality. Other monitoring programs for which data may be used include but are not limited to any of the following:

- 9.3.2.1. Random well samples from a domestic well sampling program.
- 9.3.2.2. Routine real estate transfer samples if those are performed and reported.
- 9.3.2.3. Review of public system sampling reports done by the local agency or another municipality responsible for the public system.
- 9.3.2.4. Water quality testing reports done at the time of new well development if those are reported.
- 9.3.2.5. Beach water quality testing data performed as part of Health and Safety Code Section 115885.
- 9.3.2.6. Receiving water sampling performed as a part of a NPDES permit.
- 9.3.2.7. Data contained in the California Water Quality Assessment Database.
- 9.3.2.8. Groundwater sampling performed as part of Waste Discharge Requirements.
- 9.3.2.9. Groundwater data collected as part of the Groundwater Ambient Monitoring and Assessment Program and available in the Geotracker Database.

9.3.3 Submit an annual report by February 1 to the applicable Regional Water Board summarizing the status of items 9.3.1 through 9.3.2 above. Every fifth year, submit an evaluation of the monitoring program and an assessment of whether water quality is being impacted by OWTS, identifying any changes in the Local Agency Management Program that will be undertaken to address impacts from OWTS. The first report will commence one year after approval of the local agency's Local Agency Management Program. In addition to summarizing monitoring data collected per 9.3.2 above, all groundwater monitoring data generated by the local agency shall be submitted in EDF format for inclusion into



Tier 2 – Local Agency OWTS Management Program

Geotracker, and surface water monitoring shall be submitted to CEDEN in a SWAMP comparable format.

9.4 The following are not allowed to be authorized in a Local Agency Management Program:

9.4.1 Cesspools of any kind or size.

9.4.2 OWTS receiving a projected flow over 10,000 gallons per day.

9.4.3 OWTS that utilize any form of effluent disposal that discharges on or above the post installation ground surface such as sprinklers, exposed drip lines, free-surface wetlands, or a pond.

9.4.4 Slopes greater than 30 percent without a slope stability report approved by a registered professional.

9.4.5 Decreased leaching area for IAPMO certified dispersal systems using a multiplier less than 0.70.

9.4.6 OWTS utilizing supplemental treatment without requirements for periodic monitoring or inspections.

9.4.7 OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks.

9.4.8 Separation of the bottom of dispersal system to groundwater less than two (2) feet, except for seepage pits, which shall not be less than 10 feet.

9.4.9 Installation of new or replacement OWTS where public sewer is available. The public sewer may be considered as not available when such public sewer or any building or exterior drainage facility connected thereto is located more than 200 feet from any proposed building or exterior drainage facility on any lot or premises that abuts and is served by such public sewer. This provision does not apply to replacement OWTS where the connection fees and construction cost are greater than twice the total cost of the replacement OWTS and the local agency determines that the discharge from the OWTS will not affect groundwater or surface water to a degree that makes it unfit for drinking or other uses.

9.4.10 Except as provided for in sections 9.4.11 and 9.4.12, new or replacement OWTS with minimum horizontal setbacks less than any of the following:

9.4.10.1 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet in depth.

9.4.10.2 200 feet from a public water well where the depth of the effluent dispersal system exceeds 10 feet in depth.

9.4.10.3 Where the effluent dispersal system is within 600 feet of a public water well and exceeds 20 feet in depth the horizontal setback required to achieve a two-year travel time for microbiological contaminants shall be evaluated. A qualified professional shall conduct this evaluation. However in no case shall the setback be less than 200 feet.

32

Tier 2 – Local Agency OWTS Management Program

9.4.10.4 Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.

9.4.10.5 Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water systems' surface water intake point, within the catchment area of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.

9.4.11 For replacement OWTS that do not meet the above horizontal separation requirements, the replacement OWTS shall meet the horizontal separation to the greatest extent practicable. In such case, the replacement OWTS shall utilize supplemental treatment and other mitigation measures, unless the permitting authority finds that there is no indication that the previous system is adversely affecting the public water source, and there is limited potential that the replacement system could impact the water source based on topography, soil depth, soil texture, and groundwater separation.

9.4.12 For new OWTS, installed on parcels of record existing at the time of the effective date of this Policy, that cannot meet the above horizontal separation requirements, the OWTS shall meet the horizontal separation to the greatest extent practicable and shall utilize supplemental treatment for pathogens as specified in section 10.8 and any other mitigation measures prescribed by the permitting authority.

9.5 A Local Agency Management Program for OWTS must include adequate detail, including technical information to support how all the criteria in their program work together to protect water quality and public health.

9.6 A Regional Water Board reviewing a Local Agency Management Program shall consider, among other things, the past performance of the local program to adequately protect water quality, and where this has been achieved with criteria differing from Tier 1, shall not unnecessarily require modifications to the program for purposes of uniformity, as long as the Local Agency Management Program meets the requirements of Tier 2.

33

Tier 3 – Impaired Areas

Tier 3 – Advanced Protection Management Programs for Impaired Areas

Existing, new, and replacement OWTS that are near impaired water bodies may be addressed by a TMDL and its implementation program, or special provisions contained in a Local Agency Management Program. If there is no TMDL or special provisions, new or replacement OWTS within 600 feet of impaired water bodies listed in Attachment 2 must meet the applicable specific requirements of Tier 3.

10.0 Advanced Protection Management Program

An Advanced Protection Management Program is the minimum required management program for all OWTS located near a water body that has been listed as impaired due to nitrogen or pathogen indicators pursuant to Section 303(d) of the Clean Water Act. Local agencies are authorized to implement Advanced Protection Management Programs in conjunction with an approved Local Agency Management Program or, if there is no approved Local Agency Management Program, Tier 1. Local agencies are encouraged to collaborate with the Regional Water Boards by sharing any information pertaining to the impairment, provide advice on potential remedies, and regulate OWTS to the extent that their authority allows for the improvement of the impairment.

10.1 The geographic area for each water body's Advanced Protection Management Program is defined by the applicable TMDL, if one has been approved. If there is not an approved TMDL, it is defined by an approved Local Agency Management Program, if it contains special provisions for that water body. If it is not defined in an approved TMDL or Local Agency Management Program, it shall be 600 linear feet [in the horizontal (map) direction] of a water body listed in Attachment 2 where the edge of that water body is the natural or levied bank for creeks and rivers, the high water mark for lakes and reservoirs, and the mean high tide line for tidally influenced water bodies, as appropriate. OWTS near impaired water bodies that are not listed on Attachment 2, and do not have a TMDL and are not covered by a Local Agency Management Program with special provisions, are not addressed by Tier 3.

10.2 The requirements of an Advanced Protection Management Program will be in accordance with a TMDL implementation plan, if one has been adopted to address the impairment. An adopted TMDL implementation plan supersedes all other requirements in Tier 3. All TMDL implementation plans adopted after the effective date of this Policy that contain load allocations for OWTS shall include a schedule that requires compliance with the load allocations as soon as practicable, given the watershed-specific circumstances. The schedule shall require that OWTS implementation actions for OWTS installed prior to the TMDL implementation plan's effective date shall commence within 3 years after the TMDL implementation plan's effective date, and that OWTS implementation actions for OWTS installed after the TMDL implementation plan's effective date shall commence immediately. The TMDL implementation plan may use some or all of the Tier 3 requirements and shall establish the applicable area of

34

Tier 3 – Impaired Areas

implementation for OWTS requirements within the watershed. For those impaired water bodies that do have an adopted TMDL addressing the impairment, but the TMDL does not assign a load allocation to OWTS, no further action is required unless the TMDL is modified at some point in the future to include actions for OWTS. Existing, new, and replacement OWTS that are near impaired water bodies and are covered by a Basin Plan prohibition must also comply with the terms of the prohibition, as provided in Section 2.1.

10.3 In the absence of an adopted TMDL implementation plan, the requirements of an Advanced Protection Management Program will consist of any special provisions for the water body if any such provisions have been approved as part of a Local Agency Management Program.

10.4 The Regional Water Boards shall adopt TMDLs for impaired water bodies identified in Attachment 2, in accordance with the specified dates.

10.4.1 If a Regional Water Board does not complete a TMDL within two years of the time period specified in Attachment 2, coverage under this Policy's waiver of waste discharge requirements shall expire for any OWTS that has any part of its dispersal system discharging within the geographic area of an Advanced Protection Management Program. The Regional Water Board shall issue waste discharge requirements, general waste discharge requirements, waivers of waste discharge requirements, or require corrective action for such OWTS. The Regional Water Board will consider the following when establishing the waste discharge requirements, general waste discharge requirements, waivers of waste discharge requirements, or requirement for corrective action:

10.4.1.1 Whether supplemental treatment should be required.

10.4.1.2 Whether routine inspection of the OWTS should be required.

10.4.1.3 Whether monitoring of surface and groundwater should be performed.

10.4.1.4 The collection of a fee for those OWTS covered by the order.

10.4.1.5 Whether owners of previously-constructed OWTS should file a report by a qualified professional in accordance with section 10.5.

10.4.1.6 Whether owners of new or replacement OWTS should file a report of waste discharge with additional supporting technical information as required by the Regional Water Board.

10.5 If the Regional Water Board requires owners of OWTS to submit a qualified professional's report pursuant to Section 10.4.1.5, the report shall include a determination of whether the OWTS is functioning properly and as designed or requires corrective actions per Tier 4, and regardless of its state of function, whether it is contributing to impairment of the water body.

10.5.1 The qualified professional's report may also include, but is not limited to:

35

Tier 3 – Impaired Areas

10.5.1.1 A general description of system components, their physical layout, and horizontal setback distances from property lines, buildings, wells, and surface waters.

10.5.1.2 A description of the type of wastewater discharged to the OWTS such as domestic, commercial, or industrial and classification of it as domestic wastewater or high-strength waste.

10.5.1.3 A determination of the systems design flow and the volume of wastewater discharged daily derived from water use, either estimated or actual if metered.

10.5.1.4 A description of the septic tank, including age, size, material of construction, internal and external condition, water level, scum layer thickness, depth of solids, and the results of a one-hour hydrostatic test.

10.5.1.5 A description of the distribution box, dosing siphon, or distribution pump, and if flow is being equally distributed throughout the dispersal system, as well as any evidence of solids carryover, clear water infiltration, or evidence of system backup.

10.5.1.6 A description of the dispersal system including signs of hydraulic failure, condition of surface vegetation over the dispersal system, level of ponding above the infiltrative surface within the dispersal system, other possible sources of hydraulic loading to the dispersal area, and depth of the seasonally high groundwater level.

10.5.1.7 A determination of whether the OWTS is discharging to the ground's surface.

10.5.1.8 For a water body listed as an impaired water body for pathogens, a determination of the OWTS dispersal system's separation from its deepest most infiltrative surface to the highest seasonal groundwater level or fractured bedrock.

10.5.1.9 For a water body listed as an impaired water body for nitrogen, a determination of whether the groundwater under the dispersal field is reaching the water body, and a description of the method used to make the determination.

10.6 For new, replacement, and existing OWTS in an Advanced Protection Management Program, the following are not covered by this Policy's waiver but may be authorized by a separate Regional Water Board order:

10.6.1 Cesspools of any kind or size.

10.6.2 OWTS receiving a projected flow over 10,000 gallons per day.

10.6.3 OWTS that utilize any form of effluent disposal on or above the ground surface.

10.6.4 Slopes greater than 30 percent without a slope stability report approved by a registered professional.

36

Tier 3 – Impaired Areas

10.6.5 Decreased leaching area for IAPMO certified dispersal systems using a multiplier less than 0.70.

10.6.6 OWTS utilizing supplemental treatment without requirements for periodic monitoring or inspections.

10.6.7 OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks.

10.6.8 Separation of the bottom of dispersal system to groundwater less than two (2) feet, except for seepage pits, which shall not be less than 10 feet.

10.6.9 Minimum horizontal setbacks less than any of the following:

10.6.9.1 150 feet from a public water well where the depth of the effluent dispersal system does not exceed 10 feet in depth;

10.6.9.2 200 feet from a public water well where the depth of the effluent dispersal system exceeds 10 feet in depth:

10.6.9.3 Where the effluent dispersal system is within 600 feet of a public water well and exceeds 20 feet in depth the horizontal setback required to achieve a two-year travel time for microbiological contaminants shall be evaluated. A qualified professional shall conduct this evaluation. However in no case shall the setback be less than 200 feet.

10.6.9.4 Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body.

10.6.9.5 Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point such as upstream of the intake point for flowing water bodies, the dispersal system shall be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.

10.6.9.6 For replacement OWTS that do not meet the above horizontal separation requirements, the replacement OWTS shall meet the horizontal separation to the greatest extent practicable. In such case, the replacement OWTS shall utilize supplemental treatment and other mitigation measures.

10.6.9.7 For new OWTS, installed on parcels of record existing at the time of the effective date of this Policy, that cannot meet the above horizontal separation requirements, the OWTS shall meet the horizontal separation to the greatest extent practicable and shall

37

Tier 3 – Impaired Areas

utilize supplemental treatment for pathogens as specified in section 10.10 and any other mitigation measures as prescribed by the permitting authority.

10.7 The requirements contained in Section 10 shall not apply to owners of OWTS that are constructed and operating, or permitted, on or prior to the date that the nearby water body is added to Attachment 2 who commit by way of a legally binding document to connect to a centralized wastewater collection and treatment system regulated through WDRs as specified within the following timeframes:

10.7.1 The owner must sign the document within forty-eight months of the date that the nearby water body is initially listed on Attachment 2.

10.7.2 The specified date for the connection to the centralized community wastewater collection and treatment system shall not extend beyond nine years following the date that the nearby water body is added to Attachment 2.

10.8 In the absence of an adopted TMDL implementation plan or Local Agency Management Program containing special provisions for the water body, all new or replacement OWTS permitted after the date that the water body is initially listed in Attachment 2 that have any discharge within the geographic area of an Advanced Protection Management Program shall meet the following requirements:

10.8.1 Utilize supplemental treatment and meet performance requirements in 10.9 if impaired for nitrogen and 10.10 if impaired for pathogens,

10.8.2 Comply with the setback requirements of Section 7.5.1 to 7.5.5, and

10.8.3 Comply with any applicable Local Agency Management Program requirements.

10.9 Supplemental treatment requirements for nitrogen

10.9.1 Effluent from the supplemental treatment components designed to reduce nitrogen shall be certified by NSF, or other approved third party tester, to meet a 50 percent reduction in total nitrogen when comparing the 30-day average influent to the 30-day average effluent.

10.9.2 Where a drip-line dispersal system is used to enhance vegetative nitrogen uptake, the dispersal system shall have at least six (6) inches of soil cover.

38

Tier 3 – Impaired Areas

10.10 Supplemental treatment requirements for pathogens

10.10.1 Supplemental treatment components designed to perform disinfection shall provide sufficient pretreatment of the wastewater so that effluent from the supplemental treatment components does not exceed a 30-day average TSS of 30 mg/L and shall further achieve an effluent fecal coliform bacteria concentration less than or equal to 200 Most Probable Number (MPN) per 100 milliliters.

10.10.2 The minimum soil depth and the minimum depth to the anticipated highest level of groundwater below the bottom of the dispersal system shall not be less than three (3) feet. All dispersal systems shall have at least twelve (12) inches of soil cover.

10.11 OWTS in an Advanced Protection Management Program with supplemental treatment shall be designed to meet the applicable performance requirements above and shall be stamped or approved by a Qualified Professional.

10.12 Prior to the installation of any proprietary treatment OWTS in an Advanced Protection Management Program, all such treatment components shall be tested by an independent third party testing laboratory.

10.13 The ongoing monitoring of OWTS in an Advanced Protection Management Program with supplemental treatment components designed to meet the performance requirements in Sections 10.9 and 10.10 shall be monitored in accordance with the operation and maintenance manual for the OWTS or more frequently as required by the local agency or Regional Water Board.

10.14 OWTS in an Advanced Protection Management Program with supplemental treatment components shall be equipped with a visual or audible alarm as well as a telemetric alarm that alerts the owner and service provider in the event of system malfunction. Where telemetry is not possible, the owner or owner's agent shall inspect the system at least monthly while the system is in use as directed and instructed by a service provider and notify the service provider not less than quarterly of the observed operating parameters of the OWTS.

10.15 OWTS in an Advanced Protection Management Program designed to meet the disinfection requirements in Section 10.10 shall be inspected for proper operation quarterly while the system is in use by a service provider unless a telemetric monitoring system is capable of continuously assessing the operation of the disinfection system. Testing of the wastewater flowing from supplemental treatment components that perform disinfection shall be sampled at a point in the system after the treatment components and prior to the dispersal system and shall be conducted quarterly based on analysis of total coliform with a minimum detection limit of 2.2 MPN. All effluent samples must include the geographic coordinates of the sample's location. Effluent samples shall be taken by a service provider and analyzed by a California Department of Public Health certified laboratory.

39

Tier 3 – Impaired Areas

10.16 The minimum responsibilities of a local agency administering an Advanced Protection Management Program include those prescribed for the Local Agency Management Programs in Section 9.3 of this policy, as well as monitoring owner compliance with Sections 10.13, 10.14,and 10.15.

40

Tier 4 – OWTS Requiring Corrective Action

Tier 4 – OWTS Requiring Corrective Action

OWTS that require corrective action or are either presently failing or fail at any time while this Policy is in effect are automatically included in Tier 4 and must follow the requirements as specified. OWTS included in Tier 4 must continue to meet applicable requirements of Tier 0, 1, 2 or 3 pending completion of corrective action.

11.0 Corrective Action for OWTS

11.1 Any OWTS that has pooling effluent, discharges wastewater to the surface, or has wastewater backed up into plumbing fixtures, because its dispersal system is no longer adequately percolating the wastewater is deemed to be failing, no longer meeting its primary purpose to protect public health, and requires major repair, and as such the dispersal system must be replaced, repaired, or modified so as to return to proper function and comply with Tier 1, 2, or 3 as appropriate.

11.2 Any OWTS septic tank failure, such as a baffle failure or tank structural integrity failure such that either wastewater is exfiltrating or groundwater is infiltrating is deemed to be failing, no longer meeting its primary purpose to protect public health, and requires major repair, and as such shall require the septic tank to be brought into compliance with the requirements of Section 8 in Tier 1 or a Local Agency Management Program per Tier 2.

11.3 Any OWTS that has a failure of one of its components other than those covered by 11.1 and 11.2 above, such as a distribution box or broken piping connection, shall have that component repaired so as to return the OWTS to a proper functioning condition and return to Tier 0, 1, 2, or 3.

11.4 Any OWTS that has affected, or will affect, groundwater or surface water to a degree that makes it unfit for drinking or other uses, or is causing a human health or other public nuisance condition shall be modified or upgraded so as to abate its impact.

11.5 If the owner of the OWTS is not able to comply with corrective action requirements of this section, the Regional Water Board may authorize repairs that are in substantial conformance, to the greatest extent practicable, with Tiers 1 or 3, or may require the owner of the OWTS to submit a report of waste discharge for evaluation on a case-by-case basis. Regional Water Board response to such reports of waste discharge may include, but is not limited to, enrollment in general waste discharge requirements, issuance of individual waste discharge requirements, or issuance of waiver of waste discharge requirements. A local agency may authorize repairs that are in substantial conformance, to the greatest extent practicable, with Tier 2 in accordance with section 9.2.3 if there is an approved Local Agency Management Program, or with an existing program if a Local Agency Management Program has not been approved and it is less than 5 years from the effective date of the Policy.

41

Tier 4 – OWTS Requiring Corrective Action

11.6 Owners of OWTS will address any corrective action requirement of Tier 4 as soon as is reasonably possible, and must comply with the time schedule of any corrective action notice received from a local agency or Regional Water Board, to retain coverage under this Policy.

11.7 Failure to meet the requirements of Tier 4 constitute a failure to meet the conditions of the waiver of waste discharge requirements contained in this Policy, and is subject to further enforcement action.

42

Waiver – Effective Date – Financial Assistance

Conditional Waiver of Waste Discharge Requirements

12.0 In accordance with Water Code section 13269, the State Water Board hereby waives the requirements to submit a report of waste discharge, obtain waste discharge requirements, and pay fees for discharges from OWTS covered by this Policy. Owners of OWTS covered by this Policy shall comply with the following conditions:

12.0.1 The OWTS shall function as designed with no surfacing effluent.

12.0.2 The OWTS shall not utilize a dispersal system that is in soil saturated with groundwater.

12.0.3 The OWTS shall not be operated while inundated by a storm or flood event.

12.0.4 The OWTS shall not cause or contribute to a condition of nuisance or pollution.

12.0.5 The OWTS shall comply with all applicable local agency codes, ordinances, and requirements.

12.0.6 The OWTS shall comply with and meet any applicable TMDL implementation requirements, special provisions for impaired water bodies, or supplemental treatment requirements imposed by Tier 3.

12.0.7 The OWTS shall comply with any corrective action requirements of Tier 4.

12.1 This waiver may be revoked by the State Water Board or the applicable Regional Water Board for any discharge from an OWTS, or from a category of OWTS.

Effective Date

13.0 This Policy becomes effective six months after its approval by the Office of Administrative Law, and all deadlines and compliance dates stated herein start at such time.

43

Waiver – Effective Date – Financial Assistance

Financial Assistance

14.0 Local Agencies may apply to the State Water Board for funds from the Clean Water State Revolving Fund for use in mini-loan programs that provide low interest loan assistance to private property owners with costs associated with complying with this Policy.

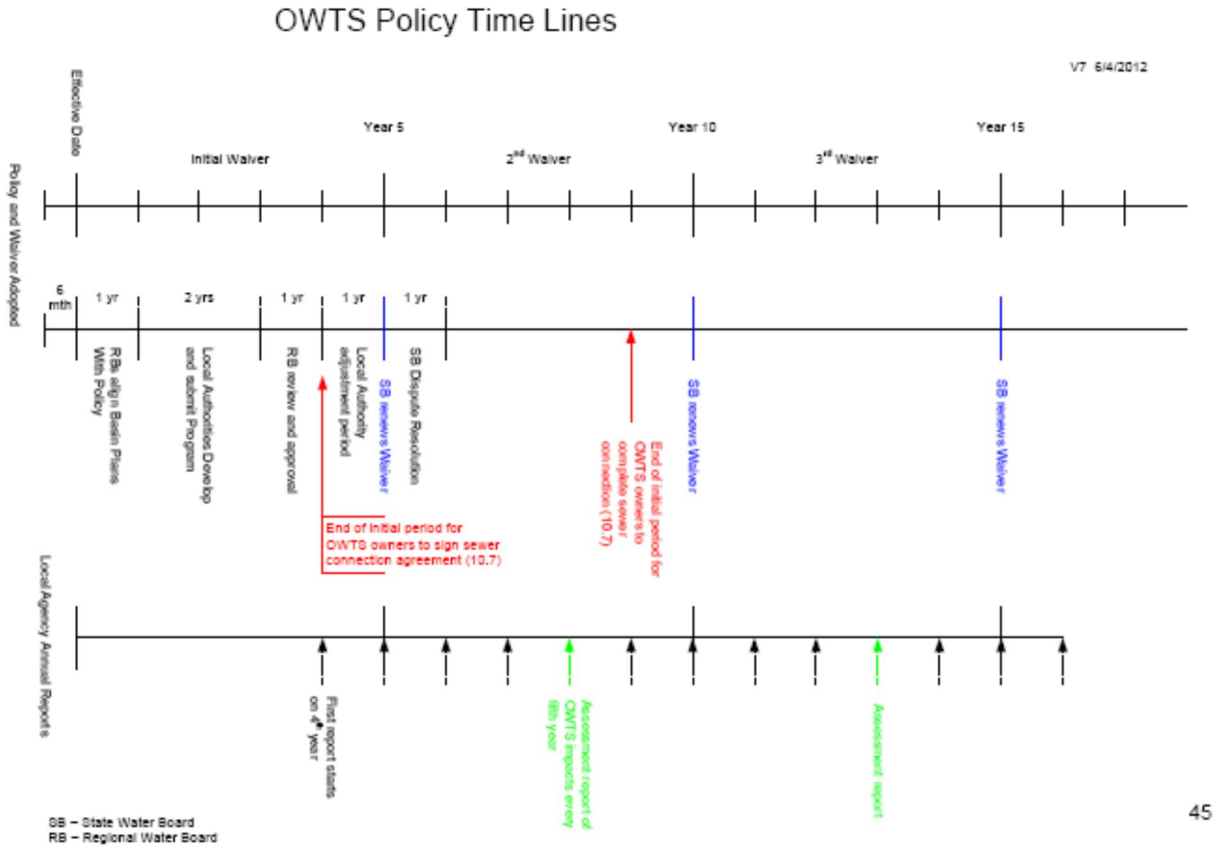
14.1 Loan interest rates for loans to local agencies will be set by the State Water Board using its policies, procedures, and strategies for implementing the Clean Water State Revolving Fund program, but will typically be one-half of the States most recent General Obligation bond sale. Historically interest rates have ranged between 2.0 and 3.0 percent.

14.2 Local agencies may add additional interest points to their loans made to private entities to cover their costs of administering the mini-loan program.

14.3 Local agencies may submit their suggested loan eligibility criteria for the min-loan program they wish to establish to the State Water Board for approval, but should consider the legislative intent stated in Water Code Section 13291.5 is that assistance is encouraged for private property owners whose cost of complying with the requirements of this policy exceeds one-half of one percent of the current assessed value of the property on which the OWTS is located.

44

Attachment 1



Attachment 2

The tables below specifically identify those impaired water bodies where: (1) it is likely that operating OWTS will subsequently be determined to be a contributing source of pathogens or nitrogen and therefore it is anticipated that OWTS would receive a loading reduction, and (2) it is likely that new OWTS installations discharging within 600 feet of the water body would contribute to the impairment. Per this Policy (Tier 3, Section 10) the Regional Water Boards must adopt a TMDL by the date specified in the table. The State Water Board, at the time of approving future 303 (d) Lists, will specifically identify those impaired water bodies that are to be added or removed from the tables below.

Table 5. Water Bodies impaired for pathogens that are subject to Tier 3 as of 2012.

REGION NO.	REGION NAME	WATERBODY NAME	COUNTIES	TMDL Completion Date
1	North Coast	Clam Beach	Humboldt	2020
1	North Coast	Luffenholtz Beach	Humboldt	2020
1	North Coast	Moonstone County Park	Humboldt	2020
1	North Coast	Russian River HU, Lower Russian River HA, Guerneville HSA, mainstem Russian River from Fife Creek to Dutch Bill Creek	Sonoma	2016
1	North Coast	Russian River HU, Lower Russian River HA, Guerneville HSA, Green Valley Creek watershed	Sonoma	2016
1	North Coast	Russian River HU, Middle Russian River HA, Geyserville HSA, mainstem Russian River at Healdsburg Memorial Beach and unnamed tributary at Fitch Mountain	Sonoma	2016
1	North Coast	Russian River HU, Middle Russian River HA, mainstem Laguna de Santa Rosa	Sonoma	2016
1	North Coast	Russian River HU, Middle Russian River HA, mainstem Santa Rosa Creek	Sonoma	2016
1	North Coast	Trinidad State Beach	Humboldt	2020
2	San Francisco Bay	China Camp Beach	Marin	2014
2	San Francisco Bay	Lawsons Landing	Marin	2015
2	San Francisco Bay	Pacific Ocean at Bolinas Beach	Marin	2014

46

Attachment 2

REGION NO.	REGION NAME	WATERBODY NAME	COUNTIES	TMDL Completion Date
2	San Francisco Bay	Pacific Ocean at Fitzgerald Marine Reserve	San Mateo	2016
2	San Francisco Bay	Pacific Ocean at Muir Beach	Marin	2015
2	San Francisco Bay	Pacific Ocean at Pillar Point Beach	San Mateo	2016
2	San Francisco Bay	Petaluma River	Marin, Sonoma	2017
2	San Francisco Bay	Petaluma River (tidal portion)	Marin, Sonoma	2017
2	San Francisco Bay	San Gregorio Creek	San Mateo	2019
3	Central Coast	Pacific Ocean at Point Rincon (mouth of Rincon Cr, Santa Barbara County)	Santa Barbara	2015
3	Central Coast	Rincon Creek	Santa Barbara, Ventura	2015
4	Los Angeles	Canada Larga (Ventura River Watershed)	Ventura	2017
4	Los Angeles	Coyote Creek	Los Angeles, Orange	2015
4	Los Angeles	Rincon Beach	Ventura	2017
4	Los Angeles	San Antonio Creek (Tributary to Ventura River Reach 4)	Ventura	2017
4	Los Angeles	San Gabriel River Reach 1 (Estuary to Firestone)	Los Angeles	2015
4	Los Angeles	San Gabriel River Reach 2 (Firestone to Whittier Narrows Dam	Los Angeles	2015
4	Los Angeles	San Gabriel River Reach 3 (Whittier Narrows to Ramona)	Los Angeles	2015
4	Los Angeles	San Jose Creek Reach 1 (SG Confluence to Temple St.)	Los Angeles	2015
4	Los Angeles	San Jose Creek Reach 2 (Temple to I-10 at White Ave.)	Los Angeles	2015
4	Los Angeles	Sawpit Creek	Los Angeles	2015
4	Los Angeles	Ventura River Reach 3 (Weldon Canyon to Confl. w/ Coyote Cr)	Ventura	2017
4	Los Angeles	Walnut Creek Wash (Drains from Puddingstone Res)	Los Angeles	2015
5	Central Valley	Wolf Creek (Nevada County)	Nevada, Placer	2020
5	Central Valley	Woods Creek (Tuolumne County)	Tuolumne	2020
7	Colorado River	Alamo River	Imperial	2017

47

Attachment 2

REGION NO.	REGION NAME	WATERBODY NAME	COUNTIES	TMDL Completion Date
7	Colorado River	Palo Verde Outfall Drain and Lagoon	Imperial, Riverside	2017
8	Santa Ana	Canyon Lake (Railroad Canyon Reservoir)	Riverside	2019
8	Santa Ana	Fulmor, Lake	Riverside	2019
8	Santa Ana	Goldenstar Creek	Riverside	2019
8	Santa Ana	Los Trancos Creek (Crystal Cove Creek)	Orange	2017
8	Santa Ana	Lytle Creek	San Bernardino	2019
8	Santa Ana	Mill Creek Reach 1	San Bernardino	2015
8	Santa Ana	Mill Creek Reach 2	San Bernardino	2015
8	Santa Ana	Morning Canyon Creek	Orange	2017
8	Santa Ana	Mountain Home Creek	San Bernardino	2019
8	Santa Ana	Mountain Home Creek, East Fork	San Bernardino	2019
8	Santa Ana	Silverado Creek	Orange	2017
8	Santa Ana	Peters Canyon Channel	Orange	2017
8	Santa Ana	Santa Ana River, Reach 2	Orange, Riverside	2019
8	Santa Ana	Temescal Creek, Reach 6 (Elsinore Groundwater sub basin boundary to Lake Elsinore Outlet)	Riverside	2019
8	Santa Ana	Seal Beach	Orange	2017
8	Santa Ana	Serrano Creek	Orange	2017
8	Santa Ana	Huntington Harbour	Orange	2017

48

Attachment 2

Table 6. Water Bodies impaired for nitrogen that are subject to Tier 3.

REGION NO.	REGION NAME	WATERBODY NAME	COUNTIES	TMDL Completion Date
1	North Coast	Russian River HU, Middle Russian River HA, mainstem Laguna de Santa Rosa	Sonoma	2015
2	San Francisco Bay	Lagunitas Creek	Marin	2016
2	San Francisco Bay	Napa River	Napa, Solano	2014
2	San Francisco Bay	Petaluma River	Marin, Sonoma	2017
2	San Francisco Bay	Petaluma River (tidal portion)	Marin, Sonoma	2017
2	San Francisco Bay	Sonoma Creek	Sonoma	2014
2	San Francisco Bay	Tomales Bay	Marin	2019
2	San Francisco Bay	Walker Creek	Marin	2016
4	Los Angeles	Malibu Creek	Los Angeles	2016
4	Los Angeles	San Antonio Creek (Tributary to Ventura River Reach 4)	Ventura	2013
8	Santa Ana	East Garden Grove Wintersburg Channel	Orange	2017
8	Santa Ana	Grout Creek	San Bernardino	2015
8	Santa Ana	Rathbone (Rathbun) Creek	San Bernardino	2015
8	Santa Ana	Summit Creek	San Bernardino	2015
8	Santa Ana	Serrano Creek	Orange	2017

49

Attachment 3

Regional Water Boards, upon mutual agreement, may designate one Regional Water Board to regulate a person or entity that is under the jurisdiction of both (Water Code Section 13228). The following table identifies the designated Regional Water Board for all counties within the State for purposes of reviewing and, if appropriate, approving new Local Agency Management Plans.

Table 7. Regional Water Board designations by County.

County	Regions with Jurisdiction	Designated Region
Alameda	2,5	2
Alpine	5,6	6
Amador	5	5
Butte	5	5
Calaveras	5	5
Colusa	5	5
Contra Costa	2,5	2
Del Norte	1	1
El Dorado	5,6	5
Fresno	5	5
Glenn	5,1	5
Humboldt	1	1
Imperial	7	7
Inyo	6	6
Kern	3,4,5,6	5
Kings	5	5
Lake	5,1	5
Lassen	5,6	6
Los Angeles	4,6	4
Madera	5	5
Marin	2,1	2
Mariposa	5	5
Mendocino	1	1
Merced	5	5
Modoc	1,5,6	5
Mono	6	6
Monterey	3	3
Napa	2,5	2
Nevada	5,6	5
Orange	8,9	8

County	Regions with Jurisdiction	Designated Region
Placer	5,6	5
Plumas	5	5
Riverside	7,8,9	7
Sacramento	5	5
San Benito	3,5	3
San Bernardino	6,7,8	6
San Diego	9,7	9
San Francisco	2	2
San Joaquin	5	5
San Luis Obispo	3,5	3
San Mateo	2,3	2
Santa Barbara	3	3
Santa Clara	2,3	2
Santa Cruz	3	3
Shasta	5	5
Sierra	5,6	5
Siskiyou	1,5	1
Solano	2,5	5
Sonoma	1,2	1
Stanislaus	5	5
Sutter	5	5
Tehama	5	5
Trinity	1	1
Tulare	5	5
Tuolumne	5	5
Ventura	4,3	4
Yolo	5	5
Yuba	5	5

50

APPENDIX 3
Onsite Wastewater Management Plan Guidance

~ GUIDANCE ~

CENTRAL COAST WATER BOARD
CHECKLIST FOR DEVELOPING & REVIEWING
ONSITE WASTEWATER MANAGEMENT PLANS

GOAL: Implementation of onsite management plan will protect and enhance ground and surface water. Each local agency is likely to have unique site limitations and potential water quality issues associated with onsite systems, and management measures to address those issues. Accordingly, the onsite management plan should be flexible and agency-specific. The plan must address each component required in the Basin Plan, however the means and degree to which each component is addressed is flexible. Following is based upon the order in which requirements appear in the Basin Plan, minus duplicative requirements (Chapter 4, Section VIII.D.)

Note: Many components of an effective onsite wastewater management plan may already be implemented by the local permitting jurisdiction or other resource agencies. To prevent duplicative efforts and maximize efficiency, such existing practices should be utilized to the maximum extent practical and summarized in the plan. For example, water quality monitoring data may be available from local health departments, water purveyors, Central Coast Water Board programs, etc. Such data can be used to support management plan activities providing the data is technically sound and adequately summarized in the plan. Adequate documentation should also be included to address any components omitted from a plan, such as those actions performed by other agencies or not applicable due to specified local conditions. The following guidance is based upon requirements adopted by the Central Coast Water Board on May 9, 2008, and not yet approved by the State Water Board.

1. Survey and evaluation of existing onsite systems.
   a. Identify areas served by existing onsite systems throughout jurisdiction. (Section should establish a baseline, include maps or GIS layers, identify areas suitable for conventional systems, summarize basis for suitability, etc.)
   b. Identify problematic areas (site limitations, failure rates, water quality impacts).
   c. Management measures 2, 3, 7 & 8 are implemented in problematic areas.

2. Water quality (ground and surface water) monitoring program.
   a. Ground and/or surface water monitoring in areas likely to detect and prevent degradation. (Include existing data sources and observations where available, document data sources, and document the basis for determining areas likely to be degraded.)
   b. Monitoring locations/depth are representative and can characterize early effects.
   c. Monitoring results support implementation measures and protection of water quality and beneficial uses.

3. Projections of onsite disposal system demand and determination of methods to best meet demand.
   a. Documentation/details that demand will be met without degrading water quality. (Section will reflect each agency's existing and planned policies, include feedback loops to ensure policies are working, and periodic reevaluation.)

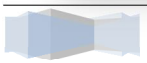
b. If sewering is proposed, a realistic schedule is provided. (Include legal authority to prohibit onsite systems within specified proximity of sewer or other tools, summarize measures to prevent water quality impacts until sewer is provided.)

4. Recommendations and requirements for existing onsite wastewater system inspection, monitoring, maintenance and repairs. (Consider different levels for conventional vs. alternative systems.)
   a. Recommendations & requirements are consistent with Basin Plan.
   b. Recommendations & requirements are implemented in an effective manner. (Include feedback loop to ensure effectiveness of policies described.)
   c. Replacements/repairs comply with Basin Plan recommendations, requirements and prohibitions. (Management proposed if repairs can not meet Basin Plan standards, deed restrictions, etc.)
   d. Method for informing onsite system owners is described and effective.
   e. Tracking of system failures, pumping, or other means of identifying problems.
   f. Implementation methods are supported by adequate resources. (Identify who implements or will implement actions.)

5. Recommendations and requirements for new onsite wastewater systems.
   a. Recommendations & requirements are consistent with Basin Plan.
   b. Recommendations & requirements are implemented in effective manner. (Include feedback loop to ensure effectiveness of policies described.)
   c. Site suitability tests are performed and support design.
   d. Permitting process ensures proper siting, design, construction & maintenance.
   e. Permitting conditions reflect Basin Plan criteria and protects set-aside areas.
   f. Property owners are notified of proper installation, operation & maintenance. (Describe when and how notification will occur in the local permitting process.)
   g. Alternative systems are prohibited unless consistent with specified criteria. (Includes water quality protection criteria for alternative systems, if allowed.)
   h. Alternative system criteria include means of verifying ongoing compliance (performance monitoring and reporting).
   i. Alternative system owners are provided maintenance or replacement document by the system designer or installer, citing homeowner procedures to ensure maintenance, repair, or replacement of critical items within 48 hours.
   j. Provisions to ensure long-term performance of alternative systems (service contract, deed restrictions, disclosures, etc.)
   g. Implementation methods are supported by adequate resources. (Identify who implements or will implement actions.)

6. Alternative means of disposing of sewage in the event of disposal system failure and/or irreversible degradation from onsite disposal. (Define how local agency characterizes system failure or irreversible degradation and how it will be detected.)
   a. List of alternate disposal options. (Availability of capacity at each optional disposal facility should be documented.)
   b. Estimated cost of wastewater disposal alternatives.

7. Education and outreach program.
   a. Sample information is fact-based, accurate, user-friendly, and lasting.
   b. Provisions for public inquiry and assistance.



8. Enforcement options. (Including maintenance of alternative systems and commitment to follow through).
   a. Local ordinance reflects Basin Plan criteria.
   b. Local enforcement tools are available and commitment is clearly stated. (Describe escalation of enforcement and who will implement each action.)

9. Septage management.
   a. Septage volume estimated.
   b. Long-term disposal capacity (authorization if site not owned by same agency).
   c. Septage disposal plans & schedule, if site not currently available.
   d. Discussion of private hauling company coordination with local agencies.

10. Program administration, staffing, records keeping, installation and repairs tracking, and financing (are adequate resources provided to support all activities).
    a. Clear delegation of tasks, who does what.
    b. Staff/contract inspectors use detailed checklist to verify construction compliance.
    c. Periodic summary reports, contents of report, and feedback loop.
    d. Local ordinance reflects Basin Plan criteria and supports management plan implementation.

APPENDIX 4
Santa Barbara County Septic Tank Inspection Report

County of Santa Barbara
Septic Tank Inspection Report

(Please Print or Type)

Department Date Stamp

Date of Service/Maintenance: _____

Owner's name : _____ Phone No.: _____

Location of inspection: _____
(ADDRESS) (CITY) (ZIP)

No. of Bedrooms: _____ Year Septic System Built: _____

Septage disposal location / date: _____

System Components:

☐ Septic tank with leach field or drywell ☐ Septic Tank With Seepage Pit (Hollow) ☐ Cesspool ☐ Other

Estimated capacity of septic tank or cesspool: _____ gal. No. of compartments: _____ Amount pumped: _____ gal.

No. of Access Lids: _____ Depth to Access Lids: _____ Diameter of Access Lids: _____

Construction of septic tank or cesspool:

☐ Rectangular ☐ Round ☐ Other
☐ Concrete ☐ Fiberglass ☐ Plastic ☐ Brick ☐ Other _____

Condition of tank:	No	Yes		No	Yes
Tank deteriorated	☐	☐	Inlet tee present	☐	☐
Baffle wall deteriorated	☐	☐	Outlet tee present	☐	☐
Lids are deteriorated	☐	☐	House lateral open	☐	☐
Heavy grease build-up	☐	☐	Needs pumping	☐	☐

Minimum concrete thickness of tank top, measured at lids: _____ Method of Measurement: _____

Prior to pumping, was effluent level above outflow tee? ☐ No ☐ Yes (may indicate failing system)

Signs of surfacing effluent? ☐ No ☐ Yes, location: _____

Any signs of past drainage problems? ☐ No ☐ Yes

Maintenance Performed: _____

System appears to be functioning satisfactorily? No ☐ Yes ☐

Repairs / upgrade required? (see reverse side) No ☐ Yes ☐

1. _____
2. _____
3. _____

Comments / Recommendations: _____

Did a Qualified Inspector personally inspect system? No ☐ Yes ☐

(Complete or Stamp)

Company: _____

Registration/Contractor's License No.: _____

Site Map

The useful life of any septic system is determined by numerous factors including, but not limited to, soil characteristics, water usage and proper maintenance. This inspection report is based on observations by the inspector and information provided by the system owner. It is not a guarantee of system adequacy.

Signature of Qualified Inspector: _____ Date: _____ Phone: _____

EHS 42-12 (Rev. 7/04)

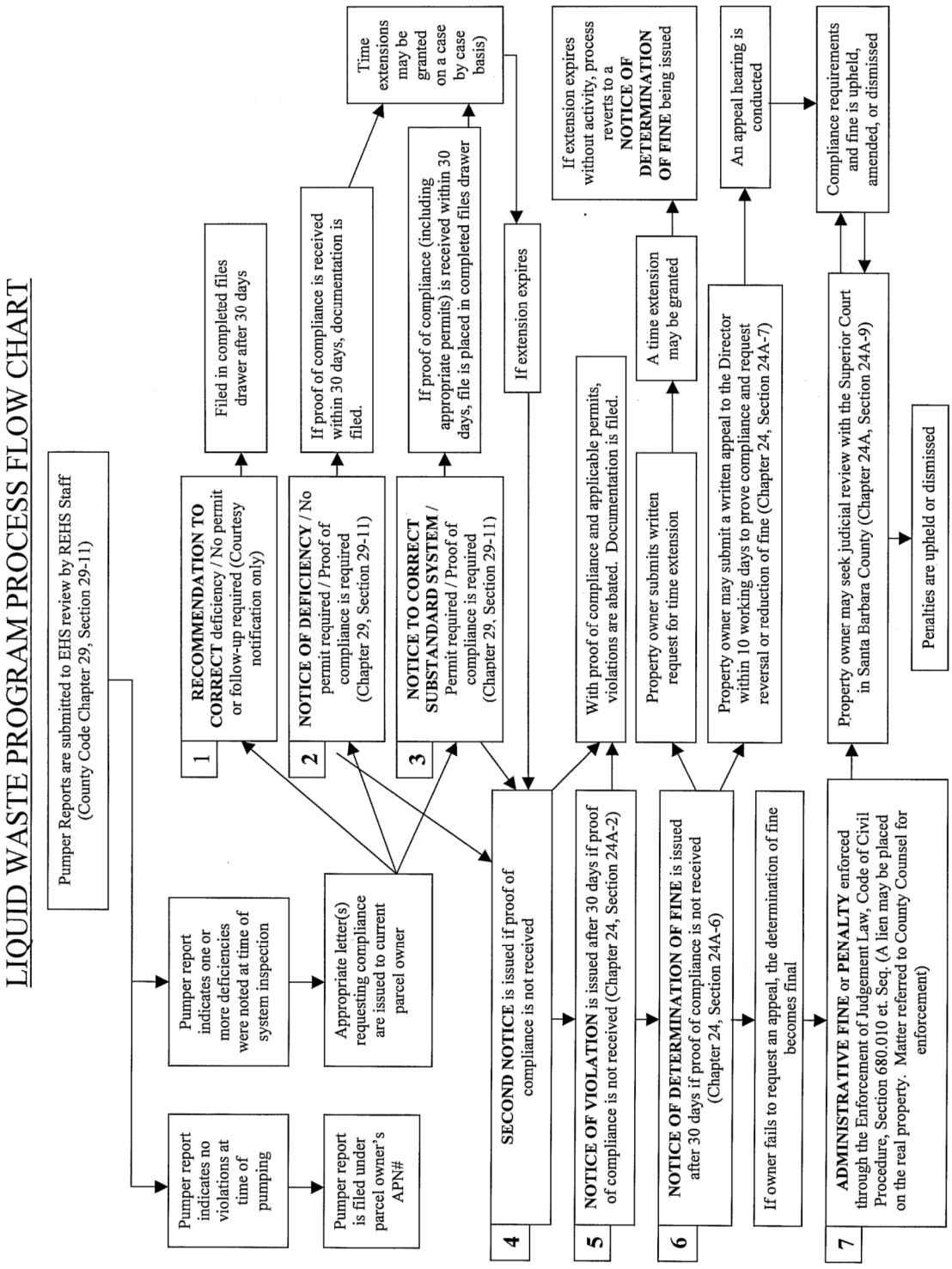
County of Santa Barbara
Septic Tank Inspection Report

SEPTIC TANK DEFICIENCIES REQUIRING FOLLOW-UP

Reference #	Deficiency	Typical Corrective Action	Permit Required
NOD-1	Inadequate access to both compartments	Install risers &/or lids to meet current code requirements	No
NOD-2	Access ports deeper than 24 inches	Install risers to within one foot of grade	No
NOD-3	Deteriorated access lid(s)	Replace lids	No
NOD-4	Deteriorated top of tank	Replace / repair	No
NOD-5	Deteriorated baffle between compartments	Replace / repair	No
NOD-6	Other		
NTC-1	Severely damaged or deteriorated septic tank	Replace septic tank	**Yes**
NTC-2	Unfilled seepage pit	Fill w/ rock or abandon	**Yes**
NTC-3	Cesspool (permeable sides & bottom)	Abandon & replace with approved septic tank and disposal field	**Yes**
NTC-4	Failed disposal field with discharge to surface	Add new field w/ diverter valve - match or exceed existing field	**Yes**
NTC-5	System constructed without required permit	Obtain permit	**Yes**
NTC-6	Discharge of graywater to ground surface or drainage course	Direct wastewater to approved disposal field	**Yes**
NTC-7	Septic tank constructed of metal or wood	Replace septic tank	**Yes**
NTC-8	Septic tank located under structure	Requires abandonment and replacement with an approved septic tank or removal or relocation of structure	**Yes**
RTC-1	Disposal field not adequately absorbing septic tank effluent	Clear blockage / repair pipe	No
		Replace / repair disposal field	**Yes**
RTC-2	Inadequate tank capacity	Replace with proper size tank	Yes
RTC-3	Missing inlet / outlet tee(s)	Replace missing tee(s)	No
RTC-4	Other		

NOD – Notice of Deficiency NTC – Notice to Correct RTC – Recommendation to Correct

APPENDIX 5
Liquid Waste Program Process Flow Chart



APPENDIX 6
Homeowner's Guide

Record of Service

Date	Work Done	Contractor

Remember to always dispose of wastewater from your home into the septic tank. This includes all sink, bath, shower, toilet, washing machine and dishwasher wastewaters. Any of these waters can contain disease-causing microorganisms or environmental pollutants.

For More Information

For more information, please contact your local Santa Barbara County Environmental Health Services office listed below:

Santa Barbara (805) 681-4900
Santa Maria (805) 346-8460

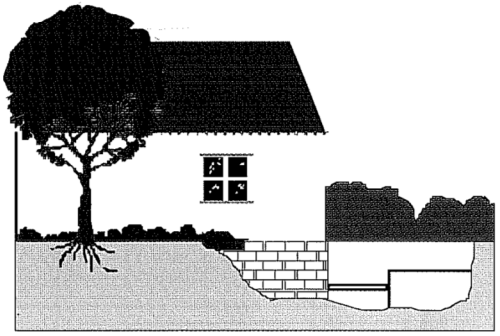
Portions of this pamphlet were reprinted with permission of Northern Virginia Planning District Commission.

www.sbcphd.org/ehs

A Reference Guide

Your Septic System

for Homeowners



Caring for your Septic System

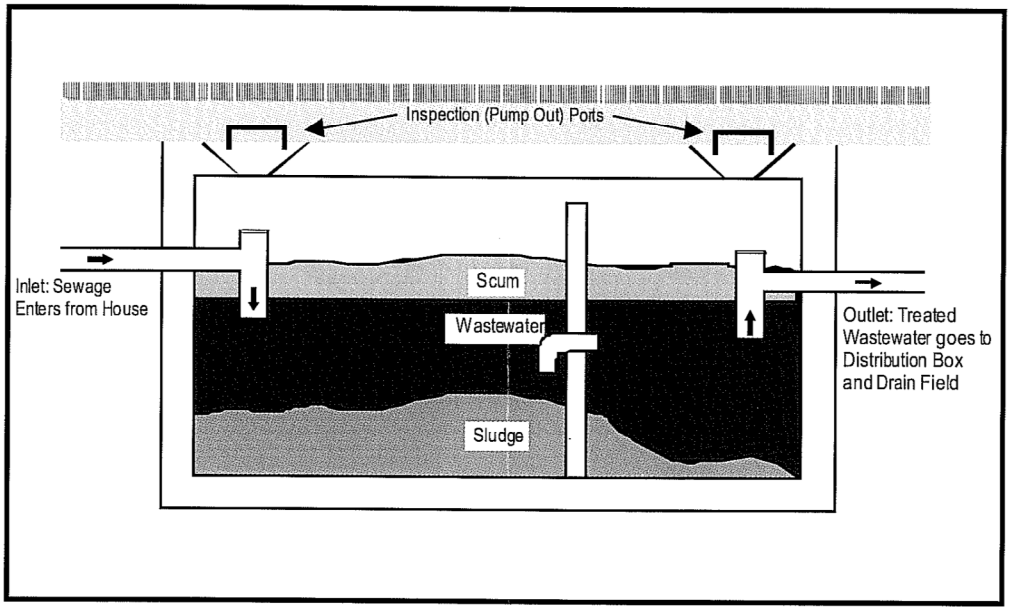
Septic systems must be maintained regularly to work properly. Solids and scum that accumulate in the septic tank should be pumped out every three to five years to protect the leachfield from clogging.

Neglect or abuse of your septic system can cause it to fail. Failing septic systems can:

- Cause a serious health threat to your family and neighbors;
- reduce the value of your property;
- be very expensive to repair;
- degrade the environment, especially lakes, streams, and groundwater; and
- put thousands of water supply users at risk if you live in a public water supply watershed.

Be alert to the warning signs of a failing system:

- sewage surfacing over the drainfield (especially after storms);
- sewage back-ups in the house;
- lush, green growth over the drainfield;
- slow draining toilets or drains;
- sewage odors.



Tips to Avoid Trouble

Do have your tank inspected every 3 to 4 years by a licensed septic tank pumper. If you have a garbage disposal unit, pump the tank at more frequent intervals.

Do keep a record of pumping, inspections, and other maintenance. Use the back page of this brochure to record maintenance dates.

Do practice water conservation. Repair dripping faucets and leaking toilets, run washing machines and dishwashers only when full, avoid long showers, and use water saving features in faucets, showerheads and toilets.

Do learn the location of your septic tank and drainfield. Keep a sketch of it handy for service visits. If your system has a flow diversion valve, learn its location and turn it once a year. Alternating drainfields can add many years to the life of your system.

Do divert roof drains and surface water from driveways and hillsides away from the septic system. Keep sump pumps and house drains away from the septic system as well.

Do use bleach and disinfectants sparingly. Bleach, disinfectants, and drain and toilet bowl cleaners can kill bacteria that are essential to the operation of the septic system system.

Don't allow anyone to drive or park over any part of the system. The area over the drainfield should be left undisturbed with only a mowed grass cover. Roots from nearby trees or shrubs may clog and damage your drain lines. Paving over a drainfield will reduce its efficiency and is prohibited.

Don't make repairs to your septic system without obtaining the required health department permit. Always use professional licensed septic system contractors for maintenance and repairs.

Don't use commercial septic tank additives or caustic drain chemicals. These products may hurt your system in the long run.

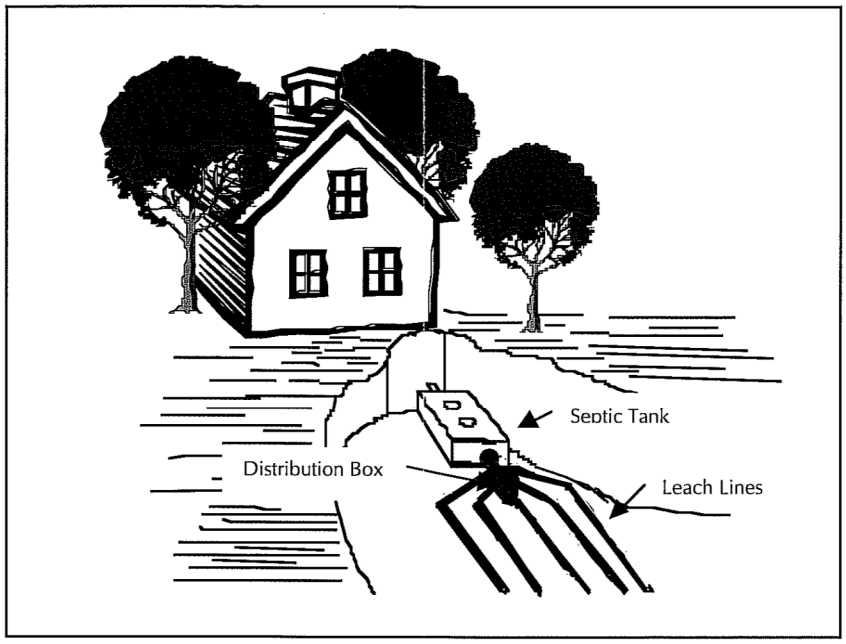
Don't use your toilet as a trash can by dumping nondegradables down your toilet or drains. Also, don't poison your septic system and the groundwater by pouring harmful chemicals down the drain. They can kill the beneficial bacteria that treat your wastewater. Keep the following materials out of your septic systems:



How Septic Systems Work

Septic systems are individual wastewater treatment systems that use a buried settling tank and the soil to treat small wastewater flows, usually from individual homes. They are typically used in rural or large lot settings where centralized wastewater treatment is impractical.

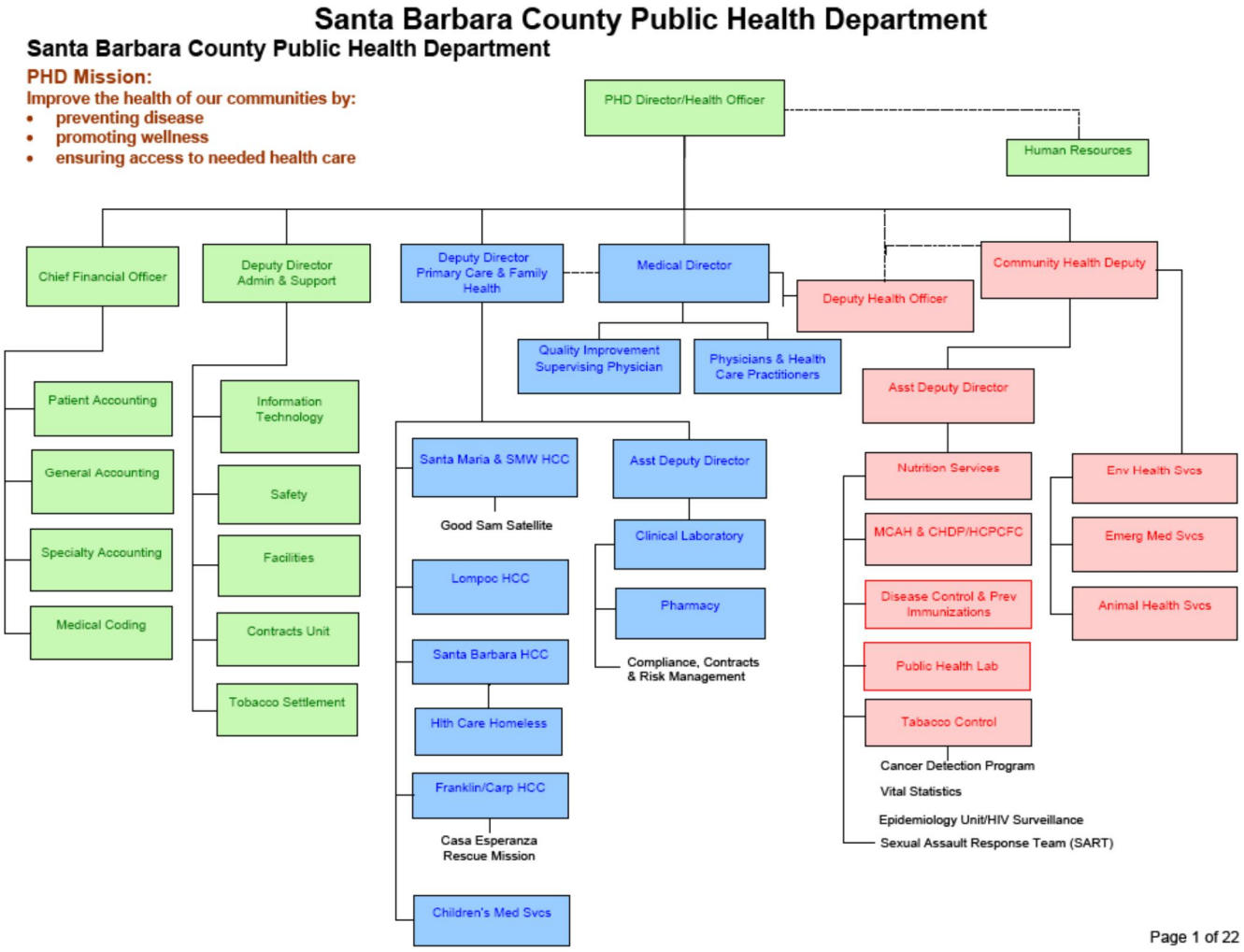
All septic systems are individually designed for each site but are based on the same principles.



A typical septic system consists of a septic tank, a distribution box and a drainfield, all connected by pipes. Your septic system treats your household wastewater by temporarily holding it in the septic tank where heavy solids and lighter scum are allowed to separate from the wastewater. This separation process is known as primary treatment. The solids stored in the tank are partially decomposed by bacteria and later removed, along with the lighter scum by a professional septic tank pumper. Failure to pump out accumulated solids and scum will eventually result in clogging of the drainfield and failure of the system.

When the partially treated wastewater leaves the tank, it typically flows into a distribution box that divides the flow among a network of drainfield trenches. Drainage holes in each line allow the wastewater to be absorbed into the soil. The wastewater then slowly seeps into the subsurface soil where it is further treated and purified (secondary treatment). A properly located and functioning septic system does not pollute the groundwater.

APPENDIX 7
Santa Barbara County Public Health Department Organization Chart



APPENDIX 8
Lamp Completeness Checklist

GENERAL REQUIREMENTS FOR LAMPS			
OWTS Policy Section	**OWTS Policy Section Summary**	**Relevant LAMP Section**	**Legal Authority/ Code Section**
3.3	Annual Reporting	Sec XI, pg. 54, para 6	NA
3.3.1	Complaints	Sec XI, pg. 54, para 6	NA
3.3.2	OWTS Cleaning	Sec XI, pg. 54, para 6	Ch. 18C, SBCC, Sec 18C-7(B) & (D)
3.3.3	Permits for New and Replacement OWTS	Sec XI, pg. 54, para 6	Ch 18C, SBCC, Sec 18C-4
3.4	Permanent Records	Sec XI, pg. 54, para 3	Ch 18C, SBCC, Sec 18C-4
3.5	Notifications to Municipal Water Suppliers	Not Specifically Addressed	NA
9.0	Minimum OWTS Standards	Sec V & VI	Ch. 18C, SBCC, Sec 18C-3, Sec 18C-5, Sec 18C-6
9.1	Considerations for LAMPs	_____	_____
9.1.1	Degree of vulnerability due to local hydrogeology	Sec VI, pg. 42 & Sec VII	Ch. 18C, SBCC, 18C-3(A), (D) & H(4), 18C-5, 18C-6(A) & (B)
9.1.2	High quality waters and other environmental conditions requiring enhanced protection	Not specifically addressed but generally covered in V pg. 38 Sec VI pg. 40-46 & VII.	Ch. 18C, SBCC, 18C-3(A)(4), 18C-5(A), 18C-5, 18C-6(A) & (B)
9.1.3	Shallow soils requiring non-standard dispersal systems	Sec VI, pg. 45, Sec VII	Ch. 18C, SBCC, 18C-5(I) – (L)
9.1.4	High domestic well usage areas	Not specifically addressed	Setbacks specified in CPC (2010), Table K-1, the DWR Bulletin 74-81, 90 & Sec 9.3.3 of the OWTS Policy apply.
9.1.5	Fractured bedrock	Sec VI, pg. 40 - 44	Ch 18C, SBCC, Sec 18C-3(A)(4)(c), Sec 18C-5(A) & (B)
9.1.6	Poorly drained soils	Sec VI, pg. 41-44	Ch. 18C, SBCC, Sec 18C-5(G)(2), Sec 18C-5(I) – (L), Table 3, OWTS Policy
9.1.7	Vulnerable surface water	Sec I, pg.1, para 6, Sec VII, pg. 47	Ch. 18C, SBCC, Sec 7.0 OWTS Policy
9.1.8	Impaired water bodies	Sec V, pg. 38, Sec VII, pg. 47	Sec 10.0 OWTS Policy (Tier 3) or development of Advanced Mgmt Prot Plan
9.1.9	High OWTS density areas	Sec VI, pg. 40,para 5, Sec VI, pg.45-46	Ch. 18C, SBCC, Sec 18C-3(A)(4), Sec 18C-5(K) – (L)

GENERAL REQUIREMENTS FOR LAMPS			
OWTS Policy Section	**OWTS Policy Section Summary**	**Relevant LAMP Section**	**Legal Authority/ Code Section**
9.1.10	Limits to parcel size	Sec VI, pg. 39, Sec VI, pg.40, para 5, Sec VI, pg. 41, para 4	NA
9.1.11	areas with OWTS that predate adopted standards	Sec V, pg. 37,para 2, Sec VII, pg. 47	Ch. 18C, SBCC, Sec 18C-3(A)(4), 18C-5(K), 18C-6(A) & (B)
9.1.12	areas with OWTS either within prescriptive, Tier 1 setbacks, or within setbacks that a Local Agency finds appropriate	Sec VII, pg.47	Ch. 18C, SBCC, Sec 18C-3(A)(4)(d), 18C-5(K), 18C-6(A)
9.2	Scope of Coverage:	Sec I, pg.2, para 6-7, Sec VI, pg. 40, para 6	Ch. 18C, SBCC, Sec 18C-5
9.2.1	Installation and Inspection Permits	Sec V, pg. 36, para 2-4, Sec VI, pg. 45 para 7, Sec IX, pg. 50-51	Ch. 18C, SBCC, Sec 18C-4
9.2.2	Special Provision Areas and Requirements near Impaired Water Bodies	Sec V, pg. 38, Sec VI, pg. 40, Sec VII, pg. 47	Sec 18C, SBCC, Sec 18C-5(K) – (L) or, Development of Adv Protection Mgmt Plan
9.2.3	LAMP Variance Procedures	Sec V, pg.37,para 2, Sec VII, pg. 47 para 3	, Ch.18C, SBCC, Sec 18C-6(A)(6), Sec 18C-11(C)
9.2.4	Qualifications for Persons who Work on OWTS	Sec V, pg. 36, Sec VI, pg. 41	Ch. 18C, SBCC, Sec 18C-3(H), 18C-7(A)
9.2.5	Education and Outreach for OWTS Owners	Sec VIII	NA
9.2.6	Septage Disposal	Sec X	Ch. 18C, SBCC, Sec 18C-7(A)(2)(a), Sec 18C-7(D)
9.2.7	Maintenance Districts and Zones	Not Addressed	NA
9.2.8	Regional Salt and Nutrient Management Plans	Not Addressed	NA
9.2.9	Watershed Management Groups	Not Addressed	NA
9.2.10	Proximity of Collection Systems to New or Replacement OWTS	Sec VI, pg.39, para 3	CPC (2010),, Ch 7, Part II, Sec 713.4
9.2.11	Public Water System Notification prior to permitting OWTS Installation or Repairs	Not specifically addressed	NA
9.2.12	Policies for Dispersal Areas within Setbacks of Public Wells and Surface Water Intakes	Sec V, pg. 37, para 2, Sec VI, pg. 40, para 5, Sec VII, pg.47, para 2	Ch. 18C, SBCC, Sec 18C-3(A)(4)(d)
9.2.13	Cesspool Discontinuance and Phase-Out	Sec V, pg. 37, para 3,8	Ch. 18C, SBCC, Sec 18C-3(D)(2), 18C-6(B)(2)
9.3	Minimum Local Agency Management Responsibilities:	————	

GENERAL REQUIREMENTS FOR LAMPS			
OWTS Policy Section	**OWTS Policy Section Summary**	**Relevant LAMP Section**	**Legal Authority/ Code Section**
9.3.1	Permit Records, OWTS with Variances	Sec XI, pg.54 para 2-3	Ch. 18C, SBCC, Sec 18C-4, Sec 18C-11(C)
9.3.2	Water Quality Assessment Program:	Sec III	NA
9.3.2.1	Domestic Well Sampling	May be included in future revisions. Sec III, pg. 23, para 6	NA
9.3.2.2	Domestic Well Sampling, Routine Real Estate Transfer Related	May be included in future revisions Sec III, pg. 23, para 6	NA
9.3.2.3	Water Quality of Public Water Systems	Sec III, pg. 28-29	NA
9.3.2.4	Domestic Well Sampling, New Well Development	May be included in future revisions. Sec III, pg. 23, para 6	NA
9.3.2.5	Beach Water Quality Sampling, H&S Code §115885	May be included in future revisions. Sec III, pg. 23, para 6	NA
9.3.2.6	Receiving Water Sampling Related to NPDES Permits	May be included in future revisions. Sec III, pg. 23, para 6	NA
9.3.2.7	Data contained in California Water Quality Assessment Database	May be included in future revisions. Sec III, pg. 23, para 6	NA
9.3.2.8	Groundwater Sampling Related to Waste Discharge Requirements	May be included in future revisions. Sec III, pg. 23, para 6	NA
9.3.2.9	Groundwater Sampling Related to GAMA Program	May be included in future revisions. Sec III, pg. 23, para 6	NA
9.3.3	Annual Status Reports Covering 9.3.1-9.3.2	Sec XI, pg. 54, para 6	NA
9.4	Not Allowed or Authorized in LAMP:	_____	_____
9.4.1	Cesspools	Sec V, pg. 37, para 3 & 8	Ch. 18C, SBCC, Sec 18C-3(D)(2), 18C-6(B(2))
9.4.2	Projected Flow>10,000 gpd	Sec I, pg.2,para 6, Sec VI, pg.40, para 6	NA
9.4.3	Effluent Discharger Above Post-Installation Ground Surface	Sec I, pg. 2, para 6	NA

GENERAL REQUIREMENTS FOR LAMPS			
OWTS Policy Section	**OWTS Policy Section Summary**	**Relevant LAMP Section**	**Legal Authority/ Code Section**
9.4.4	Installation on Slopes >30% without Registered Professional's Report	Sec VI, pg. 39, para 4, Sec VI, pg. 42, para 1	Ch. 18C, SBCC, Sec 18C-5(A)(1)(a)
9.4.5	Decreased Leaching Area for IAPMO-Certified Dispersal System with Multiplier <0.70	Sec I, pg. 2, para 3	CPC, Sec K 3.0 (5)
9.4.6	Supplemental Treatments without Monitoring and Inspection	Sec I, pg. 2, para 1 & 3	Ch. 18C, SBCC, Sec 18C-5(K) – (L)
9.4.7	Significant Wastes from RV Holding Tanks	Sec I, pg. 2, para 3 & 6	NA
9.4.8	Encroachment Above Groundwater	Sec I, pg. 2, para 3	Sec 8.1.5 OWTS Policy, Table 2
9.4.9	Installations Near Existing Sewers	Sec VI, pg. 39 para 3	CPC, Ch 7, Part II , Sec 713.4
9.4.10	Minimum Setbacks:	Sec I, pg. 2, para 3	NA
9.4.10.1	From Public Supply Wells, dispersal less than 10 feet	Sec I, pg. 2, para 3	NA
9.4.10.2	From Public Supply Wells, dispersal greater than 10 feet	Sec I, pg. 2, para 3	NA
9.4.10.3	From Public Supply Wells, Regarding Pathogens	Sec I, pg. 2, para 3	NA
9.4.10.4	From Public Surface Water Supplies	Sec I, pg. 2, para 3	NA
9.4.10.5	From Public Surface Water Supplies	Sec I, pg. 2, para 3	NA
9.4.11	Supplemental Treatments, Replacement OWTS That Do Not Meet Minimum Setback Requirements	Sec V, pg. 37, para 2, Sec VI, pg. 40, para 5, Sec VII, pg. 47, para 2 – 3	Ch. 18C, SBCC, Sec 18C-5(K) – (L), Sec 18C-6(A)(5)
9.4.12	Supplemental Treatments, New OWTS That Do Not Meet Minimum Setback Requirements	Sec VI, pg. 40, para 5, Sec VI, pg. 45, para 5 & 7	Ch 18C, SBCC, Sec 18C-5(K) – (L)
9.5	Technical Support of LAMP	Sec 1, pg. 2, para 1	NA
9.6	Regional Water Quality Control Board Consideration of LAMP	_____	_____