# CITY OF ATSCADERO

## Local Agency Management Program (LAMP)

A comprehensive policy for the management of Onsite Wastewater Treatment Systems

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# CITY OF ATASCADERO

## Local Agency Management Program (LAMP)


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## PART 0 DEFINITIONS

The following definitions apply to the City of Atascadero LAMP document:

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

**"5:1 Slope"** means 20% slope. It refers to horizontal run over rise, in this case 5 feet of horizontal distance over 1 foot of vertical difference.

**Alternative Onsite Wastewater Treatment System.** Alternative onsite wastewater treatment system is a type of OWTS that utilizes either supplemental treatment and/or a method of wastewater dispersal other than a conventional leachfield, leach bed or seepage pit for the purpose of producing a higher quality wastewater effluent and improved performance of and siting options for effluent dispersal.

**Aquifer.** A body of rock or sediment that is sufficiently porous and permeable to store, transmit, and yield significant or economic quantities of groundwater to wells and springs, as defined in Bulletin 118, 2003 Update. For purposes of the LAMP, it is understood that this definition is limited to alluvial aquifers

**Basin plan.** Basin plan means the same as "water quality control plan" as defined in Division 7 (commencing with Section 13000) of the California Water Code. Basin plans are adopted by each Regional Water Quality Control 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.

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

**Biological Oxygen Demand (BOD).** BOD, measures the oxygen required for biochemical degradation of organic and inorganic material. High BOD causes an increased biological demand on downstream OWTS components and may shorten the life of the system.

**California Environmental Data Exchange Network (CEDEN).** California Environmental Data Exchange Network is a website operated by the State Water Resource Control Board that serves as a central location to find and share information about California's water bodies, including streams, lakes, rivers and the coastal ocean. www.ceden.org

**Central Coast Regional Water Quality Control Board (Central Coast RWQCB**). Central Coast RWQCB means Region 3 of the Regional Water Quality Control Boards as designated by Water Code Section 13200. Any reference to an action of the Regional Water Board in the LAMP 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.

**Cesspool.** 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 are not preceded by a septic tank and are not authorized under the LAMP. The term cesspool does not include pit-privies and out-houses which are not regulated under the LAMP.

**Clay.** Clay is a kind of 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.** Cobbles mean rock fragments 76 mm or larger using the USDA soil classification systems.

**Cut Slope.** A Cut Slope means any slope greater than 60% or a man-made excavation that exposes the vertical soil profile.

**Conventional OWTS.** Conventional OWTS means an OWTS consisting of a septic tank with the effluent discharging into a subsurface leachfield, leach bed, infiltrative chamber, seepage pit or gravel-packed pit.

**Day-lighting.** Day-lighting within the LAMP refers to the horizontal distance from a subsurface structure or leach field projected out to an adjacent slope. Within the LAMP, day-lighting does not refer to wastewater effluent reaching the ground surface, which is referred to as "surfacing effluent."

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

**Domestic wastewater.** Domestic wastewater means wastewater with a measured strength less than 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 recreational vehicle (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.

**Domestic well.** Domestic well means a groundwater well that provides water for human consumption and is not regulated by the California Water Board – Division of Drinking Water.

**Drainageway.** Drainageway means a natural or artificial channel that is not a watercourse as defined by the LAMP. Examples of a drainageway include irrigation and drainage ditches that flow only for hours or days following rainfall, grass-lined swales, concrete-lined canals, and storm water runoff devices.

**Dump Station.** 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.

**Dwelling Unit.** Dwelling unit means a single unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking or sanitation, conforming with the edition of the California Residential Code (Title 24) in place at the time of construction.

**Effective Depth.** Effective depth means the depth of the useable, permeable layers of soil below the bottom of the distribution pipe in a dispersal system.

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

**Electronic Deliverable Format (EDF).** EDF is a comprehensive data standard designed to facilitate the transfer of electronic files between data producers and data users. The EDF may be used for the production of hard copy reports, electronic data review, or data summaries,

**Existing OWTS.** Existing OWTS means an OWTS that was constructed and operating prior to the effective date of the LAMP and OWTS for which an OWTS construction permit has been issued prior to the effective date of the LAMP.

**Fats, Oils and Grease (FOG).** FOG measures biological lipids and mineral hydrocarbons. The analytical test for FOG does not measure an absolute quantity, but is useful in making comparisons of wastewater.

**Gray Water.** Gray water means untreated wastewater that has not been contaminated by any toilet discharge, and has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes (Health and Safety Code section 17922.12). Gray water includes used water from bathtubs, showers, bathroom wash basins, clothes washing machines and laundry tubs. Gray water does not include waste water from kitchen sinks or dishwashers.

**Gray Water System.** Gray water system is a disposal system that disposes of gray water subsurface and conforms with the latest edition of the California Plumbing Code.

**Groundwater.** Groundwater means water below the land surface that is at or above atmospheric pressure and is located below the water table elevation within the saturated zone.

**Groundwater Basin.** Groundwater Basin refers to an "…alluvial aquifer or stacked series of alluvial aquifers with reasonably well-defined boundaries in a lateral direction, based on features that significantly impede groundwater flow, and a definable bottom…", as defined in Title 23, Division 2, Chapter 1.5, Subchapter 1, Article 2, Section 341(g)(1) of the California Code of Regulations, and referenced in Bulletin 118, 2003 and 2016 Updates. Within the context of the LAMP, reference to Groundwater Basin refers to the Paso Robles Groundwater Basin, as defined in Bulletin 118, 2003 Update and the Paso Robles Groundwater Management Plan.

**Groundwater Basin Degredation.** Groundwater Basin Degredation refers to a substantiated decrease in groundwater quality, such that the trend line of measureable constituent(s) exceeds specified limits for maximum concentration.

**Groundwater Subbasin.** Groundwater Subbasin refers to a portion of a Groundwater Basin determined by geologic or hydrologic barriers, as defined in Bulletin 118, 2003 Update. Within the context of the LAMP, reference to Groundwater Subbasin refers to the Atascadero Subbasin, as defined in Bulletin 118, 2016 Update and the Paso Robles Groundwater Management Plan, as that portion of the Paso Robles Formation basin west of the Rinconada fault.

**Guesthouse.** Guesthouse means the same as described in City of Atascadero Municipal Code and is considered a detached bedroom(s) for purposes of sizing the OWTS.

**Health Department.** Health Department means the San Luis Obispo County Health Department.

**High Strength Wastewater.** 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.** IAPMO means the International Association of Plumbing and Mechanical Officials

**Impaired water bodies.** 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.

**Impervious layer or material.** Impervious layer or material is characterized as having a percolation rate slower than one hundred twenty (120) minutes per inch or having clay content of sixty (60) percent or greater.

**Infiltrative Area.** Infiltrative area means the surface area of the sidewalls below the effluent distribution pipe where the dispersal field media makes direct contact with the soil or permeable rock. The surface area of the bottom of the dispersal system can be included in specific circumstances.

**Local Agency Management Program for Onsite Wastewater Treatment Systems (LAMP).** LAMP means this document, the Atascadero LAMP, which conforms to all of the applicable Tier 2 criteria listed in the OWTS Policy, including adherence to the prohibitions specified in Section 9.4 of the OWTS Policy.

**Leach bed.** A Leach Bed is equivalent to a leachfield except that multiple distribution pipes are installed within a single excavation with a common underlying mat of gravel.

**Leach field.** Leach field means a system of trenches or beds filled with drain rock, or other approved aggregate material, and overlain by a perforated pipe that distributes treated sewage effluent for subsurface dispersal into the soil. A leachfield is also known as a "drainfield" or a "soil absorption system".

**Local Agency.** 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. Within the context of the LAMP, Local agency refers to the City of Atascadero.

**Major repair.** 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.

**Maximum Contaminant Level.** Maximum Contaminant Level (MCL) refers to the highest level of a contaminant that is allowed in drinking water. Primary MCL's are set as close to the Public Health Goal (PHG) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

**Mottling.** 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.** Mound system is a type of alternative OWTS dispersal system consisting of an aboveground, 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.

**NSF.** NSF is an acronym for National Sanitation Foundation (also known as NSF International), a not for profit, non-governmental organization that develops health and safety standards and performs product certification.

**New OWTS.** New OWTS means an OWTS permitted after the effective date of the LAMP. A new OWTS is any new system installed to serve a new structure or an elective rebuild of an existing structure. For example, a rebuild of a fire damaged structure is not considered a new OWTS.

**Nitrogen.** Nitrogen is of concern due to its impact on groundwater and surface water. Nitrogen acts as a potentially limiting nutrient for photosynthetic autotrophs in surface water and as a potential health risk in groundwater. The principal forms of nitrogen found in wastewater are organic nitrogen (Organic-N), ammonia nitrogen (NH3-N), ammonium nitrogen (NH4-N), nitrite nitrogen (NO2-N), and nitrate nitrogen (NO3-N). These forms of nitrogen are expressed either individually or as components of the following:

1. Total Kjeldahl Nitrogen (TKN), which is the sum of (Organic-N) +(NH3-N)
2. Total Inorganic Nitrogen (TIN), which is the sum of (NH3-N) + (NO2-N) +(NO3-N)
3. Total Nitrogen (TN), which is the sum of (TKN) + (NO2-N) +(NO3-N)

**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.

**Onsite Wastewater Treatment System (OWTS).** OWTS means individual wastewater 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 gray water systems pursuant to Health and Safety Code Section 17922.12.

**OWTS Policy.** OWTS Policy is the Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems as adopted by the State Water Resources Control Board on June 19, 2012.

**Pathogens.** Pathogens mean disease-causing microorganisms. Their presence is indicated by sampling wastewater for coliform bacteria.

**Perched Water.** Perched water, which includes sheetwater, means subsurface drainage or groundwater that flows in a relatively thin sheet upon an impervious or very slowly permeable soil layer, such as clay.

**Percolation test.** Percolation test is 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.

**Percolation rate.** Percolation rate means the speed at which water moves through soil, usually reported in minutes per inch.

**Permeable Rock.** Permeable rock means decomposed granite, shale or other weathered bedrock formations. For the purposes of the LAMP, permeable rock may be considered a viable substrate to accommodate a dispersal system provided stabilized percolation rates and vertical separation requirements as determined by the LAMP to groundwater, consolidated bedrock or another impervious layer have been met.

**Permit.** Within the context of the LAMP, 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.** 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 the LAMP or the OWTS Policy.

**Privy.** Privy means a structure (portable or fixed) and excavation used for the disposal of human wastes without the aid of water or chemical toilets (portable or fixed) which are subsequently pumped and disposed of in an approved facility.

**Public Health Goal.** Public Health Goal refers to the level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

**Public water system.** "Public water system" means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year (California Health and Safety Code Section 116275). Within the context of the LAMP, this refers to the water system within the City of Atascadero owned and operated by the independent Atascadero Mutual Water Company.

**Public water well.** A 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. Within the context of the LAMP, public water wells refer to the water wells within the City of Atascadero owned and operated by the independent Atascadero Mutual Water Company.

**Qualified Professionals (QP), Qualified Installers (QI), and Qualified Service Providers (QSP).** Qualified Professionals design OWTS and perform soil and site evaluations. Qualified Installers construct, modify, repair, abandon, and demolish OWTS. Qualified Service Providers operate, maintain, and service OWTS. See Section 3.7 for additional information and required qualifications.

**Regional Water Board** means any of the Regional Water Quality Control Boards designated by Water Code Section 13200. Any reference to an action of the Regional Water Board in the LAMP 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. Within the context of the LAMP, Regional Water Board generally refers to the Central Coast Regional Water Quality Control Board.

**Repair.** Repair means either: (1) for a dispersal system, repairs to an existing OWTS dispersal system that are installed in a "like-for-like" configuration to maintain the design specifications and location of the dispersal field; (2) for a septic tank, patching cracks that do not degrade the tank structural integrity and do not allow wastewater to exfiltrate or allow groundwater to infiltrate the tank.

**Reserve Area.** Reserve area means an accessible area that shall be available to accommodate a minimum of one replacement dispersal system without utilization or disruption of the initial installation(s).

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

**Reservoir.** Reservoir means a pond, lake, basin or other space either natural or created in whole or in part by the building of engineering structures, which is used for storage, regulation and control of water, recreation, power, flood control or drinking. A detention pond designed to meter runoff water during a storm event is not considered a reservoir.

**Sand.** Sand is a kind of 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.

**Sanitary sewer.** Sanitary sewer means a system for collecting residential or municipal wastewater and directing the collected wastewater to a treatment works prior to dispersal.

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

**Septage.** Septage means solid residue with low water content from septic tanks, privies, or wastewater treatment facilities.

**Septic tank.** 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.

**Shallow Pressure-Distribution Trench.** Shallow pressure-distribution trench is a type of alternative OWTS dispersal field, similar to a conventional gravity leachfield except that it uses a pump and small-diameter pressure piping to achieve broad, uniform distribution of wastewater in the shallow soil zones for improved soil absorption and enhanced treatment of percolating effluent.

**Silt.** Silt is a kind of 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.

**Site** means the location of the OWTS and, where applicable, a reserve dispersal area capable of disposing of 100% 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 the LAMP.

**Soil.** 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 the LAMP, soil shall contain earthen material of particles smaller than 0.08 inches (2 mm) in size.

**Soil Structure.** 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.** 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 United States Department of Agriculture.

**State Water Board** is the State Water Resources Control Board.

**Subsurface drip dispersal.** Subsurface drip dispersal is a type of alternative OWTS dispersal system consisting of small diameter flexible plastic tubing manufactured with emitters spaced uniformly along its length that releases treated wastewater to the soil for final treatment and dispersal; the drip field is designed and installed such that the drip tubing is installed in the shallow surface soils, typically 8 to 12 inches below finished grade.

**Supplemental Treatment System.** Supplemental treatment system 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.

**Surface Water Ambient Monitoring Program (SWAMP).** SWAMP is a comprehensive surface water monitoring and assessment program managed by the State Water Resources Control Board. https://www.waterboards.ca.gov/water_issues/programs/swamp/

**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 Suspended Solids (TSS).** TSS are a constituent of total solids. TSS is residue retained on a filter after drying the sample and is a measure of the level of treatment being achieved.

**United States Geological Survey (USGS).** USGS is a scientific agency for natural sciences, including earth science and biology and maintains topographic maps of blue-line streams.

**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.

**Wastewater.** Wastewater includes sewage, gray water, and any and all other contaminated liquid waste substances associated with human habitation.

**Water Quality Objectives.** Water Quality Objectives are measurable constituent level limits, as defined in the Central Coast Water Board Basin Plan, necessary for the reasonable protection of beneficial uses and for the prevention of nuisance.

# PART 1 INTRODUCTION & BACKGROUND

## 1.1 INTRODUCTION

In California, the authority for the regulation of Onsite Wastewater Treatment Systems (OWTS) belongs to the State Water Resources Control Board (SWRCB). The policies of the SRWCB are implemented locally through nine regional water quality control boards (RWQCB). 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.

General guidelines for the siting, design, and construction of new OWTS were part of each basin plan. While the regional boards retain primacy over large and some specialized systems, direct regulatory authority for individual OWTS has been delegated to local agencies.

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 as the OWTS Policy. The OWTS 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. A complete copy of the OWTS Policy is included in Appendix A.

The OWTS Policy provides a multi-tiered strategy for management of OWTS in California. This document presents the proposed Local Agency Management Program (LAMP) pertaining to the oversight of OWTS within the City.

It is the intent of the Atascadero City Council, in adopting the LAMP, 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 City of Atascadero.

The OWTS Policy provides a multi-tiered strategy for management of OWTS in California. Five tiers were created:

Tier 0 – existing OWTS that are properly functioning.

Tier 1 – minimum standards for low risk new or replacements OWTS.

Tier 2 – allows customized management programs ("Local Agency Management Programs") that address conditions specific to the local jurisdiction.

Tier 3 – applies special, enhanced standards to OWTS located near a water body listed as impaired pursuant to Section 303(d) of the Clean Water Act.

Tier 4 – applies to OWTS that require corrective action.

The purpose of the LAMP is to allow the continued use of OWTS within the jurisdiction of the City as well as to expand the local program to permit and regulate alternative OWTS while protecting water quality and public health.

The LAMP is designed to protect groundwater sources and surface water bodies from contamination through the proper design, placement, installation, maintenance, and assessment of individual OWTS. This plan sets forth minimum standards for the treatment and ultimate disposal of sewage though the use of OWTS in the City of Atascadero. The City of Atascadero LAMP does not include the following, which require individual waste discharge authorization or a waiver of individual waste discharge requirements issued by the RWQCB:

- Any OWTS with projected wastewater flow of 10,000 gallons per day or more.
- Any OWTS that has above ground surface discharge.
- Any OWTS that receives high-strength wastewater, unless the waste stream is from a commercial food service facility. "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.
- Any OWTS used for winery production. (All wineries not connected to the municipal sewer system shall apply separately to the Water Board under the General Winery WDR Order No. R3-2017-0020.
- Any OWTS that receives high-strength wastewater from a commercial food service facility:
    - with a BOD higher than 900 mg/l or
    - that does not have a properly sized and functioning oil/grease interceptor.
- OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks.

## 1.2 BACKGROUND

The City of Atascadero (the City) is a unique community from both a historical perspective and the environmental setting within which it is situated. The area surrounding the City was originally home to the Salinas and Chumash Indians. In the half century between 1769 and 1823, the Spanish Franciscans established 21 missions along the California coast, including the nearby Mission's San Miguel Archangel, and San Luis Obispo de Tolosa. In 1821, Mexico won its independence from Spain, and California became a Mexican province. Under Mexican rule, the land that includes what is now the City of Atascadero was the 23,000-acre Rancho Atascadero. In 1848, California was ceded to the United States after the Mexican–American War. In 1913, Edward Gardner Lewis, a successful magazine publisher from the East, assembled a group of investors and acquired Rancho Atascadero and founded the Atascadero Colony in 1913 as a planned colony. The entire Atascadero Colony was surveyed and subdivided in 1914 and shortly thereafter, construction began on a system of roadways and a public water supply system. In 2017, with over 29,000 residents, Atascadero is the third-largest city in San Luis Obispo County. Many of the very principles that E.G. Lewis envisioned for his "utopian city" are ensured through the city's general plan, which includes preservation of open space, protection of trees and hillsides, and large lot sizes. In conjunction with the formation of the Atascadero Colony, the Atascadero Mutual Water Company (AMWC) was formed in 1913. The AMWC was deeded all water rights within its service area to hold in trust for its shareholders (i.e. individual property owners). The AMWC service area comprises all land within the City of Atascadero corporate boundaries. Exhibit 1.2.1 graphically depicts the AMWC service

area. As trustee, the AMWC has the authority and responsibility to manage these groundwater resources. The AMWC's intent is to protect the groundwater resources of the shareholders and provide for the equitable distribution of these resources. The AMWC allows the drilling and use of some private wells in those areas where the wells are not likely to have significant impacts on the groundwater resources of the AMWC. The AMWC prohibits the drilling and use of new wells in areas that overlie the Atascadero Sub-basin, the alluvial deposits of the Salinas River, or other areas that could significantly impact the quantity, quality, or recharge of groundwater.

## 1.3 STATE & LOCAL REQUIREMENTS

The California Water Code authorizes the SWRCB to regulate all discharges that could affect the quality of the waters of the state. The SWRCB policies are implemented locally through nine regional water quality control boards. The City of Atascadero lies within the jurisdiction of the Central Coast Regional Water Quality Control board (Central Coast RWQCB).

Discharges are regulated through the use of Waste Discharge Requirements that act as discharge permits. With regards to the regulation of wastewater in San Luis Obispo County, the Central Coast RWQCB 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 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 agencies, including the City of Atascadero, through a Memorandum of Understanding.

Under the tiered approach of the OWTS 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 LAMPs must be approved by the appropriate RWQCB. 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.

The City acknowledges that the Tier 1 standards afford an essential level of public health and water quality protection. Accordingly, the City has enacted an OWTS Ordinance that 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 OWTS Ordinance.

There are however, certain elements in Tier 1 that would be problematic in the City. 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 City 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 OWTS Ordinance requires the use of supplemental treatment in conjunction with an operating permit to remove the constituents of concern and provide an appropriate level of environmental protection. Conditions of the operating permits include regular system inspection, maintenance and reporting. Consequently, in those areas where the City's requirements differs from Tier 1 in the OWTS Policy, the required mitigation measures will result in an equal level of public health and groundwater protection.

In October 2016, the City of Atascadero submitted a letter to the Central Coast RWQCB informing the Board of the City's intent to develop a LAMP in lieu of implementing Tier 1 standards. It is the intent of the City, 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 City.

The LAMP conforms to all of the applicable Tier 2 criteria listed in Section 9 of the OWTS 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 RWQCB, which is included in Appendix B.

The actual standards for existing and new OWTS are specified in the OWTS Policy, the California Plumbing Code, and in the City of Atascadero OWTS Ordinance. The OWTS Ordinance 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).

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

It is the intent of the City, 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.

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 OWTS Policy requires that a jurisdiction complete an evaluation of its monitoring program every five years to determine if water quality is being impacted by OWTS and whether modifications must be made to its LAMP to address any identified 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 RWQCB and if changes are substantive, the proposed modifications to the LAMP will be brought before the Atascadero City Council for approval.

## 1.4 GEOGRAPHIC AREA

The City of Atascadero contains approximately 26.1 square miles of land within its corporate boundaries. In addition to this land area, the City adopted a comprehensive General Plan update in 2002. As part of that process, the General Plan designated Eagle Ranch as "Development Area 11" and set forth policies that contemplate annexation of the ranch. Following adoption of the General Plan, the San Luis Obispo Local Agency Formation Commission (LAFCO) adjusted the City of Atascadero's Sphere of Influence to include Eagle Ranch, signifying that the ranch is ultimately expected to be annexed into the Atascadero city limits within the next 20 years. In 2011, the San Luis Obispo LAFCO reaffirmed the City of Atascadero's Sphere of Influence. The Eagle Ranch property contains approximately 5.4 square miles, which results in the area of the City of Atascadero's Sphere of Influence to be approximately 31.5 square miles. For the purposes of the LAMP, the proposed development associated with Eagle Ranch is included. In 2017, there were approximately 12,220 individual property parcels within the City of Atascadero corporate limits and an additional 587 parcels planned in the Eagle Ranch area to be annexed in the future. A location map, which graphically depicts the Atascadero Sphere of Influence, is included as Exhibit 1.4.1.

The City of Atascadero Sphere of Influence is situated between the Santa Lucia Mountains to the west and the Salinas River to the east. There are significant variations in topography within the region, with elevations ranging from 2436 feet to 792 feet AMSL. In many areas, most notably within the western portions of the community, the ground slopes are steep, often in excess of 30%. Soils in the area include both the presence of fine-grained clayey & silty soils and coarse-grained sandy to gravelly soils. Soil depths are shallow to absent in some of the rugged, mountainous areas in the western portions of the LAMP area, as well as in the Spaghetti Hill, Chalk Mountain, and Pine Mountain areas, which are located within the eastern fringe of the area. The natural land cover of the regional landscape is predominately oak woodland and oak savanna, with riparian zones within in the drainages and creeks. Surface water drainage is generally from west to east, with the major creeks being Atascadero Creek, Graves Creek, Paloma Creek, and Eagle Creek. Each of these creeks is fed by minor unnamed tributaries with their individual watersheds. All surface water drainage features within the LAMP area ultimately discharge into the Salinas River. The only significant groundwater basin sources that are present beneath the City of Atascadero Sphere of Influence are the two distinct yet interrelated groundwater sources: the Salinas River Underflow and the Atascadero Sub-basin of the Paso Robles Groundwater Basin. These groundwater supplies are each located along the eastern fringe of the LAMP area. A more detailed discussion of the environmental setting of the LAMP area is presented in Part 2.

## 1.5 OVERVIEW OF EXISTING ONSITE WASTEWATER TREATMENT SYSTEMS

Prior to the adoption of the LAMP and the new OWTS Ordinance, onsite sewage disposal systems that exist within the corporate boundaries of the City of Atascadero are regulated by the City. The City of Atascadero regulations for onsite sewage disposal systems were contained in Atascadero Municipal Code Section 8-6.102, which sets forth standards for the installation of new, replacement, or enlarged septic OWTS. These regulations have historically 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 the City have been adopted as part of Community Plans or as project-specific mitigation measures or conditions applied to development proposals lying within a designated Special Problem Areas of the City.

Historically, City of Atascadero septic system requirements provided for use of conventional systems including septic tanks for treatment and absorption trenches or seepage pits (dry wells) for disposal. Absorption trenches have traditionally been the preferred method of disposal with seepage pits being permissible only where the use of absorption trenches is infeasible. There are only a small number of "alternative" systems in the City. These alternative systems provide additional treatment (beyond the septic tank) or different methods of disposal (e.g. mounds, or pressure-dosing absorption trenches) are designed to overcome specific soil or groundwater constraints. Design requirements for these systems have historically been established on a “case by case” basis, based on the City review of engineering documentation prepared by the permittee. The City required the permittee to 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 absorption trench replacement/expansion.

Older, non-conforming OWTS are present in several areas within the City of Atascadero Sphere of Influence. Many of the properties are small (<1/2 acre in size), with OWTS constructed prior to the modern codes. Some of these systems may be subject to failure in the future, and repairs/replacement tend to be very challenging on these properties. Non-conformance with adopted setback requirements (e.g. from structures, water features, cut banks, and sharp changes in slope, etc.) are also common. The LAMP includes provisions for addressing the older, non-conforming OWTS, in subsequent sections of the LAMP document.

For informational purposes, a comparison table was created to illustrate the principal differences between the OWTS design and construction requirements, which were required under Atascadero Municipal Code Section 8-6.102, and the new OWTS requirements, which are required under the provision of the LAMP and the new OWTS Ordinance. The pre/post-LAMP comparison table is included in Appendix C.

## 1.6 EXISTING MUNICIPAL SANITARY SEWER COLLECTION SYSTEM

The City of Atascadero serves a population of over 29,000 residents. Land uses include residential, office, commercial, and light industrial developments. Sanitary sewer services are provided to approximately 45% of the residents and to a majority of the businesses within the City limits. The remainder of the City utilizes privately owned and maintained OWTS. Of the more than 12,000 parcels within the City of Atascadero corporate boundaries, approximately 5,360 parcels are currently connected to the municipal sanitary sewer collection system. Exhibit 1.6.1 depicts parcels currently serviced by the sewer systems and Exhibit 1.6.2 depicts those serviced by OWTS.

The existing municipal sewer collection system consists of more than 303,600 lineal feet of laterals, mains, trunks, and 44,500 feet of force mains, ranging in size from 4 to 24 inches in diameter. A series of gravity collection system mains and 12 lift stations pump directly to the City-owned water reclamation facility.

The water reclamation facility (WRF) is located east of the Chalk Mountain Golf Course. Groundwater reclaimed from below the facility's infiltration ponds is used for fairway irrigation. The WRF has a design flow of 1.4 MGD and consists of an aerobic, facultative polishing lagoon, and six percolation ponds. In addition, the WRF receives the final effluent discharged by the Atascadero State Hospital's wastewater treatment plant to the sixth and final percolation pond. The WRF also produces Class B biosolids. Operations, maintenance, and environmental compliance staff ensure that the WRF is operated and maintained in the most efficient manner possible and complies with all regulatory requirements.

A map depicting the location and size of the primary components of the Atascadero municipal sanitary sewer collection system is included as Exhibit 1.6.3.

## 1.7 AREAS OF POTENTIAL EXPANSION OF THE EXISTING SANITARY SEWER COLLECTION SYSTEM

The City of Atascadero has undertaken a preliminary study to identify those areas within its service area that could potentially be served in the future with an expansion of the existing municipal sanitary sewer collection system. Criteria considered in this study included the following:

- Proximity to existing sanitary sewer infrastructure.
- Number and size of parcels that could be serviced with the expanded infrastructure.
- The presence of existing rights-of-way and / or utility easements.
- The feasibility of gravity service vs service via force mains and lift stations.
- Estimated costs of system expansion vs probable benefits.
- Capacity of the existing water reclamation facility (WRF) to accommodate the additional loading.

Based on the results of the subject study, the City of Atascadero identified 1,711 parcels that are currently not served by the existing sanitary sewer collection system, which could potentially be served through an expansion of the system. Each area's location is graphically depicted in Exhibit 1.7.1 – 1.7.6. A summary of the project costs for expansion of the existing sanitary sewer collection system for each of these areas in included in Appendix D. The costs summarized are preliminary and based on a conceptual level design effort.

## 1.8 ORGANIZATION OF THE LAMP

The LAMP aims to illustrate the diversity of hydrogeologic conditions within the City of Atascadero and create a comprehensive policy that protects groundwater and surface water resources from both new and existing OWTS. Part 2 of the LAMP documents the results of an in-depth study on the geology, soil conditions, and ground/surface water resources within the LAMP area. Part 3 lays out the local program administration structure for the LAMP. Part 4 establishes code requirements for new OWTS and Part 5 establishes requirements for the repair and replacement of existing systems. Finally, Part 6 deals with education, outreach, and enforcement for all OWTS policies.

# PART 2 ENVIRONMENTAL CONDITIONS

## 2.1 OVERVIEW

The City of Atascadero is unique not only in its founding, but also in the wide diversity of environmental conditions. While the geographical extents make it the largest city in the San Luis Obispo County, it is the topography that creates great variety among the City's parcels. The City of Atascadero LAMP area has over sixty soil types, creating a wide array of soil characteristics. From a hydrologic perspective, the LAMP area is generally lacking in any significant groundwater resources, with the exception of the eastern fringe, which is underlain by the Atascadero Sub-basin of the Paso Robles Groundwater Basin and alluvial sub-flow of the Salinas River. The Rinconada Fault defines a distinct boundary between the groundwater supplies and the majority of the LAMP area.

The City's environmental diversity makes it an ideal candidate for a LAMP where a localized approach can better address unique conditions of the area and the most appropriate approach to OWTS permitting and management.

## 2.2 GEOGRAPHICAL EXTENTS

The City of Atascadero is geographically the largest city in the San Luis Obispo - Atascadero - Paso Robles metropolitan area. With an area of 26.1 sq. mi, the Atascadero Sphere of Influence comprises 98.13% land area and 1.87% surface water. Only 9% of the LAMP area overlies the Atascadero Sub-basin of the Paso Robles Groundwater Basin.

The City is situated in the southern section of the Salinas River Valley, bordered by hills and canyons with open rolling hills surrounding the City center. The City is bordered in the west by the rugged ridges of the Santa Lucia Coastal Range, in the east by the low hills of the La Panza and Temblor range, and in the north by the low hills and flat terraces of the Diablo Range. The highest elevations are in the Santa Lucia Coastal Range, where peaks can reach 2,000 to 3,400 feet AMSL.

The area has a Mediterranean climate with a wet season from October to April and a dry summer season with low humidity. Rainfall numbers vary significantly across the City, generally increasing in relation to elevation. For simplicity, the City utilizes available San Luis Obispo County data, with the entirely of the City limits averaging a yearly rainfall total of greater than 20 inches. In the winter, the average high temperatures range from the 50s to the 60s, with lows in the 30s. In the summer, the average daily highs are in the 90s, with some days reaching into the 100s. Summertime lows are typically in the 60s and 70s.

The area comprising the City of Atascadero contains over twelve thousand parcels of land that range from extremely small municipal right-of-way properties to the large state-owned Atascadero State Hospital property. This variance in city-owned parcel size is also reflected in the diversity of residential parcel size. Individual residential parcels range in size from less than half an acre in the urban township to over fifty acres in the rural residential areas.

## 2.3 TOPOGRAPHY

The Santa Lucia Range is a dominant topographic feature that extends almost the entire length of the western portion of San Luis Obispo County. In the northern portion of the County, the Santa Lucia Range

rises sharply up from the Pacific Ocean. The City of Atascadero is located on the leeward side of this mountain range in the north central part of the County.

Topographically, the LAMP area can be sub-divided into the western and eastern regions. The border between these two regions generally follows a line parallel to and west of the US 101 corridor. The western region is bounded on the west side by the rugged peaks of the Santa Lucia mountain range. The eastern region is bounded on the east by the Salinas River.

Ground slopes are generally steeper in the western region, with the majority of the parcels exhibiting slopes greater than 20% and many exceeding 30%. The land use in the western region is primarily rural residential, with very limited access to the municipal sanitary sewer system.

As the Santa Lucia Range descends to the east, it flattens into rolling hills with the Salinas River, which forms the eastern border of the LAMP area. The eastern region of the City is generally level, although there are localized areas with steep terrain, including the Chalk Mountain, Pine Mountain, and Spaghetti Hill areas.

The majority of parcels in this eastern region have ground slopes that range from near level to approximately 20%. Very few parcels in this area have ground slopes that exceed 30%. The parcels with ground slopes exceeding 30% are located primarily in the Pine Mountain and Chalk Mountain areas, with a few in the Spaghetti Hill area. In these areas, there are approximately 537 lots that have at least a portion of the individual parcel that has an average ground slope that exceeds 30% although there has been no OWTS that has been constructed on the steeper (i.e. >30% slope) areas of these parcels.. A graphical depiction of the average ground slope for all parcels in the LAMP area is included as Exhibit 2.3.1.

## 2.4 SOILS

Based on a review of the available soil mapping data, it was determined that there are sixty-one different soils types within the City of Atascadero LAMP area. For the purposes of the LAMP, the soil formations present were categorized into three general soil types: Sand-Gravelly Soils, Fine Silty Clay Soils, and Soil Veneer/Rock Outcrop. A graphical depiction of the soils mapping, which was prepared by the USDA Natural Resources Conservation Service (NRCS), is included as Exhibit 2.4.1. A generalized soils map for the LAMP area is also included as Exhibit 2.4.2.

### Sand-Gravelly Soils

This soil grouping consists of sands, sandy-loams, loams, loamy-sands, sandy-gravels, and gravelly soils. These soil formations are typically located within the valley floors and floodplains. Approximately 43% of parcels within the LAMP area are underlain by sandy-gravelly soils. These parcels generally have slopes that range from near level to 15%, although in some areas exceeds 30%. These soils are typically moderately well-drained and are generally the most conducive for supporting conventional OWTS absorption trenches. In those areas where this soil type exists, the primary condition affecting OWTS design is soil depth. Soil depth to bedrock is variable from parcel to parcel and in some cases can be less than 20 inches.

### Silt-Clay Soils

This soil grouping consists of silt and clay soils, which are mainly located in the southwest and western region of the LAMP area. The rural mountainous areas are dominated by this soil type, which are a result of the weathering of underlying shale bedrock. There are approximately 9700 parcels that have silty and/or clayey soils. These regions have slopes that range from 15-25%, with many areas exceeding 30%. Silty-clay soils are moderate to poorly drained and typically have slower percolation rates when compared to the coarser-grained sandy and gravelly soils. An important characteristic of this soil type is its shrink-swell potential—as water penetrates these soils, it will swell and expand. The shrink-swell characteristic, however, can vary widely by depth and distance, depending on the relative amount and type of clay. While not all expansive soils have the same swell potential, the soil types with the highest shrink-swell potential are located mainly in the Arbuckle-San Ysidro complex, Arbuckle-Positas complex, and Rincon clay loam.

### Soil Veneer/Rock Outcrop

A soil veneer is a geomorphic formation in which rock fragments (clasts) of gravel or cobble size form a thin cover over a surface or hillslope. Rock veneers are typically a few inches to several feet thick and may partially or fully cover the ground surface. The presence of a thin soil veneer or outcropping bedrock on a parcel will generally preclude the installation of a conventional OWTS. One exception may be those areas where the bedrock is highly fractured and there is no groundwater or potential pathways to a surface water feature present. Based on NRCS data, approximately 23% of the LAMP area is underlain by either a thin soil veneer or exhibits outcropping bedrock. These parcels are also commonly characterized by steep topographic slopes, with some slopes steeper than 75%. The majority of these parcels are located within the western region of the LAMP area.

## 2.5 GEOLOGY

The City of Atascadero lies within the Salinas Valley, in the Coast Range Geomorphic Province of California. The Coast Range Province is divided into two major blocks: the Salinian block and the Coastal block. The City lies within the Salinian block, which consists of a crystalline basement complex of plutonic and metamorphic blocks. The basement rock units are overlain by Miocene to early Pleistocene-age sedimentary rocks and surficial deposits. The Salinian block is separated from the Coastal block to the west by the Nacimiento Fault zone and is bounded to the east by the San Andreas Fault. The Rinconada Fault trends through the northern part of the central region of the block.

Mapped lateral faults in the vicinity of Atascadero include the potentially active Rinconada Fault and the Nacimiento fault zone. The Rinconada Fault (and associated Jolon Fault) is mapped east of the Salinas River trending northwest. The 6-mile-wide Nacimiento fault zone (trending northwest in the Santa Lucia Range southwest of the City) is classified as inactive but appears to coincide with an historic earthquake epicenter. A subsurface thrust fault (Black Mountain) is believed to lie a few miles east of the City. The closest active faults nearest to Atascadero are summarized in Table 2.5.1 below.

**Table 2.5.1 Active Faults near Atascadero**

| Fault | Distance from Atascadero | Maximum Credible Earthquake* | Slip Rate (millimeters/year) | Status |
|---|---|---|---|---|
| Rinconada | 2.5 | 7.5 | 1.0 | Potentially Active |
| Los Osos | 13 | 7.0 | 0.5 | Active |
| San Luis Range (S. Margin) | 30 | 7.0 | 0.2 | Potentially Active |
| Hosgri | 32 | 7.5 | 2.5 | Active |
| San Juan | 40 | 7.1 | 1.0 | Potentially Active |
| San Andreas | 47 | 7.8 | 34.0 | Active |
| Casmalia (Orcutt Frontal) | 57 | 6.5 | 0.3 | Potentially Active |
| Lions Head | 64 | 6.6 | 0.02 | — |
| Los Alamos—W. Baseline | 82 | 6.9 | 3.0 | — |

Note:
* Moment magnitude
Sources: City of Atascadero, 2004; County of San Luis Obispo, 2005.

The quaternary deposits, which are generally associated with the Salinas River, consist of historic to late Holocene alluvial flood plain and channel deposits. These deposits consist of very young alluvial gravel, cobbles, boulders, sand, silt, and clay. Young surficial deposits of unconsolidated sand, silt, and clay-bearing alluvium are deposited on flood plains and valley floors. Old surficial deposits date from late to middle Pleistocene and fluvial sediments are preserved above active flood plains and channels. These units consist of interfingering beds and lenses of weakly-consolidated gravel, sands, silt, and clay. Terrace surfaces, which are preserved along the Salinas River, Atascadero Creek and other drainages, are slightly dissected and capped by moderate to well-developed pedogenic soils.

East of the Rinconada Fault line there are Tertiary rock formations. First is the Monterey Formation of the upper to middle Miocene period, which consists of the upper siliceous member of light gray and tan rhythmically-bedded pocelinite, opaline chert, mudstone shale, siltstone, diatomite, and tuff. This unit also includes white to light gray arkosic and locally pebble sandstone. Second is the Santa Margarita Formation of the upper Miocene which consists of white, weakly-consolidated, coarse arkosic sandstone and includes interbedded mudstone, siltstone, and diatomite. Resistant shell beds containing pectin and oyster shells are locally present. Third is the Paso Robles Formation, which consists of poorly-sorted conglomerate lenses set in a sandy and muddy matrix. Clasts range from sand-sized to boulders and consist primarily of Monterey debris, including siliceous shale, chert, porcelinite, calcareous sandstone, and dolomite.

West of the Rinconada Fault lies the Great Valley Sequence, which consists of the Atascadero and Toro Formations of the Cretaceous to Jurassic period. The Atascadero Formation consists of thin to thick-bedded turbidite sandstones with interbedded siltstone, mudstone, and conglomerate. There are four subunits of the Atascadero Formation, which all consist of sandstone, siltstone, and mudstones, but differ in bedding type and mineral composition. The Toro Formation consists of a thin-bedded, micaceous shale,

interbedded with thin sandstone beds. The sandstone is rare, occurring in beds up to five meters thick and containing calcareous lenses and concretions.

A geologic map of the LAMP area is included as Exhibit 2.5.1

## 2.6 GROUNDWATER

The vast majority of the Atascadero LAMP area does not overlay a groundwater basin, as defined by the California Department of Water Resources (DWR) in Bulletin 118. The only designated groundwater basin that is present within the LAMP area is the Atascadero Sub-basin of the Paso Robles Groundwater Basin. The Atascadero Sub-basin is located to the east of the LAMP area and only the eastern fringe of the area extends over the western boundary of the basin. Less than 9% of the 1,451 acres that comprise the LAMP area overlie the Atascadero Sub-basin. The portion of the area which does overlie the Sub-basin contains 621 parcels. Of these 621 parcels, 163 are currently served, or have access to, the City sanitary sewer collection system. This basin is hydraulically connected to the overlying Salinas River Underflow system that has been partially adjudicated. The locations of parcels overlying the Atascadero Sub-basin are depicted in Exhibit 2.6.1.

The Atascadero Mutual Water Company (AMWC) is the exclusive water purveyor within the LAMP area and provides potable water to all parcels. The AMWC is one of the largest retail mutual water companies in the state and is responsible for meeting the water requirements of more than 30,000 people, with over 10,000 service connections. Since its formation in 1913, the AMWC has provided water for domestic and irrigation purposes at cost to its shareholders. It is comprised of approximately 250 miles of pipeline ranging in size from 4 inches to 24 inches and 9 storage tanks that range in size from 120,000 gallons to 4.8 million gallons. There are 17 active wells, 8 booster stations, 5 treatment buildings, and 20 pressure-reducing stations located throughout the system. In addition, there are over 10,000 customer service connections, 1,900 valves, and 1,700 fire hydrants. Elevations in the system vary from 800 feet at the well fields along the Salinas River to 1,916 feet at the tank located in Summit Hills.

The AMWC obtains all of its water from two distinct yet interrelated groundwater sources: the Salinas River Underflow and the Atascadero Sub-basin of the Paso Robles Groundwater Basin. Water from these sources resides in the tiny spaces between sands and gravels until it is pumped to the surface by the AMWC's wells. These sands and gravels act as natural filters, resulting in water that is clean and clear.

Wells that are perforated in the Salinas River Alluvium are typically less than 100 feet in total depth with 10 to 30 feet of well screens. Groundwater well production from these well generally ranges from less than 100 up to 700 gallons per minute. Wells that are perforated in the Atascadero Sub-basin are typically 150 to 600 feet in total depth with well screens ranging from 100 to 300 feet in length. Groundwater well production from these wells generally ranges from 100 to 800 gallons per minute.

The Atascadero Sub-basin is located in the western portion of the Paso Robles Groundwater Basin and is approximately 14,577 acres, about 3% of the total Paso Robles Basin. At the eastern boundary of the Atascadero Sub-basin is the Rinconada Fault, which separates the Atascadero Sub-basin from the Paso Robles Basin. The Rinconada Fault displaces the Paso Robles formation, and thus the hydraulic connection between the aquifer across the Rinconada Fault is sufficiently restricted to deem the classification of the

Atascadero Sub-basin. The northern boundary of the Atascadero Sub-basin is approximately the southern end of the City of Paso Robles and the southern sub-basin boundary is located just south of the community of Garden Farms.

Groundwater flows from areas of higher elevations to areas of lower elevations. The southern portion of the Atascadero Sub-basin is 800 -1000 feet in elevation and the northern portion of the Sub-basin is 600 – 800 feet in elevation. Thus, the Salinas River flows north roughly paralleling the Highway 101. Outflow through the sub-basin (primarily surface flow and Salinas River underflow) enters the Estrella Sub-area of the Paso Robles Basin near the City of Paso Robles.

Fed by several creeks within the watershed, the Salinas River is the primary recharge source of the alluvial aquifer of the Atascadero Sub-basin. This alluvial aquifer in turn recharges the deep-water basin of the Paso Robles Formation.

The Nacimiento Water Project (NWP) is the other source of recharge for the alluvial and deep-water aquifers. The AMWC discharges approximately 2,000 acre feet per year of water into a 1.6 acre recharge basin over a 4-6 month period in summer/fall. Existing wells downstream from this discharge area draw a blend of recharged surface water and groundwater for AMWC stakeholders.

## 2.7 SURFACE WATER

The primary surface water feature within the Atascadero LAMP area is the Salinas River. The Salinas River drains a large watershed with a number of distinct tributaries. Although it is considered a single hydrologic unit, geographic, political, land use, and groundwater divisions facilitate discussion of the Salinas River watershed in terms of an upper and a lower watershed. The upper watershed begins at the headwaters of the Salinas River in the La Panza Range southeast of Santa Margarita Lake in San Luis Obispo County and flows to the narrows area near Bradley, just inside Monterey County. Within the LAMP area, the Salinas River forms the eastern boundary. The Salinas River is an extremely important resource to the City because, among other things, the river is an important source of recharge to the Atascadero Sub-Basin and the Salinas River sub-flow groundwater supplies.

All regions in the LAMP area are located to the west of the Salinas River and are within one of three contributory watersheds. These include the Paloma Creek, Atascadero Creek, and the Graves Creek watersheds. Each of these creeks is fed by numerous other small tributaries. These drainage basins rise to a maximum elevation of approximately 2,800 feet above mean sea level with steep topography categorizing much of the western portion of the watersheds. The watersheds contain a mix of urban and rural residential land uses as well as agricultural land uses. A portion of the Los Padres National Forest is also contained within the watershed along the western boundary.

Although there are very few parcels in direct proximity to the Salinas River, there is a hydraulic connection between the main creeks and their contributing smaller tributaries with the Salinas River. This means that anything that impacts the surface water quality within the Paloma Creek, Atascadero Creek, and Graves Creek watersheds, can potentially impact the surface water quality of the Salinas River and subsequently the underlying groundwater quality. For this reason, the City will require special requirements for OTWS that are located within 100-ft of a surface watercourse. There are 1,223 parcels with OWTS located within

100-ft of an existing surface watercourse. A graphical depiction of these parcels in included at Exhibit 2.7.1.

## 2.8 VULNERABLE RESOURCES

### Public Water Supply

The AMWC is the only water purveyor that serves all parcels within the LAMP area. As described previously in this document, sixteen of the AMWC's seventeen production wells extract water from the Salinas River alluvium and the deeper sub-basin formation. The location of these public water supply wells are concentrated along a narrow band within the extreme eastern fringe of the LAMP area. In addition to these sixteen wells along the Salinas River, the AMWC also operates a single, isolated public water supply well, which is located in the extreme western limits of the LAMP area. This isolated well produces groundwater from the fractured bedrock of the Monterey shale formation.

The underflow of the Salinas River alluvium layer serves as a filter and shallow wells extract water viable for community consumption. Wells tapping the Salinas River alluvial aquifer tend to be less than 100 feet deep. The Salinas River alluvial aquifer is the primary source of recharge to the Paso Robles Formation.

About 73% of the water consumption in the AMWC is for residential use. The remaining water usage is related to commercial and other non-residential use. The average daily water use for each resident for the month of February 2017 was 51 gallons. The total water use for 2016 for the City of Atascadero was approximately 1.47 billion gallons or 4511 acre-feet/year.

In the summer of 2012, the Nacimiento Pipeline began delivering surface water to the AMWC (up to 2,000 acre-feet per year) to offset the municipal groundwater pumping. The AMWC has contracted 2,000 AFY, which will significantly improve its ability to meet the current and future water needs of its shareholders.

Given that the location of all existing public water supply wells within the LAMP area are located at the extreme fringe of the area, there is very little risk of direct degradation of the public drinking water supplies from either existing or future OWTS. This fact is supported by testing data that has been accumulated by the AMWC over a period of approximately 100 years, which confirms that there has never been any evidence of degradation in groundwater quality from sources associated with OWTS. In an effort to provided continued protection of the public drinking water sources, the AMWC has delineated Wellhead Protected Areas (WHPA) for each of its production wells and diligently strives to ensure that no activity is allowed within these areas that could result in adverse groundwater impacts. With regard to OWTS proximity to the existing public water supplies, there are 39 parcels with OWTS located within 300 feet of a public water supply well.

Exhibit 2.8.1 graphically depicts the location of the AMWC service area and all public water supply wells in Atascadero.

### Private Wells

Under the covenants created when the original Atascadero Colony was established in 1913, a commitment was made by the AMWC to provide a water supply to all parcels within the City of Atascadero. Therefore, under typical conditions, there is no incentive for a private property owner within

the LAMP area to construct a private well. This lack of incentive to construct private wells is further reinforced by the hydrogeologic conditions within the vast majority of the LAMP area, which is not underlain by a designated groundwater supply. The combined consequences of a lack of available groundwater resource and a readily available water supply from the AMWC has resulted in the presence of very few private water wells within the LAMP area.

Although all parcels within the LAMP area have access to municipal water service, the AMWC does allow the drilling and use of some private wells in those areas where the wells are not likely to have significant impacts on the groundwater resources of the AMWC. The AMWC prohibits the drilling and use of new wells in areas that overlay the Atascadero Sub-basin, the alluvial deposits of the Salinas River, or other areas that could significantly impact the quantity, quality, or recharge of groundwater. The water quality from private (non-commercial) wells is not regulated or monitored by any outside agency or company. It is the responsibility of the private well owner to ensure that their well water is safe. According to the Environmental Health Services (EHS) of San Luis Obispo County, there were 69 domestic private well permits approved within the Atascadero city limits. In addition, there were 41 private irrigation well permits approved within the City limits of Atascadero. The majority of existing domestic private wells within the City are located on parcels within land use areas requiring minimum lot sizes greater than 2.5 acres.[RH1]

The locations of all known private wells within the LAMP area that were permitted with the San Luis Obispo County EHS are graphically depicted in Exhibit 2.8.2. The locations of these wells are based on information provided by the EHS. There are no known records of private wells constructed prior to 1990 or those wells that may have been completed without being recorded with the EHS. It is considered unlikely that there are a significant number of additional, unreported, private wells due to the factors described above.

Given the relatively small number of private wells that are present within the LAMP area, there is relatively low risk of adverse impact to the water supply for these wells from OWTS. The majority of these private wells provide irrigation water supplies for private parcels and the water is not used for human consumption. When existing private wells are cross-referenced with parcels connected to AMWC service, there are a total of 8 known parcels within the City that draw their domestic water for a private well. In total, there are 120 parcels that are currently served by an OWTS that are located within 100 feet of a private well.

A graphical depiction of these parcels is included as Exhibit 2.8.3.

In order to continue to verify private wells will not be constructed within setbacks from existing leachfields or 100% expansion areas for new OWTS's, the City of Atascadero will review all well applications received by the County of San Luis Obispo within City limits. Upon receipt of a well drilling application with the City of Atascadero, County of San Luis Obispo EHS staff send the application to both City of Atascadero and AMWC staff for review and approval. City staff will review all well applications for all applicable setbacks, including those for OWTS's.

## Impaired Streams

Under Section 303(d) of the Clean Water Act; states, territories, and authorized tribes are required to develop lists of impaired waters. These waters are considered polluted or otherwise degraded to meet the water quality standards set by states, territories, or authorized tribes.

There are two such streams within the City of Atascadero. One impaired stream is Atascadero Creek, which enters the LAMP area from the southern border and travels northeast to the Salinas River confluence. Atascadero Creek is 5.4 miles in length and has 148 residential parcels that are within 100 feet of its bank full width. Atascadero Creek is listed for three constituents that include E. Coli, fecal coliform, and low dissolved oxygen. None of the Atascadero Creek constituents are linked to urban or OWTS sources.

The second impaired waterway is the Salinas River. This area is the lower confluence of the Salinas Valley and originates at the Santa Margarita Reservoir. This reach of the Salinas River is impaired due to three constituents that include chloride, sodium, and pH. As is the case with Atascadero Creek, none of the constituents of concern in the Salinas River are linked to urban or OWTS sources.

The Salinas River is a major source of recharge for the Atascadero Sub-basin and the Paso Robles Groundwater Basin. There are no residential parcels within 100 feet of its bank along the designated impaired section. There are open spaces designated in this area that consist of buffer zones where deep and shallow wells exist for groundwater.

Although the stream segments described above are classified as impaired by the RWQCB, under Section 303(d) they are not identified as impaired water bodies that are subject to Tier 3 requirements per the OWTS Policy. Per the provision of the OWTS Policy, it is stipulated that if a water body in the Atascadero LAMP area is designated by the Central Coast RWQCB as impaired or significantly degraded as a result of the use of OWTS, the City will develop an Advanced Protection Management Program (APMP) in accordance with Section 4.14.

## Areas Susceptible to Historic Localized Flooding

The City of Atascadero is a participant in the National Flood Insurance Program. The Atascadero CID# is 060700. The FIRM panel identification is 06079C0831G there are no repetitively flood-damaged structures in Atascadero.

In Atascadero, the most common type of flooding event is riverine flooding, also known as overbank flooding. Riverine floodplains range from narrow, confined channels in the steep valleys of mountainous and hilly regions, to wide, flat areas in plains and agricultural regions. The amount of water in the floodplain is a function of the size and topography of the contributing watershed, the regional and local climate, and land use characteristics. Flooding in steep, mountainous areas is usually confined, strikes with less warning time, and has a short duration. Larger rivers typically have longer, more predictable flooding sequences and broad floodplains.

In addition to riverine flooding, Atascadero is susceptible to flash flooding in smaller watersheds. Flash flood is a term widely used by experts and the general population, but there is no single definition or clear means of distinguishing flash floods from other riverine floods. Flash floods are generally understood to

involve a rapid rise in water level, are high velocity, and have large amounts of debris, which can lead to significant damage that includes the tearing out of trees, undermining of buildings and bridges, and scouring of new channels. The intensity of flash flooding is a function of the intensity and duration of rainfall, steepness of the watershed, stream gradients, watershed vegetation, natural and artificial flood storage areas, and configuration of the streambed and floodplain. Dam failure may also lead to flash flooding. Urban areas are increasingly subject to flash flooding due to the removal of vegetation, installation of impermeable surfaces over ground cover, and construction of drainage systems. Wildland fires that strip hillsides of vegetation and alter soil characteristics may also create conditions that lead to flash floods and debris flows. Debris flows are particularly dangerous due to the fact that they generally strike without warning and are accompanied by extreme velocity and momentum.

Finally, localized flooding may occur outside of recognized drainage channels or delineated floodplains due to a combination of locally heavy precipitation, increased surface runoff, and inadequate facilities for drainage and storm water conveyance. Such events frequently occur in flat areas and in urbanized areas with large impermeable surfaces. Local drainage may result in "nuisance flooding," when streets or parking lots are temporarily closed and results in minor property damage. Historically, the effects of localized flooding are not widespread and damage is typically minimal.

The flood magnitude used as the standard for floodplain management in the United States is a flood having a probability of occurrence of 1% in any given year, also known as the 100-year flood. The most readily available source of information regarding the 100-year flood is the system of Flood Insurance Rate Maps (FIRMs) prepared by FEMA. These maps are used to support the National Flood Insurance Program (NFIP). The FIRMs show 100-year floodplain boundaries for identified flood hazards. These areas are also referred to as Special Flood Hazard Areas (SFHAs) and are the basis for flood insurance and floodplain management requirements. The FIRMs also show floodplain boundaries for the 500-year flood, which is the flood having a 0.2% chance of occurrence in any given year. FEMA has prepared a FIRM for the City of Atascadero, dated December 2012.

The FIRM for the City of Atascadero shows identified SFHAs for the following flooding sources:

- The Salinas River, which originates in southern San Luis Obispo County and flows northwesterly into Monterey County along the eastern border of the City. The Salinas Dam, located on the Salinas River upstream of Atascadero, has reduced the threat of flooding from smaller, more frequent flood events on the river but is not designed to provide complete protection from the 100-year flood.
- Atascadero Creek, the main tributary to the river within Atascadero, which bisects the City from southwest to northeast and runs through the downtown area and several residential areas.
- Graves Creek, which parallels Atascadero Creek to the north and empties into the Salinas River at the north end of the LAMP area.
- Paloma Creek, which traverses the southern end of the LAMP area.

Exhibit 2.8.4 graphically depicts the extent of the 100- and 500-year floodplains within Atascadero (high risk and moderate risk, respectively). An area totaling 1.46 square miles within the City is within the 100-year floodplain and an area totaling 2.40 square miles is located within the 500-year floodplain. The City

is prone to shallow flooding (1 to 3 feet) within the downtown area adjacent to Atascadero Creek, State Route 41/Morro Road, the underpass at US 101 and State Route 41, and low-lying areas adjacent to the Salinas River. Flooding in these areas generally occurs during the rainy season from October - April. There are approximately 172 parcels located within the delineated 100-yr floodplain. Of these, there are 155 parcels that either are currently served or may be served by an OWTS in the future. The location of these parcels is graphically depicted on Exhibit 2.8.6. To insure that the OWTS on parcels that are located within floodprone areas are not operated while inundated by a storm or flood event, the City will include specific restrictions in the OWTS permits which are issued for the affected parcels.

### Areas with Native Oak Trees or Woodlands

The City has adopted Ordinance 350 § 2, 1998, which sets forth regulations for the installation, maintenance, planting, preservation, protection and selected removal of native trees within the City limits. In establishing these regulations, it is the City's intent to encourage the preservation, maintenance and regeneration of a healthy urban forest. The construction of new and / or replacement OWTS within City jurisdictional areas shall adhere to the requirements of the subject Ordinance and applicable sections of the City Code.

## 2.9 KEY SITE SPECIFIC ENVIRONMENTAL CONDITIONS CONTROLLING OWTS DESIGN & CONSTRUCTION

The following summarizes how key site suitability, land use, and development factors have been addressed in the OWTS requirements of Atascadero's LAMP for protection of water quality.

- Soil Conditions

  Soil suitability is the single most critical aspect of onsite wastewater treatment and dispersal. The soil provides the medium for the absorption and treatment of wastewater discharged through sub-surface dispersal systems. This is accomplished mainly through a combination of physical filtering, biological and chemical processes, and dilution. Protection of underlying groundwater (where present) relies on provision of an adequate depth of permeable soil below the dispersal field (zone of aeration) for absorption and treatment to occur.

  Soil type can generally be separated into three (3) groups: coarse grained soils (sands and gravels), fine grained soils (silts and clays), and soil veneer/exposed bedrock. The coarse-grained soils are considered most appropriate for OWTS installation, due to their inherent permeability characteristics. The fine-grained soils are considered more restrictive due to decreased permeability and the potential for moisture sensitivity. The least suitable soil group for OWTS placement is the areas underlain by thin soil veneer or rock outcrop. A generalized soil map, which depicts where each of these soil groups are located within the LAMP area, is included in Exhibit 2.4.2.

  Consideration should also be given to the soil layer thickness. Data from the NRCS Web Soil Survey can be utilized to estimate the depth to the nearest restrictive layer (lithic bedrock) for a specific parcel. For this assessment, the soil depths that are greater than six feet should be considered

more suitable for OWTS siting. A map that graphically depicts soil depth is included as Exhibit 2.9.1.

The City requires detailed site evaluation to document suitable soil characteristics and depth for each OWTS installation. The observed depth and percolation characteristics of the soil are used to select the appropriate location, sizing, and design of the OWTS to achieve proper effluent dispersal and groundwater protection.

- Geologic Factors
  Geology is important to the suitability and performance of OWTS due to its influence on topography and landforms, the type and characteristics of soils that develop at the surface, the occurrence and movement of sub-surface water, and slope stability. Geologic factors are addressed for new OWTS based on information from basic site evaluations for all installations, including information of percentage of slope, proximity to potential unstable land masses, and depth to bedrock. A map that graphically depicts the average topographic slope of each parcel is included as Exhibit 2.3.1.

- Groundwater Conditions
  The vast majority of the City's parcels do not overlie the groundwater sub-basin. A map depicting those parcels that overlay the Atascadero Sub-basin is included as Exhibit 2.6.1. Although there is very limited potential for adverse impacts to the public water supply aquifer from OWTS within the LAMP, the City and the AMWC are extremely diligent with regard to protecting the Atascadero Sub-basin and the Salinas River Sub-flow systems. The City maintains a close relationship with the AMWC to ensure that drinking water supplies are closely monitored and that all existing or new OWTS within close proximity to the groundwater supply are reviewed to ensure both appropriate OWTS design and the maintenance of an appropriate vertical separation between the point of effluent dispersal and the water table for protection against pathogen impacts. In addition, septic systems have been utilized for on-site disposal since the early 1900's with no indication of adverse water quality impacts to public groundwater associated with septic use.

  While adverse effects to groundwater quality have not been observed to date, as part of the LAMP development process, areas of unsewered parcels were evaluated with the intention of identifying high priority areas for groundwater quality monitoring. Based upon the OWTS Policy, the primary parameters for evaluation were lot density, soil type and proximity to the Atascadero groundwater sub-basin. These areas are shown on Exhibit 1.7.1 as potential areas for future expansion of sanitary sewer collection system. Additionally, each of the five identified areas is hydrologically connected to the Salinas River underflow either directly or via the Atascadero Creek watershed, and are all hydrologically upstream of the AMWC wells. As such, continued monitoring of the AMWC shallow wells is expected to provide ongoing verification of groundwater protection. For additional information regarding determination of basin degradation and required protective measures, see Section 4.13, Advanced Groundwater Protection Management Program.

- Public Supply Wells

  As previously described in this document, the AMWC is the only water purveyor for the City of Atascadero. To ensure that the sole source drinking water supply is protected, the City of Atascadero, in partnership with the AMWC, has implemented measures to assure protection of existing public water supply wells from the effects of OWTS. These include minimum horizontal setback distances between OWTS and any public supply well and the availability of alternative non-standard treatment and dispersal technologies to mitigate documented or potential impacts to groundwater in areas of public supply well usage. The setback distance established by the City for OWTS proximity to a public water well is presented in Appendix F. No residential parcels are located within 150 feet of any public water well. The setback distance established by the City for OWTS proximity to a private water well is 100 feet. Exhibit 2.8.3 graphically depicts all parcels within 100 feet of a known private water well. For the purposes of developing this Exhibit, setback distances were measured from a parcel's boundary (i.e. property line) to the private well location, therefore an existing OWTS on a designated parcel may actually meet the setback criteria.

- Minimum Watercourse/Water Body Setback Requirements

  The primary measure of protection of surface water quality is the establishment of safe horizontal setback distances between OWTS and various watercourse and waterbody features. The minimum setback criteria for all watercourses and water bodies within the LAMP area are set forth in the LAMP and/or City OWTS Ordinance and City Code.

  The setback distance established by the City for OWTS proximity to a surface watercourse (e.g. streams, creeks, rivers) is 100 feet. Exhibit 2.7.1 graphically depicts all parcels within 100 feet of a surface watercourse. For the purposes of developing this Exhibit, setback distances were measured from a parcel's boundary (i.e. property line) to the private well location, therefore an existing OWTS on a designated parcel may actually meet the setback criteria.

  The setback distance established by the City for OWTS proximity to a surface water body (e.g. lakes, ponds) is 200 feet. Exhibit 2.9.2 graphically depicts parcels within 200 feet of a surface water body. For the purposes of developing this Exhibit, setback distances were measured from a parcel's boundary (i.e. property line) to the watercourse / water body and, therefore an existing OWTS on a designated parcel may actually meet the setback criteria.

- Alternative Treatment and Dispersal Technologies

  The City, in accordance with the provisions of the LAMP, the OWTS Ordinance and applicable provisions of the City Code, provides for the use of alternative treatment and dispersal technologies that provide flexibility options for system repairs and replacements. The use of alternative technologies, which produce higher quality effluent, can compensate for reduced amount of soil absorption area where the OWTS system on an older non-conforming development site encroaches within the normal setback requirement. Section 4.11 of this

document describes the constituents to be treated and the corresponding effluent constituent limits when supplemental treatment is required.

Additionally, alternative dispersal methods can reduce the amount of encroachment into the setback area by making more portions of the property (e.g. shallow soils) potentially feasible for wastewater dispersal, while also reducing the overall amount of land area needed for the dispersal system.

- Erosion Control Measures
  The City requires that erosion control measures be implemented in connection with the installation of OWTS under certain circumstances, based on the type and size of the system, the prevailing ground slope conditions, and proximity to storm water drainage features.

- Flood Protection Measures
  During a flood event, OWTS could result in pollution of an adjacent surface water body that has overreached the previously specified setback criteria. Therefore, additional setback requirements are necessary for parcels with OWTS that lie within flood hazard areas. Flood Insurance Rate Maps (FIRMs) created by FEMA identify Special Flood Hazards Areas (SFHA). A high-risk flood hazard area (Zone A / AE) lies within the limits of a 100-year flood (1% chance in any given year). The high-risk flood hazard areas within the LAMP area are Graves Creek, Paloma Creek, Atascadero Creek, and the Salinas River. An OWTS setback criteria for OWTS within 100 feet of a FEMA Zone A/AE boundary is established. Exhibit 2.8.5 graphically depicts parcels within the specified setback of the mapped FEMA Zone A/AE. For the purposes of developing this Exhibit, setback distances were measured from a parcel's boundary (i.e. property line) to the flood zone boundary and, therefore an existing OWTS on a designated parcel may actually meet the setback criteria.

- High Density OWTS and Parcel Size
  The size and configuration of the existing parcels within the LAMP area is extremely variable and diverse. This wide range in parcel sizes is a direct consequence of the original master planning undertaken during the formation of the Atascadero Colony. Existing parcels within the LAMP area range in size from less than 0.5 acre to exceeding 81 acres. Consideration of OWTS density and parcel size will be addressed during the OWTS design and permitting process, and will require different and/or addition requirements as deemed appropriate to protect water quality. The City will consider requirements for parcel size and susceptibility to hydraulic mounding, organic or nitrogen loading, and whether there is sufficient area for OWTS expansion in case of failure. Exhibit 2.9.3 graphically depicts the general spatial distribution and location of the parcels of varying size. For further discussion of OWTS siting and design as pertains to lot size, see Sections 4.12 and 4.13.

- Proximity to Existing Sanitary Sewer Collection System
  It is the goal of the City to provide sanitary sewer service to as many citizens as feasible. If an existing inhabitable structure that generates wastewater is located within 200 feet of an existing

sanitary sewer, the City may require the owners of that parcel to extend the sewer and connect to the system unless it is determined that such a connection is physically and/or financially infeasible. Financial infeasibility shall be a demonstrated cost to connect to sewer greater than twice the cost of OWTS replacement and a determination by the City of protection of water quality. A finding of physical infeasibility will be site specific and may be made by the City for reasons including, but not limited to, increased environmental risks, risks to groundwater, public health risks or excessive maintenance costs or concerns.

Exhibit 2.9.4 graphically depicts those parcels that are located within 200 feet of an existing gravity sanitary sewer and are not currently connected to the sanitary sewer system. For the purposes of developing this Exhibit, setback distances were measured from a parcel's boundary (i.e. property line) to the existing sanitary sewer collection pipeline and, therefore an existing inhabitable structure on a designated parcel may actually be further than 200 feet.

# PART 3 LOCAL AGENCY REQUIREMENTS & RESPONSIBILITIES

## 3.1 PROGRAM ADMINISTRATION & RECORD KEEPING

The City of Atascadero, as a Local Agency, has determined that a significant number of the land parcels which are located within the Atascadero LAMP area could not meet the Tier 1 minimum requirements, as set forth in the OWTS Policy, due to the conditions pertaining to the parcel size, soil, geology, topography, and other conditions described in Part 2. Therefore, the City of Atascadero will implement a LAMP in accordance with Tier 2 of the OWTS Policy. The LAMP establishes the minimum requirements and responsibilities for the City of Atascadero as a Local Agency with an OWTS management program that provides an alternative to Tier 1 (Sections 7 and 8 of the OWTS Policy) and achieves the same policy goal of protecting water quality and public health. The submission of the LAMP for RWQCB approval shall serve as notice of the City of Atascadero's intent to regulate OWTS using alternative standards as contained in this document. The City of Atascadero's program provides protection of water quality and public health equal to or better than Tier 1 standards, as set forth in the OWTS Policy.

The primary entity within the City of Atascadero responsible for administering the provisions and requirements of the LAMP is the Community Development Department. This department administers the City's zoning and building regulations through the implementation of the General Plan, Zoning Code, and the California Building Code. In addition, the department promotes development consistent with the policies adopted in the General Plan and supports the City's economic vitality. The Community Development Department is headed by the Community Development Director and has two divisions: Planning and Building.

The Planning Division is responsible for implementing the General Plan and ensures all development projects are consistent with the goals, policies, and programs outlined in the LAMP, current local zoning ordinances, and state codes. The Planning Division reviews all Use Permits, Subdivision Applications, Planned Developments, and projects requiring environmental review. The Planning Division provides technical analysis of entitlement projects and makes recommendations to the Planning Commission and City Council on all land use issues that come before them for consideration.

The Building Division is headed by the Building Official and is responsible for ensuring that all construction is consistent with the applicable Building Codes, and coordinates the review of building permits with other interested departments, such as the Fire Department, Planning Division, and Public Works Department.

The Engineering Division of the Public Works Department is headed by the City Engineer and is responsible for providing technical expertise on matters related to the LAMP, including reviewing plans, technical reports and testing, and assisting with construction inspections, site investigations, and other LAMP administrative and policy matters. The City Engineer is principally charged with determining if a structure that generates wastewater is required to connect to the municipal sanitary sewer system, including the limits of sewer extensions and financial feasibility to connect.

With regard to the provisions and requirements of the LAMP, the Building Division and Engineering Division, as required, shall be responsible for the following:

- Issuing permits for new construction, replacement and repair of OWTS.
- Reviewing plot plans for new and replacement OWTS.
- Determining the level and type of site-specific investigation requirements for each permit.
- Reviewing percolation records and other site investigation reports.
- Reviewing alternative treatment proposals for new and replacement alternative OWTS.
- Retaining permit information regarding new construction, replacement systems, repairs, and plot plans.
- Complying with LAMP reporting requirements regarding issued permits for new, repaired and replacement OWTS.
- Notifying the AMWC and the California Department of Public Health within 72 hours upon discovery of a failing OWTS within the setbacks from a public water supply well as identified in Appendix F. Failing OWTS subject to this section shall be considered any OWTS that has pooling effluent, discharges wastewater to the surface, or has wastewater backed up into plumbing fixtures, because the dispersal system is no longer adequately percolating the wastewater, or, any OWTS with a septic tank failure such that either wastewater is exfiltrating or groundwater is infiltrating.
- Investigating complaints for overflowing/failed septic tanks which includes:
    - Requiring property owners to obtain applicable permits from the Building Division for repairs, or replacement of failing systems.
    - Retaining information regarding complaints and investigations for overflowing or failed septic systems, and subsequent actions taken.
- Complying with the LAMP reporting requirements for complaint investigations, which includes:
    - Providing information to the RWQCB annually pertaining to OWTS operation and maintenance, including number, and location of the complaints.
    - Identifying investigated complaints, and
    - Determining how the complaints were resolved.
- Reviewing applications and registrations issued as part of the liquid waste hauler program.

As part of the LAMP administration process, the City of Atascadero Building Division shall be responsible for maintaining all OWTS permit related records including, but not limited to those records associated with Site Reviews, Percolation Tests, Wet Weather Groundwater and/or Localized Flooding Inspections, OWTS Plan Checks, New and Replacement Standard and Alternate OWTS Permits, Operational Permits for Alternate OWTS, Abatement and Voluntary Repair Permits, Septic Tank Replacement, Septic Tank Destruction, and Variance Requests. Additionally, the location of each new, repaired and replacement OWTS will be field located to determine the GPS coordinates and included on a GIS database to be maintained by the City GIS Department.

The Building Division will retain permanent records of LAMP required OWTS permitting actions and will make those records available within 10 working days upon written request for review by the Central Coast RWQCB. This includes:

- Number, location, and description of installation permits issued for new, repaired and replacement OWTS with Tier indicated.
- OWTS variances and/or exemptions issued, including number, location and description.
- Annual operating permits issued for Alternative OWTS or other OWTS where the Building Department has determined the need for an operating permit.
- Five year reporting for Standard OWTS without operating permits.
- Number and location of complaints, complaint investigations and outcomes.
- Permits issued for septic tank pumper and liquid waste hauler trucks.

## 3.2 LOCAL REGULATIONS, CODES & ORDINANCES

The City of Atascadero regulations for OWTS are contained in Atascadero Municipal Code, which sets forth standards for the sizing, design, and installation of new, replacement, or enlarged septic OWTS. These regulations have historically set forth specific requirements related to (a) permitting and inspection of onsite systems, (b) septic tank design and construction, (c) disposal field requirements, and (c) servicing, inspection, reporting, and upgrading requirements. Additional requirements for onsite systems in the City of Atascadero 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 City.

The City of Atascadero anticipates that the applicable sections of the Municipal Code, and local ordinances, which are affected by the LAMP, may be revised or replaced in the future. If those changes in the local requirements affect the provisions of the LAMP, then the City will modify the LAMP as required to insure continuity between the various documents. Prior to adoption of any revision to the LAMP (excluding typographical/or formatting edits), the City shall obtain the approval of the RWQCB.

## 3.3 WATER QUALITY ASSESSMENT PROGRAM

The general operational status of OWTS will be assessed through compilation and review of the following types of information:

- Septage pumper reports;
- Complaints and abatement activities for failing OWTS;
- Variances issued for new and/or repaired OWTS;
- Performance evaluations of existing OWTS in connection with building permits, land use projects, or property transactions;
- Inspection of existing Standard OWTS without operating permits as reported under five year reporting requirements;
- Monitoring reports for alternative OWTS and other OWTS under an operating permit.

The City of Atascadero will implement an OWTS water quality assessment program with three primary objectives: (1) to determine the general operational status of OWTS in the City; (2) assess possible impacts of OWTS on groundwater and surface water quality, and their associated beneficial uses; and (3) identify areas for changes to existing OWTS management practices.

The data review and assessment will focus on not only quantitative water quality data, but also on apparent trends and areas for changes in practice. The assessment will maintain and update the existing inventory records of OWTS in the City. The Building Division will maintain those records.

The water quality assessment will include the following:

- Water Quality Parameters of Concern
  The initial focus of the water quality assessment program will be on two key water quality parameters – pathogens, sodium, chloride, and nitrate-nitrogen. Other parameters of concern may be added if warranted.

- Water Quality Data Sources
  Relevant water quality monitoring data for pathogens, sodium, chloride, and nitrate-nitrogen will be compiled from available sources, anticipated to include:
  - Water quality data from cumulative impact studies;
  - Monitoring data and reports;
  - Domestic water well potability testing or other;
  - Public water system raw water quality data from AMWC monitoring reports;
  - Reservoir or stream water quality sampling data from Atascadero Lake, Salinas River, Atascadero Creek, Graves Creek, and Palamo Creek;
  - Receiving water sampling performed as part of a of a National Pollutant Discharge Elimination system (NPDES) permit or waste discharge requirements (WDR);
  - Groundwater sampling performed as part of WDR;
  - Data from the California Water Quality Assessment Database; and
  - Groundwater data collected as part of the Groundwater Ambient Monitoring and Assessment Program available in the Geotracker Database.

- Assessment
  In addition to regularly evaluating the water quality data, it is anticipated that assessment of the data will include a collaborative review with the AMWC to:
  - Determine relevance of the various data to OWTS;
  - Identification of any obvious water quality degradation attributable to OWTS warranting follow-up investigation or action;
  - Identification of any water quality degradation where OWTS may be implicated as a possible source;
  - Identification of water quality data/areas where no apparent issues of concern related to OWTS.

## 3.4 REPORTING TO THE REGIONAL WATER BOARD

### Annual Report

An annual report pertaining to OWTS activities in the City of Atascadero LAMP area will be submitted to the Central Coast RWQCB by February 1st of each year. The annual report will, at a minimum, include the following information, organized in a tabular spreadsheet format:

- Number and location of complaints pertaining to OWTS operation and maintenance, and identification of those which were investigated and how they were resolved;
- Number, location, Tier and description of permits issued for new and replacement OWTS, including any variances and/or exemptions issued;
- Number, location and results of septage pumper reports;
- List of applications and registrations issued as part of the local septage pumper registration program pursuant to Section 117400 et seq. of the California Health and Safety Code;
- Number and location of alternative OWTS and summary of their performance (I.e., effluent concentrations).

The report will include: (a) a summary of whether any further actions related to OWTS are warranted to protect water quality or public health; and (b) any other information deemed appropriate by the City.

### Five-Year Water Quality Assessment Report to Regional Water Board

Every five years the annual report to the Central Coast RWQCB will be accompanied by a Water Quality Assessment Report that summarizes the information and findings from the City's Water Quality Assessment Program described above. The report will present an overall assessment regarding any evidence of water quality impacts from OWTS along with any recommended changes in the LAMP to address the identified impacts. Additionally, all groundwater water quality data collected by the City from San Luis Obispo County, Atascadero Mutual Water Company, private well owners or other pertinent parties will be submitted in electronic data format (EDF) for inclusion in Geotracker, and any surface water quality data will be submitted to CEDEN in a SWAMP comparable format.

## 3.5 PERMITTING

The City of Atascadero Building Division shall issue permits for OWTS installation, repair, replacement, and destruction, which are subject to the requirements set forth in the LAMP. Each permit will specify the location, critical environmental site characteristics, OWTS specifications, property owner, and contractor information. Permit applications can be submitted by the property owner or a contractor licensed with the California State License Board (CSLB). The contractor must have an appropriate, current valid license issued from the CSLB, which is subject to verification, by the City at the CSLB website at the time of permit issuance. A list of acceptable licenses is provided in Section 3.7 of the LAMP. Permits shall be issued after the Building Division and Engineering Division (when required) have completed a full review of the plans and any associated reports, and have determined the OWTS is compliant with the provisions of the LAMP and applicable regulations and code requirements. Building Division staff shall perform an appropriate level of site inspections at the time the OWTS is constructed to ensure the system was installed as

permitted. The Building Division will not finalize an OWTS permit until the installation is complete and complies with the issued permit requirements.

In addition to the initial design, construction, and permitting requirements, alternative (nitrogen reducing ATU's), experimental, and supplemental treatment systems which are installed within the City of Atascadero will be required to obtain a special system operating permit. This category of OWTS will be required to submit operating and monitoring reports, including at minimum annual effluent sampling results.

## 3.6 VARIANCES & PROHIBITIONS

### Variances

An exception (i.e. variance) to any provision of the requirements set forth in the LAMP may be authorized when in the judgment of the City of Atascadero and based on sound scientific evidence and engineering judgement, the application of such provisions are unnecessary, or impose additional requirements which are deemed not necessary to protect the quality of the water resources, public health, and safety. Specific conditions or exceptions will be prescribed on the variance permit. Examples of variances that may be granted by the City include reduction of setbacks to property lines or structures where it can be shown that all reduced setbacks do not negatively impact groundwater resources or public safety. Variance requests shall be made to the Building Division and on a case-by-case basis; the City of Atascadero may establish alternative OWTS siting and operational requirements where it is determined by the City that the alternate requirements will provide a similar level of protection.

### Prohibitions

There will be situations, however, where variances are not granted. The following is a list of those conditions that are prohibited:

- OWTS with Surface Discharge
  Permits will not be granted for any OWTS that utilizes any form of effluent disposal discharging on, or above, the post installation ground surface; this includes, but is not limited to sprinklers, exposed drip lines, free-surface wetlands, and ponds.

- OWTS Over 10,000 gpd Capacity
  If the volume of wastewater produced is 10,000 gpd or more, the method of treatment and dispersal must be approved by the RWQCB.

- Cesspools
  Cesspools are not permitted in the City of Atascadero. However, there may be existing cesspools that were installed prior to the requirement for permits. If a cesspool is discovered pursuant to a complaint, malfunction or failure, or a building remodel and/or addition, the cesspool shall be properly abandoned and a repair or replacement OWTS installed as soon as practicable.

- Sewer Availability

It is the goal of the City to provide sanitary sewer service to as many citizens as feasible. If an existing inhabitable structure that generates wastewater is located within 200 feet of an existing sanitary sewer, the City may require the owners of that parcel to extend the sewer and connect to the system, unless it is determined that such a connection is physically and/or financially feasible. The City's OWTS Ordinance includes provisions that require such extensions and connections for new and some replacement OWTS, subject to the feasibility of such connections. The City recognizes that in many cases, site topography or other conditions may not make connection feasible In cases where an existing OWTS has failed on a parcel that has the nearest inhabitable structure within 200 feet an existing public gravity sanitary sewer, then the failed OWTS must be abandoned and a connection shall be made to the public sanitary sewer, unless it can be successfully demonstrated to the City that such connection is unfeasible.

- Ground Slope
  If the installation of a standard OWTS dispersal field exceeds 30% slope, a geological engineering report shall be prepared and submitted. The report, prepared by a registered civil engineer or certified engineering geologist, shall demonstrate that the use of a conventional OWTS with a soil absorption system will not create a public health hazard or otherwise jeopardize the proposed building site or contiguous properties. For OWTS installation on slopes greater than or equal to 30%, pressure distribution of effluent is required.

- Leaching Areas
  Reductions in design sewage flows may be granted where certain water saving devices are incorporated permanently into the buildings being served. Otherwise, sizing reduction for International Plumbing & Mechanical Officials (IAPMO) certified disposal systems is not allowed. Under no condition, shall the maximum allowable decreased leaching area for IAPMO certified dispersal systems be less than a multiplier of 0.70. No permits will be granted for systems using a multiplier of less than 0.70.

- Supplemental Treatment without Monitoring and Inspection
  Supplemental treatment without monitoring and inspection is not allowed. All systems with supplemental treatment require an annual Operating Permit and monitoring, as well as inspection by the City of Atascadero.

- RV Holding Tanks
  The OWTS Policy defines domestic wastewater to include only incidental RV holding tank dumping but does not include wastewater consisting of a significant portion of RV holding tank wastewater such as an RV dump station. Pursuant to the OWTS Policy, OWTS dedicated to receiving significant amounts of wastes dumped from RV holding tanks will not be permitted by the City of Atascadero and is not subject to the provisions of the LAMP. Applications for OWTS proposed for this use will be referred to the RWQCB.

- Separation to Groundwater

  The absolute minimum amount of native soil allowed for installation of a Standard OWTS leach line or leach bed is five (5) feet between the bottom of the dispersal system and groundwater. The absolute minimum amount of native soil allowed for installation of a Standard OWTS seepage pit is ten (10) feet between the dispersal line and groundwater. The absolute minimum amount of native soil allowed for installation of an Alternative OWTS is two (2) feet between the dispersal line and groundwater.

## 3.7 PROFESSIONAL, CONTRACTOR & MAINTENANCE PROVIDER QUALIFICATIONS

To ensure performance that is consistent with the goals and objectives of the LAMP, OWTS must be sited, designed, and constructed properly. Once an OWTS is 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 are required in order to design, construct, maintain, and/or repair an OWTS within the City of Atascadero LAMP area. Design, construction, maintenance, and repair of an OWTS shall be conducted by a qualified individual registered in the State of California and shall be made in accordance with the following requirements. The following are considered Qualified Professionals (QP):

- A California Professional Geologist, a California Certified Engineering Geologist, a California Registered Professional Engineer, a California Registered Professional Soil/Geotechnical Engineer or a California Registered Environmental Health Specialist who is not currently employed by the City of Atascadero.

  All above listed QP are qualified to design a new or replacement OWTS and to perform all necessary soil and site evaluations where the treatment or dispersal system will be replaced or expanded, except as noted below. The design of new and replacement OWTS shall be based on influent wastewater quality and quantity, the site characteristics, and the required level of treatment for protection of water quality as well as public health.

  For a person to be considered a QP for the following activities, the individual must have one of the qualifications noted next to the activity:

  - A site evaluation of the property, including subsurface exploration to determine the depth of groundwater, down-logging of a soil profile excavation hole and preparing a written report of findings – California Professional Civil Engineer, California Professional Geologist, or California Certified Engineering Geologist
  - Determination of uniform geology where extreme geologic conditions do not exist – California Professional Civil Engineer, Professional Geologist
  - Preparation of soil profile of any test pits – California Professional Civil Engineer, California Professional Geologist or California Certified Engineering Geologist
  - Address potential for slope destabilization for any proposed hillside installation – California Professional Civil Engineer, California Certified Engineering Geologist or a California Registered Professional Soil/Geotechnical Engineer

- Prepare and certify a hydrological assessment to request a waiver of setback requirements from a blue line stream or tributary confirming that neither the proposed dispersal system nor the subject drainage course will ever generate sufficient lateral infiltration that could negatively impact each other, declaring the location for the proposed dispersal area suitable – California Professional Civil Engineer, Registered Geologist, Hydro-geologist, or Engineering Geologist.

The QP who prepares the feasibility report shall sign the report. Additionally, he/she shall affix a professional stamp on the plot plan and the report adjacent to the signature, acknowledging the responsibility for the overall preparation of the report and agreeing to the following declaration: *"This submittal is intended to represent a complete feasibility report that conforms with the applicable provisions of the feasibility report requirements of the City of Atascadero Local Area Management Program (LAMP)."*

- Qualified Installers (QI) construct, modify, repair, abandon, or demolish an OWTS. A qualified installer shall be a contractor duly licensed by the California State License Board to install OWTS, such as an A, C-36, C-42 or B license holder (provided the B license holder is installing the OWTS in conjunction with a new construction project as appropriate under applicable State contractor's law. An owner/builder may abandon or demolish an OWTS septic tank under permit from the City of Atascadero without a contractor's license. The qualifying contractor under this definition may perform all work related to installation of new and replaced OWTS, and repair of existing OWTS in accordance with California Business and Professions Code and Title 16 of the California Code of Regulations. For the purposes of certification inspection of existing OWTS, contractors who only possess a General Building Contractor (Class B) license are not qualified to perform the required OWTS inspection.

- Qualified Service Providers (QSP) operate, maintain and service OWTS. A qualified service provider shall be an individual or company certified by an alternative OWTS manufacturer to conduct operation, maintenance and service activities specific to the subject OWTS, or other qualified professional as approved by the City of Atascadero.

# PART 4 OWTS REQUIREMENTS & PROCEDURES

## 4.1 PROJECTS REQUIRING PLAN REVIEW & FEASIBILITY REPORTS

Any of the following projects that will result in an increase in effluent discharge may require a plan review and a feasibility report prepared by the appropriate qualified professional. A determination with regard to the scope of any required investigation and / or report will be made by the City at the time of OWTS permit application:

- Land Development Projects
  Conditional Use Permit and land Subdivision projects where a public sewer is not available.

- Building Construction
  Any new construction, including secondary units, where a public sewer is not available within 200 feet of the building or property. It is the goal of the City to provide sanitary sewer service to as many citizens as feasible. If an existing inhabitable structure is located within 200 feet of an existing sanitary sewer, the City strongly encourages the owners of that parcel to extend the sewer to the parcel and connect to the system. The City's OWTS Ordinance includes provisions that require such extensions and connections for new and some replacement OWTS, subject to the feasibility of such connections. The City recognizes that in many cases, site topography or other conditions may not make connection feasible

- Building Expansion
  Any renovation of an existing building that entails expansion beyond the current footprint of the permitted structures, the addition of a room, the addition of plumbing fixtures or a combination of any of the above that will increase the design flow or demand a greater capacity than the capacity indicated on the previous approval for the existing system.

- Addition of a Building or Structure on the Property
  The addition of a new building or structure such as a garage, gazeebo, patio, deck, swimming pool, spa, or driveway, whether or not it includes any plumbing or bedroom equivalents must be evaluated to determine whether the new structure encroaches on the setbacks for the existing system and to ensure that a tested and approved area remains for the 100% future expansion area. The addition of a new building or structure that does not result in an increase in effluent discharge requires plan submission but does not require a feasibility report.

- OWTS and Alternative OWTS Replacement, Renovation or Repair
  - The City will require a plan and feasibility report in the event that an existing OWTS has failed. Per City regulations, a septic system has failed if public or environmental health is jeopardized by (a) effluent or sewage escaping to the surface, or otherwise jeopardizing ground or surface water, or (b) inadequate percolation results in sewage backup into buildings, or (c) a public nuisance is caused by odor generation that results in formal complaints, and the system cannot be repaired or replaced consistent with Appendix K of the Uniform Plumbing Code within thirty (30) calendar days. The private disposal system

shall be abandoned in the manner prescribed by the City in accordance with the currently adopted edition of the Uniform Plumbing Code. (Ord. 438 § 2, 2004)

- The City will not require that a plan and / or a feasibility study be submitted for minor repairs to existing OWTS. Minor repairs shall include repair or replacement to failed septic tanks, piping, appurtenances or system elements upstream of the dispersal system. Such repairs are considered minor repairs.
- The City will require a plan and feasibility report for any repair, renovation or replacement of the septic tank, supplemental treatment components, or dispersal system where it is discovered that the existing system is nonconforming and does not meet the current requirements.
- The City will require a plan and feasibility report for any repair, renovation or replacement of a previously approved, existing septic tank, supplemental treatment components, or dispersal system where geological conditions have been identified that may adversely affect the operation of the system.

- Activation of the 100% Future Expansion Area
  The feasibility of installing the 100% future expansion area shall be demonstrated if the previous approval was based on soil category evaluation or where the 100% future expansion area was not tested at the time of the original approval even if the plans or records refer or illustrate to a location for the future expansion area.

## 4.2 DOCUMENTS & INFORMATION REQUIRED FOR OWTS PLAN REVIEW

### Service Request Application

- The location of the property, including a legal description (state how the property is identified) and the Assessor's Parcel Number (APN).
- The property owner's name, mailing address, phone number, and email address
- The contractor's name, address, phone number and email address. The geologist's name and contact information is to be included with the feasibility report.
- The service requested.

### Feasibility Report

Feasibility reports may be required by the City for a project which will result in the construction of new or replacement OWTS or a major repair / renovation to an existing OWTS. Feasibility reports will not be required for minor repairs. Feasibility reports contain "proprietary information" and shall not be released to the public or industry professionals. Copies of the Feasibility Report will be provided to the RWQCB upon request. A determination with regard to the scope of any required investigation and / or feasibility report will be made by the City at the time of OWTS permit application: The feasibility report shall clearly identity the following:

- The property address, ownership information, the Qualified Professional's information, the date of the testing, and the description of the procedures.

- The name and the profession of the person(s) who performed the actual percolation testing procedure and their working relationship with the QP who signed the report.
- A site-specific determination of seasonal and historical subsurface water levels, including information regarding the methods utilized to reach the determination. This should include all available historical data that supports the findings concluded by the QP.
- Percolation testing data including the failures of test holes.
- A general soil description and any features that may affect subsurface wastewater dispersal.
- A soil profile excavation down-logged by a QP. This report is to be included with the percolation test data.
- For additional information on what is required to be included in the Feasibility Report, see Section 4.7—Procedures for Determining Depth of Subsurface Water, Section 4.8— Requirements Applicable to all Percolation Tests, Section 4.9—Percolation Testing for Leach Lines and Leach Bed Dispersal Systems, and Section 4.10—Percolation Testing for Seepage Pit and Gravel Packed Pit Dispersal Systems.

### Floor Plan

Floor plans may be required by the City for a project which will result in the construction of new or replacement OWTS or a major repair / renovation to an existing OWTS. Floor plans will not be required for minor repairs. When a floor plan is required to be submitted for the building(s), the plan shall illustrate all rooms and may be required to provide a listing of all plumbing fixture units (for commercial properties). A scale indicator shall be included on the map and shall not be subject to change due to reduction or enlargement of the plan. For new construction, the floor plan shall include all proposed rooms and their designated use. For evaluation of existing systems required due to building expansion, addition of a new building, OWTS repair, or activation of the future expansion area, the plans shall indicate all current rooms and their designated use.

### Grading Plan

Grading plans may be required by the City for a project which will result in the construction of new or replacement OWTS or a major repair / renovation to an existing OWTS. Grading plans will not be required for minor repairs. A copy of the rough grading geology review sheet approval for hillside properties that is required by the City shall be submitted prior to final approval. The proposed system shall conform to the rough grading approval by the City of Atascadero Building Division.

### Plot Plan

Plot plans may be required by the City for a project which will result in the construction of new or replacement OWTS or a major repair / renovation to an existing OWTS. Plot plans will not be required for minor repairs. A plot plan shall be submitted, professionally drawn to scale, not less than 1”= 20’ for parcels of one acre or less, and 1”= 40’ for parcels over one acre, signed by a QP. A scale indicator shall be included on the map and shall not be subject to change due to reduction or enlargement of the plan. For very large parcels, insertion of the specific wastewater dispersal areas may also be required. The typeface and size must remain legible when the plan is reduced to 11 x 17 inches. Multiple pages may be used to clearly identify all relevant features of the site. Photographs may be included to illustrate site conditions. The plot plan shall illustrate a northerly indicator and contain the following information:

1. The dimension of the lot including property lines, easements for roads, utilities, utility easements, access to other lots, etc. (Submittal of easement documents with underlined dimensions that match the dimensions shown on plans and the description of the purpose for each easement shall be required).

   See Appendix E for further information on easements, including conditions when an OWTS or alternative OWTS may be installed in an easement.

2. All slopes and topographical features, including location of all down banks, man-made cuts, and unstable land masses, on or off the property, affecting "day-lighting" requirements shall be indicated. Typically, the day-lighting setback is measured from the point where wastewater is being discharged within the dispersal system. The day-lighting setback for infiltrative chambers is measured from the highest point on the interior arc of the infiltrative chamber; for leach lines, it is measured from the bottom of the pipe where perforations are; and for seepage pits, it is measured from the capping depth. The capping depth is defined as the depth below the natural ground surface to the top of the seepage pit system where the infiltrative sidewall begins.

3. All vegetation and trees, especially oak trees and groundwater indicators such as willows, reeds, cattails, and other hydrophilic plants shall be shown with clear indication of their trunk. A minimum of 10 feet of horizontal setback from the trunk of non-native a tree to any part of OWTS is required. No part of the OWTS shall be located within the dripline of an oak tree or other native tree without an arborist report affirming the location.

   The City has adopted Ordinance 350 § 2, 1998, which sets forth regulations for the installation, maintenance, planting, preservation, protection and selected removal of native trees within the City limits. In establishing these regulations, it is the City's intent to encourage the preservation, maintenance and regeneration of a healthy urban forest. The plot plan shall clearly show that all components of the OWTS shall adhere to the requirements of the subject Ordinance and applicable sections of the City Code.

4. All sources of water including the following: the proposed source of drinking water; all existing, abandoned, or proposed water wells on or off the property within 200 feet of the dispersal system; all water mains, domestic onsite water lines and service connections, culverts, ripraps, French drains, key- ways, and sub-drains on the subject property.

5. All flowing surface water bodies such as streams, springs, and drainage courses, watercourses, and flood ways, whether year-round or ephemeral, within 200 feet of the OWTS. The plot plan shall illustrate the natural or levied bank.

6. All surface water bodies such as vernal pools, wetlands, and lakes or ponds within 200 feet where the edge of the waterbody is the high water mark for lakes and reservoirs.

7. All horizontal set-back distances as required by either the LAMP or the City OWTS Ordinance. Each setback distance should be indicated on the plan.

8. The location of all percolation tests, including failures, and their corresponding percolation rates; all borings to establish current groundwater/subsurface water levels; and test locations and borings shall be identified by numbers corresponding to the collected field data.

9. The location of rock outcroppings.

10. The location of all existing and proposed structures to include cesspools, tanks, out-buildings, car ports, swimming pools, driveways, paved areas, retaining walls, steps, decks, patios, cantilevered balconies, etc.

    Note: Cesspools are not permitted by OWTS Ordinance and any existing cesspools must be disconnected from a sewer line and filled in.

11. The location and components of the entire dispersal system to include:

    a) The dimensions (length, width and depth) of the leach lines, depth and diameter of seepage pits, or size of any other style of dispersal field, and the distances between trenches and seepage pits.

    b) The distribution box located at the head of the dispersal system when the dispersal system is comprised of more than one leach line or seepage pit.

    c) The required setbacks from the building are measured out from the vertical plane of the closest edge of the building exterior, clear to sky, to include any protrusions, such as, roof overhang, balcony, deck, etc.

    d) Any supplemental treatment components and disinfection treatment components.

    e) The required day-lighting setback applied to underground structures where the structure is at or below the level of the point of discharge measured out from the vertical plane of the closest edge of the structure.

12. The location, size and rating of the septic tank to be installed.

13. The proposed area reserved for both the 100% future expansion and for repair/replacement of existing systems. Where access to the future absorption area is compromised by the construction of the dwelling or by any future use of the property, the 100% future expansion system shall be installed with the present system. The 100% future expansion system installed with the present system shall not be activated until the life of the present system has come to its end.

14. All supplemental information that may be requested by the City of Atascadero to facilitate a comprehensive assessment of the proposed OWTS must also be included on the plot plans.

### Cross Sectional View of the Dispersal Field or Seepage Pit

A cross-sectional view of the proposed installation of the entire dispersal field or seepage pit and its components, illustrating setbacks to preclude day-lighting. Any extra gravel in excess of the required 12 inches below the distribution line(s) shall be indicated on cross sectional view.

### Site Identification

The address of the job site is to be clearly posted at the construction site. Clearly visible residential addresses meet this requirement. If an inspector attempting to conduct a site evaluation as part of the plan approval process is unable to locate the property because the address is not properly posted, the contractor may be required to pay additional fees for a second site evaluation.

### Additional Information Required Depending on the Project

Additional investigations and / or reports listed below may be required by the City for projects which will result in the construction of new or replacement OWTS or a major repair / renovation to an existing OWTS when in the judgment of the City they are warranted. The following will not be required for minor repairs.

- An evaluation of the current system by a QI is required for existing systems without evidence of prior approval and approved systems over 15 years whenever the project includes any of the following:
    - building expansions without additional bedrooms or plumbing fixtures;
    - repairs of the existing system;
    - the addition of new buildings or structures to the property, or;
    - the activation of a future expansion area.

- A Slope Evaluation Report approved by a qualified professional is required whenever natural ground slopes in dispersal areas are greater than 30%.

- A geotechnical report from a QP for any unstable land mass or area subject to earth slides when proposed set back distance will be less than 100 feet.

- A report by a registered civil engineer indicating that the wastewater generated by the OWTS will not surcharge and mound on any caisson, column, pillar or footing that is intended to support an above ground structure, installed below grade extending down to or below the point of discharge, even though it may be lesser in width than the dispersal system (i.e., smaller than the diameter of seepage pit or width of trench) with which it interfaces. Any such structures with width equal to or wider than the interfacing dispersal system shall be considered an underground structure and a 15-foot day-lighting setback requirement shall apply.

- Identification of types of filler material such as rock, gravel, or alternative materials to be used in the dispersal fields of leach lines and beds, or to line the outside of the seepage pit liners. Documentation from the supplier attesting that all filler materials/rocks have been washed to be reasonably free of fines shall be available at the time of installation.

## 4.3 SETBACKS & OTHER CONSIDERATIONS

### Setbacks

- All new OWTS and alternative OWTS installations and all replacement conventional OWTS shall comply with the setback requirements of OWTS Ordinance or the LAMP, whichever is greater. A table with all of the required setbacks is provided in Appendix F.

- The setback requirements for an alternative OWTS that is replacing a currently installed OWTS shall meet all of the setback requirements as is feasible. When setback requirements cannot be met, the City shall specify the required level of treatment, if any, to be provided by the alternative OWTS. Section 4.11 of this document describes the constituents to be treated and the corresponding effluent constituent limits when supplemental treatment is required. The minimum depth to the anticipated highest level of groundwater below the bottom of the leaching trench shall not be less than prescribed in Table 4.3.1.

**Table 4.3.1. Minimum Vertical Separation to Groundwater for Conventional OWTS Dispersal Systems**

| **Percolation Rate** (MPI=minutes per inch) | **Minimum Vertical Separation to Groundwater** |
|---|---|
| Percolation Rate ≤ 1 MPI | Not Authorized without Alternative OWTS with Supplemental Treatment |
| 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 | Not Authorized without Alternative OWTS with Supplemental Treatment |

- When the percolation rate is either 1 minute per inch or faster, or slower than 120 minutes per inch, or when the minimum vertical separation to groundwater cannot be met, supplemental treatment, including Total Nitrogen reduction, shall be incorporated into the proposed OWTS and the vertical groundwater separation requirements specified by Table 4.11.1 shall apply.
- A minimum of 10 feet separation shall exist between the bottom of a seepage pit and groundwater.
- The minimum setback for day-lighting is 15 feet and it is considered the shortest horizontal distance measured from the nearest point that wastewater is being discharged (i.e., closest side wall of leach line or perimeter of seepage pit) to the edge of sloping grounds or to any underground structure.
- New OWTS and alternative OWTS shall not be located in FEMA Flood Zone A/AE unless no feasible alternative location exists and shall be subject to a more stringent design review and approval by the City.

## General Project Requirements

- With the exception of minor repairs, a city building permit is required for all septic tank and leach system repairs, replacements, or installations.
- All conditions of the City Building Code shall be complied with.

- No plans will be accepted or approved for any new OWTS, alteration or repair of a failed OWTS, for which a connection to the public sewer is available (as defined by the City Municipal Code), unless the City Engineer determines that connection to the existing sanitary sewer is not feasible or creates an undue hardship due to site specific conditions.
- All City issued documents, such as, plan correction response letters, inspection reports, approvals and other related documents are considered public records and may be released upon request, subject to the provisions and restrictions of applicable laws and regulations
- Prior to conducting an evaluation of an existing OWTS, the qualified contractor shall notify the City of the date and the time of the uncovering of the OWTS, at least one business day in advance, for possible observation and verification by the City representative.
- The evaluation of an existing system must be submitted on forms provided by the City. See Appendix G for a copy of the form. The evaluation of an existing system must include whether the existing system was properly installed, is currently functional, and structurally in good repair. The qualified contractor shall submit to the City a signed report attesting to such capability for the existing OWTS. The inspection report of the current system required in shall include:
    - Verification that all components were installed/constructed in an acceptable manner (i.e., setbacks are met) and all components are intact and in good repair.
    - Verification of the structural integrity of the entire system, to include tank, baffles, plumbing lines, distribution box, diverter valves, and any other related component.
    - The report shall attest to the current condition of the dispersal system. For example, the extent which the perforated pipes for leach lines and the gravel below are clogged; the presence of organic build up in the seepage pit; the observed level of standing wastewater in seepage pit and if the wall of the seepage pit is stained due to constant contact with wastewater that may have happened in the past, etc.
    - The report shall include a plot plan that clearly identifies and illustrates the entire OWTS to include the tank size and related details of the dispersal system.
- If the evaluation of an existing system determines that the septic tank is inadequate, the tank shall be upgraded to meet the current City requirements.
- When a previously approved OWTS fails but the proposed expansion area does not meet the current percolation rates, an alternative OWTS shall be required even though there are no concurrent improvements planned for the structure.
- When a previously approved OWTS fails and surface or subsurface water conditions are such that the current setback requirements cannot be met, an alternative OWTS including disinfection shall be required.
- Secondary units may be combined with the primary units in the septic system providing the septic tank and leach system are adequately sized. The City encourages separate systems wherever feasible. When separate systems are constructed for secondary units, all siting and design criteria for primary unit OWTS design apply. Pursuant to Section 4.1, approval of secondary units on sites without sewer availability remain contingent upon viability of OWTS expansion or addition. Recently enacted State policies regarding secondary units do not override OWTS feasibility analysis.

## 4.4 SEPTIC TANK CAPACITY & REQUIREMENTS

The liquid capacity of all septic tanks shall conform to the requirements found in Appendix H.

## Capacity of Septic Tanks

The determination of the capacity of a septic tank is subject to the following requirements:

- The capacity for a septic tank to be utilized for single or multiple family dwelling shall be determined based on the number of bedrooms and bedroom equivalents.
- The septic tank capacity for commercial establishments shall be determined based on fixture units count specified in Table 4.4.1 and in accordance with the type of the establishment indicated in Table 4.4.2, whichever provides a greater capacity.
- When determining the septic tank size for establishments that are composed of both single or multiple family dwelling units and commercial establishments, whether based on fixture unit count or bedroom and bedroom equivalent or combination of both, the largest resulting capacity shall be proposed.
- All rooms with the exception of core rooms shall be considered a bedroom or bedroom equivalent when determining the minimum capacity for a septic tank and sizing of a dispersal system. As noted in a previous section of this document, the application for construction of a new OWTS shall include a detailed floor plan.
- Detached structures/rooms with windows that are greater than 70 square feet in area and are not equipped with water lines or plumbing fixtures shall not be considered a bedroom or bedroom equivalent. Plans for construction shall clearly describe the purpose of such structure/room and indicate that the structure/room is not equipped with any plumbing fixtures.
- A guest house with kitchen may connect to an existing primary structure OWTS or connect to a separate OWTS. Sizing of a separate OWTS for guesthouses with kitchen shall be computed based on the number of bedrooms and bedroom equivalents. When a guesthouse with kitchen uses the primary unit OWTS, an engineering report shall be prepared demonstrating the septic tank and leach system are adequately sized. The construction of a guesthouse with kitchen requires approval from both the Planning and Building Divisions.

Note**:** Septic tanks and leach systems may be voluntarily oversized to improve the retention time. This should be clearly noted on the plans.

## Structural Requirements for Septic Tanks

- All new septic tanks shall comply with the most current version of the OWTS Ordinance.
- All new or replacement tanks shall be approved by IAPMO or stamped and certified by a California registered civil engineer as meeting industry standards and their installation shall be according to manufacturer's recommendations.
- New and replacement tanks on conventional OWTS shall be equipped with an effluent filter to prevent the solids in excess of 3/16th of an inch from passing to the dispersal area. All filters shall meet NSF 46 certification standards. Filter sizes shall be increased as design flow rates are increased.
- All joints between the septic tank and its components shall be watertight and constructed of solid, durable materials to prevent excessive corrosion or decay.
- The inverts of all outlets shall be level and the invert of the inlet shall be at least one inch higher than the outlets.
- Inlets to any gravity system distribution box shall be at least 6 inches higher than the distribution box outlet.

- Leach system distribution piping shall be at least 6 inches lower than the septic tank or distribution box outlet.

Example of an Aerobic Treatment Tank:

- All septic tank access points shall have watertight risers the tops of which are set not more than six (6) inches below grade. Access openings at grade or above shall be locked or secured to prevent unauthorized access.
- Aerobic systems may be used in place of conventional septic tanks provided they provide equivalent treatment to a conventional system when the aeration unit is not operational.
- Any tank proposed to be installed within a driveway must be traffic-rated and equipped with traffic-rated risers with traffic-rated covers set at grade. Non-traffic rated tanks shall not be installed within 5 feet of any road or driveway.
- OWTS that utilize pumps to move effluent from the septic tank to the dispersal system shall be equipped with one of the following: a visual, audible, or telemetric alarm that alerts the owner or service provider in the event of pump failure. All pump systems shall, at minimum, provide sufficient storage space in the pump chamber during a 24-hour power outage or pump failure and shall not allow an emergency overflow discharge. The capacity for the storage space for pump chamber shall be equal or greater than the sum of 300 gallons for first three bedrooms and 200 gallons for each additional bedrooms or bedroom equivalent rooms thereafter.
- When the existing system is required to be exposed to establish the size and capacity of the septic tank and/or dispersal field or seepage pit, the City staff shall visit the site and verify the dimensions with the QP/QI. The QP/QI shall notify the City of the date and the time of the uncovering of the OWTS, at least one business day in advance for possible observation by the City representative.

## 4.5 DISPERSAL METHODS FOR CONVENTIONAL OWTS

### General Dispersal System Requirements

- If the percolation tests for a proposed leach bed or leach line results in an absorption rate that is slower than 120 MPI, the soil conditions do not meet the minimum requirements of a conventional system. Soil replacement as detailed in Appendix I is required.
- If the percolation test for a proposed leach bed or leach line results in an absorption rate that is faster than 1 MPI, the soil conditions do not meet the minimum requirements of a conventional system. Soil replacement as detailed in Appendix I is required.
- 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.
- Leach bed or leach line dispersal systems shall not exceed a maximum depth of 10 feet as measured from the ground surface to the bottom of trench unless Supplemental Treatment is used.
- No excavation for a leach line or leach bed, shall extend to within 5 feet of groundwater. No excavation for a seepage pit shall extend to within 10 feet of groundwater.
- Where two or more leach lines are installed, an approved distribution box of sufficient size to receive lateral lines shall be installed at the head of the dispersal field. Similarly, two or more seepage pits shall be connected by means of a distribution box and not in series.

- Distribution boxes shall be of an approved type with protective coating on interior surfaces, sufficient in size, designed to ensure equal flow and be installed on a level concrete slab in natural or compacted soil.
- There shall be at least three (3) feet of natural, continuous, undisturbed soil beneath the bottom of a conventional dispersal system. When there is not 3 feet of natural, continuous, undisturbed soil between the bottom of the dispersal system and fractured bedrock or bedrock, soil replacement as detailed in Appendix I is required.
- The dispersal area shall be configured to exclude all failed test holes. The minimum distances between failed test holes to the nearest component of the proposed dispersal system shall be not less than the required setback for the respective dispersal component.
- Dispersal fields for leach lines and leach beds shall be installed at the shallowest practicable depth to maximize elements critical to treatment of effluent in the soil. A depth of 12 to 18 inches of earthen cover is required over leach lines. See Appendix I for reason for shallow dispersal system.
- On sloping grounds, to compensate for excessive line slope, leach lines and leach beds shall be stepped. The lines between each horizontal section shall be made with watertight joints and shall be designed so each horizontal dispersal trench or bed shall be utilized to the maximum capacity before the effluent shall pass to the next lower leach line or bed.
- A slope stability report is required for any slope of 30% or greater. A California Certified Engineering Geologist or a California Registered Professional Soil/Geotechnical Engineer shall address whether the any unstable land mass or areas subject to earth slides require a setback of 100 feet or indicate other setbacks that should be allowed.
- Leach lines on hillside properties shall be installed as level as possible with the contour of the land.
- The dispersal field/area may not be covered or paved over and in no case may a vehicle be driven or placed over the dispersal field/area. See Appendix I for additional information.

### Leach Bed

This system consists of multiple perforated lines installed in an excavation with a minimum 48 inches in width, maximum of 100 linear feet in length and containing a minimum of 12 inches of gravel beneath a system of perforated distribution pipes through which sewage effluent seeps into the surrounding soil. Perforated pipes shall neither be installed greater than 6 feet apart nor closer than 3 feet to the sidewall of the leach bed.

Construction of a Leach Bed:

- The surface area designated as a leach bed shall be at least 50% greater than the surface area required for leach lines.
- Gravel, stone, slag and similar materials used for filtration purposes shall be thoroughly washed to be free of fines (small particles).
- Due to confined space, if the slope exceeds 20%, 4 to 5 feet of filtration gravel is typically needed and the trench depth can range from 6 to 8 feet.
- On slopes greater than 30%, 3½ feet of clear cover is often needed to achieve 15 feet daylight.

### Leach Line

A standard leach trench system consists of one or more trenches. Each trench shall be 36 inches in width, maximum of 100 feet in length, and contain a minimum of 12 inches of gravel beneath a single perforated

distribution pipe through which sewage effluent seeps into the surrounding soil. Alternative leach trench configurations may be approved by the City, based on a review of site specific conditions and information provided by the QP.

Example of a Leach Field:

- When more than 1 leach line is required to be installed, they shall equal in length and size and be provided effluent from a distribution box rather than an overflow pipe connecting the leach lines in series. See Appendix I for additional information regarding leach lines of uneven length or leach lines required to bend.
- The distance between trenches shall be a minimum of 4 feet, measured from closest sidewall to sidewall. The distance between trenches shall be increased by 2 feet for every 1 foot of gravel beneath the perforated lines.
- Gravel, stone, slag and similar materials used for filtration purposes shall be thoroughly washed to be free of fines (small particles).

### Infiltrative Chamber

This system consists of semicircular chambers installed contiguously with open portion of the infiltrative chambers on the ground. The infiltrative surface area credit shall be limited to the calculated floor area beneath the open portion of the chamber, excluding the area beneath the base of walls where infiltrative chamber is placed on the ground. The infiltrative surface area may be reduced up to a maximum of seventy percent (70%) of the area that it would be required for a conventional leach field dispersal system if the QP provides an engineering basis for such reduction in the Feasibility Report Use of gravel under the infiltrative chambers is optional

### Seepage Pit

This system consists of one or more covered lined circular excavations, four to six feet in diameter with an interior lining of six inches of gravel backfill allowing effluent to seep into the surrounding soil. Pit liners shall be constructed of concrete, sewer brick, or an alternative material that is approved by the City. The pit shall have a minimum effective sidewall of 10 feet below its sewer inlet pipe. The seepage pit(s) must be sized to hold a volume of at least five (5) times the volume of the proposed size of the septic tank divided by the amount of water absorbed during the percolation test. When groundwater depth prevents a single pit from meeting this requirement, additional seepage pits must be constructed. Multiple seepage pits shall have effluent delivered to them from a distribution box rather than connecting the pits in series. The volume of storage for the seepage pit shall be computed based on its pore volume (i.e. excluding the volume of the rock mass).

If the percolation tests for a replacement seepage pit or gravel packed pit results in an absorption rate exceeding 5.12 gallons per square foot of dispersal area per 24 hours**,** Soil replacement as detailed in Appendix I is required.

The installation of a seepage pit is only allowed as part of an existing, conventional OWTS when it is required to install the future expansion area, the soil meets percolation rate requirements, and inadequate surface area exists for leach lines or a leach field.

The installation of seepage pits for new construction requires the use of an alternative OWTS.

### Gravel-packed Pit

Gravel packed pits are seepage pits that are filled with gravel of ¾ to 2 ½ inches in size up to the cap level, allowing effluent to seep into the surrounding soil. The gravel must be washed and free of silt. All of the limitations on seepage pits apply to gravel packed pits.

The gravel packed pit(s) must be sized to hold a volume of at least five (5) times the volume of the proposed size of the septic tank divided by the amount of water absorbed during the percolation test. The same requirements for percolation testing of a seepage pit apply to a gravel packed pit if the test is performed without gravel pack being added.

Geosynthetic Aggregate Systems may be permitted by the City subject to review and approval of supporting documentation from the QP. These engineered geosynthetic aggregate systems may be considered in lieu of gravel-packed or infiltrative systems. In such cases, no reduction in geosynthetic aggregate volume (compared to gravel volume) will be permitted.

## 4.6 FUTURE EXPANSION AREA REQUIREMENTS

- Every new OWTS and alternative OWTS, regardless of the type of the dispersal system, shall be provided with a sufficient land area for an entirely new dispersal system (100% future expansion area).
    - When soil profile and percolation tests confirm alluvium geology and uniformity in geology has been has been guaranteed by the judgement of the Professional Geologist, the required percolation testing for the 100% future expansion area may be waived. The uniformity in geology shall be established through both soil profile studies and percolation testing of more than one hole.
    - Where proposed future expansion areas are in bedrock, hardpan or fractured rock formation, the future pits shall be tested to establish percolation rates for each individual pit.

- If the dispersal system proposed for the 100% future expansion area is installed concurrently with the construction of a new system, the use of both the existing and new dispersal fields may be placed in operation and their use alternated on a bi-annual basis to permit each dispersal field to "rest" for six (6) months per year at the option of the property owner.

- Any expansions beyond the current footprint of the existing structure or addition of any new detached structures, such as swimming pools, spas, patio, decks, stairs, walls or any permanently constructed structures shall require the demonstration of the feasibility of installing the 100% future expansion area, regardless of whether the proposed renovation will increase the design flow or demand greater capacity than the existing OWTS.
    - As a part of an approval for 100% future expansion, a previously approved existing OWTS that has been in service for more than 15 years is required to be inspected by a Qualified Contractor (see Section 3.7).
    - If previous approval of the OWTS is not available or did not include approval of the 100% future expansion area AND the renovation/expansion neither increases the design flow, nor demands a greater capacity, the existing OWTS shall be evaluated by a Qualified Contractor, in addition to proving out the 100% future expansion area by a Qualified Professional (see Section 3.7).

- When the present dispersal system has failed and the 100% future expansion area is to be utilized, a new 100% future expansion area shall be demonstrated through testing in accordance with the provisions of the LAMP and be reserved for future use.

  This requirement may be waived if one of the following conditions is met:

  - When the 100% future expansion area (dispersal system) that is being activated is equipped with supplemental treatment component;
  - When the property is one acre or greater in size and the geology report prepared for the 100% future expansion area that is being activated confirms no unfavorable geological conditions, such as, bedrock formation, etc. exist;
  - Where the geology report for the existing present dispersal system, if available, concurs with the geology report prepared for the 100% future expansion area that is being activated, confirming uniform and favorable soil and geological conditions throughout the property.

- An expansion of up to 10% of the current footprint may be allowed without requiring to prove out the feasibility for the 100% future expansion area so long as the expansion:
  - Does not increase the design flow or require greater capacity,
  - Does not take up more than 10% of the remaining available undeveloped area on the property, where no unfavorable geological conditions, such as, bedrock formation, etc. exist,
  - All required setbacks can be met,
  - The location and direction of the proposed expansion is in a manner that will not interfere with the installation of the 100% future expansion area when needed in the future.
  - Applicants who elect to utilize the exemption under 10% expansion rule, shall submit a signed statement from a California Professional Civil Engineer, California Professional Geologist, or a California Certified Engineering Geologist substantiating that there are areas available on the property for the installation of the 100% future expansion area and there are no unfavorable geological conditions, such as, bedrock formation, etc. exist within the property that may prevent the installation of the 100% future expansion area when needed in the future.
  - Only one use of the 10% expansion rule will be granted to a property.

- Land area for future expansion may be acquired by a property owner through the acquisition of an effluent disposal easement on an adjacent property, subject to the approval of the City. Under this scenario, the perpetual easement shall be recorded with the titles of both properties.

- In situations where adequate land is not available for a second 100% future expansion area, the dispersal system that is being installed shall be equipped with supplemental treatment component.

- When approving a future expansion area for a system without prior approval, the approval issued by the City will only encompass the 100% future expansion area, approving only the

renovation/expansion and not the existing OWTS. The City may require other additional improvements to ensure that the minimum required standards have been met.

See Appendix J for additional considerations for a future expansion area.

## 4.7 PROCEDURES FOR DETERMINING DEPTH OF SUBSURFACE WATER

### Known or Observed High Subsurface Water

In areas that are known to have high groundwater and/or where observation of mottling, oxidation, staining, crystal buildup, seeps, weeps or other features that may indicate presence of groundwater in the past or present or where groundwater or moisture seepage (seeps, perched-water, etc.) is present within 5 feet below the expected bottom of the dispersal field or seepage pit, the City may require that the QP investigate the presence of moisture and determine the depth to high groundwater through a groundwater level observation well in a manner described below:

- A permit for a monitoring well is required from the San Luis Obispo County EHS. The QP shall contact the EHS for information on applying for a permit to construct a monitoring well.
- The high groundwater determination exploration shall be conducted throughout the months of December through May.
- The groundwater level shall be monitored and measured to determine the highest level that water has reached during the monitoring period and the final static water level. The QP shall measure the groundwater level at least once every two weeks, during the entire monitoring period.

Typical Monitoring Well:

When a minimum of 2 inches of rainfall has been recorded during a 10 day period within the area where the groundwater monitoring is being conducted, the interval between two monitoring events shall be reduced to once a week, starting after 3 weeks from the last rainfall that constituted the 2-inch rainfall. If rainfall continues to occur during the monitoring period, the monitoring intervals shall continue to remain at least once a week.

The groundwater measurements could be achieved by physical observation or by using a piezometer or any instrument intended for this purpose to record the groundwater level. The piezometer or instrument may be a float device that mechanically or electrically records the highest groundwater level.

- The groundwater level observation well shall be installed to a minimum depth of 10 feet below the anticipated depth of dispersal field or seepage pit, at the lowest possible elevation in the vicinity of a proposed wastewater dispersal system.

  If an impermeable layer is present at a depth of less than 10 feet below the anticipated bottom of the dispersal field or seepage pit, the subsurface water level observation well shall not extend beyond the impermeable layer.

- Seeps and perched-water are considered infiltration of water and are considered as evidence of high groundwater being present. The QP shall monitor the excavated groundwater test hole during the entire observation period as specified above to observe the presence of water, continuation of seeps, increase/decrease in the seepage and any fluctuation of the water level or if the water has been dissipated and the excavated test hole is completely dry. The professional

geologist shall interpret the observation in the geology report and substantiate that the infiltration and presence of water no longer exists, if so.

## 4.8 REQUIREMENTS APPLICABLE TO ALL PERCOLATION TESTING TYPES

A sufficient number of percolation tests shall be conducted within the anticipated dispersal system on all properties proposing to use an OWTS. A QP or individual that are supervised by the QP shall perform the entire percolation test procedures, including presoak.

- Prior to performing percolation testing, the QP shall notify the City of the date and time of all percolation tests to be performed, at least one business day in advance. The City representative may visit the site to observe the testing procedure. All QPs are strongly advised to consult with the City, prior to performing the tests, to reach an agreement on the number of test holes required when it is anticipated that unusual circumstances may be encountered.

- When a minimum of 2 inches of rainfall has been recorded within a 10-day period in the area where the percolation test is to be conducted, the start of percolation test, including the presoak shall be delayed until such time that the QP determines that the site conditions are no longer impacted from the recent rainfall events.

- All percolation testing shall be performed within the immediate proximity of the actual anticipated dispersal area. All test holes, successful or failed, shall be clearly identified and labeled by durable monuments and tags so that the correct locations for dispersal system (leach fields and seepage pits), as established through successful tests, can be easily identified during the construction.

- Where extreme geological conditions (e.g., bedrock formation or variation in water table, etc.) do not exist on a property and where uniform geology has been established by a QP within a certain limited area on the property, the results of soil profile and percolation testing conducted in the area may be accepted as a representation for a dispersal field or seepage pit as long as the test holes are within a 35 feet radius of the proposed dispersal field or seepage pit.

- The distances between percolation test holes shall be the same as the setback required for the respective dispersal system when constructed. An exception may be allowed when due to extenuating circumstances test holes cannot meet minimum setback requirements.

- Results from previously conducted percolation testing may be accepted for a project, if the proposed dispersal field or seepage pit is in the same location where tests were conducted and referenced in updated geology reports, except when significant changes in geology (e.g., flood, earthquake, significant groundwater recharge, etc.) have occurred or the City's procedures for percolation test has changed after the date of the testing. All plan approvals of the entire construction proposal will expire one year from the date of the approval.

## 4.9 PERCOLATION TESTING FOR LEACH LINES AND LEACH BED DISPERSAL SYSTEMS

### Requirements

- There shall be a minimum of 3 test holes in the proposed present dispersal area and 3 test holes in the proposed 100% future expansion area unless a waiver on testing the future expansion area has been granted (see Section 4.6).
- Requiring only 3 test holes represents the most optimal situation with a minimum size system and shall be authorized only when uniformity in geology and absorption rates has been demonstrated. Larger dispersal fields, significant variation in absorption rates of percolation tests or less favorable geological conditions, such as, hard rock formation require additional testing. It is recommended and may be necessary to excavate and test a sufficient number of percolation test holes in the proposed present, and future dispersal areas to provide a complete and accurate representation of the absorption rate for each proposed dispersal area.
- The location for percolation testing on each line shall be strategically selected to provide a true representation of the entire leach line.
- The percolation test locations shall be evenly spaced along the proposed present and 100% future expansion leach fields/lines in a manner that the test holes are not greater than 35 feet apart from each other.
- During the percolation testing, the slowest percolation time observed among all tested holes shall be considered for determining the size of the proposed dispersal field.

### Percolation Test Procedures for Leach Beds and Leach Lines.

1. Prior to performing percolation tests, a determination of the topography and plumbing hydraulic grade shall be made to appropriately determine the level of the dispersal field.

2. An excavation shall be made at least 10 feet below the calculated depth of the trenches to determine if seasonally high groundwater precludes the use of a conventional system. Based on this information, the size of the system may be estimated and a determination made concerning a representative number of test holes.

3. Excavation for the test holes shall be made at the same depth as the proposed depth for the leach lines or leach bed. These test holes shall be at least 3 feet square and dug to the depth of not less than 2.5 feet. A 1 cubic foot hole (1’ x 1’ x 1’) shall be provided at the bottom. All percolation tests shall be performed so that the top of the 1 cubic foot test hole is at the same level as the anticipated bottom of the trench.

4. The sides and bottom of the 1 cubic foot holes shall be scarified to remove the areas that became smeared by the auger or other tool used to develop the hole.

5. The 1 cubic foot holes shall be thoroughly presoaked 24 hours prior to percolation test. If water is found in any test holes after 24 hours of the presoak, that test hole is considered failed. This procedure is to ensure that the soil is given ample opportunity to swell and to approach the condition it will be in during the wettest season of the year.

   The soaking must be done with clean water, and the water should be added carefully (to avoid disturbing the sides of the test hole) to a minimum depth of twelve inches. There are three options for conducting the presoak:

- 1st option: Maintain 12 inches of clear water for a minimum of 4 hours. After 4 hours, allow the water column to drop overnight. Testing must be done within 15-30 hours after the initial 4-hour presoak.
- 2nd option: The hole should be continuously soaked overnight, which may require constant addition of water from a make-up reservoir, possibly by means of an automatic siphon. The percolation measurements are made 24 hours after the start of the soaking period.
- 3rd option: In sandy soils with little or no clay, no swelling of the soil will occur. If, after filling the hole twice with 12 inches of water, the water seeps completely away in less than ten minutes, the test can proceed immediately.

6. Following the presoak, the test holes shall be completely filled with water again and allowed adequate time for the water level to drop. As the water level drops, each one inch of drop shall be recorded as Minutes per Inch (MPI). The size of the dispersal field shall be determined by the amount of time required for the water to drop from the 5th to the 6th inch. The slowest acceptable elapsed time recorded on the property shall be used as the representative of the percolation rate for the area being tested and utilized in the Ryon Formula calculation.

7. At or before 24 hours later, after a successful presoak, the test holes shall be completely filled with water again and allowed adequate time for the water level to drop. As the water level drops, the time of each one inch of drop shall be recorded. The size of the dispersal field shall be determined by the amount of time required for the water to drop from the 5th to the 6th inch. The slowest acceptable elapsed time recorded on the property shall be used as the representative of the percolation rate for the area being tested and utilized in the Ryon Formula calculation.

Ryon Formula:

$$A = \frac{T + 6.24}{29} * \frac{C}{2}$$

Where A = sq. ft. of 3' wide trench dispersal area

T = Time in minutes for the 6$^{th}$ inch of water to drain

C = Proposed septic tank capacity

The resulting "A" must be divided by 3 to arrive at the length of a 3-foot wide trench with 1 foot of filter material below the perforated pipe provided for the dispersal system. For trenches proposing 2 feet of filter material below the pipe, "A" must be divided by 5 to arrive at the length of trench. For trenches proposing 3 feet of filter material below the pipe, "A" must be divided by 7.

## 4.10 PERCOLATION TESTING FOR SEEPAGE PIT AND GRAVEL PACKED PIT DISPERSAL SYSTEMS

### Requirements

- The soil profile excavation hole shall be down-logged by a California Professional Civil Engineer, California Professional Geologist, or California Certified Engineering Geologist unless reasonably deemed unsafe by the QP. When reasonably deemed unsafe by the QP the required information shall be obtained through alternative methods advised by the QP. When test holes are required to be down-logged by the Building Division, a copy of the field data shall be submitted to the City.

- Results from the soil profile and percolation testing of different pits shall be accepted where the proposed seepage pits locations are within 35 feet of the actual soil profile and percolation testing area, where uniform geology has been established by a QP, except where the proposed seepage pits are located in bedrock/hardpan/fractured rock formation.

- Every seepage pit located in bedrock, hardpan or fractured rock formation shall be tested to establish percolation rates for each individual pit.

- Where proposed future expansion areas are in bedrock, hardpan or fractured rock formation, the future pits shall be tested to establish percolation rates for each individual pit.

- When one pit is marginally dispersing water and it has to be supplemented with more pit(s) to achieve the required septic tank capacity, each pit shall be tested for the entire 8 hours to assess the exact capability of the pit(s) and to ensure 10-feet drop can be achieved at the end of the tests.

- When proposing a cluster system comprised of numerous pits, the QP may request for reconsideration of this requirement in light of sufficient data that might support an alternative scope of testing. Such data should be presented to the local office prior to commencing the test procedure, in order to reach an agreement as to the scope of testing that will be required.

- The water metered in shall be under pressure and shall be metered in constantly through a hose with a minimum of 1½ inch in diameter. A written certification, confirming that the water meter used for the percolation test has been calibrated and certified within the last 12 months prior to the date of the test shall be made available during the test for verification purposes and submitted with the feasibility report.

- A decrease in the effective height of the seepage pit due to a cap level adjustment after percolation test has been completed shall require an additional percolation test in order to demonstrate adequate absorption and the 10 feet of drop can be successfully achieved.

- The covering and securing of any open test excavations/borings/pits shall be in conformance with Building Division's requirements**.**

## Procedures

1. A circular boring with a minimum 2-foot diameter and maximum 6-foot diameter shall be excavated to the anticipated depth of the seepage pit for percolation testing purposes. Approval shall be obtained prior to construction of any pit having an excavated diameter greater than 6 feet. No pits shall be finished, bricked or capped, without prior authorization by the City. If a seepage pit is to be installed, it will be necessary to secure a permit for the installation of a test pit from Building Division.

2. Presoak the test pit by filling it with clear water up to the proposed level of the inlet and allow it to permeate for 24 hours. The water drop after 24-hour presoak period shall equal or exceed 10 feet**.** Seepage pits shall not be permitted when the observed water drop is less than 10 feet in 24 hours

   When percolation testing holes cannot be filled to presoak or to conduct a conventional percolation test due to drainage of water from the hole, the test may be stopped once a volume of water equal or greater than the nominal volume of the hole has been metered in during the presoak test or a volume equal or greater than 5 times the required tank capacity has been metered in during the percolation test. In this case, the maximum absorption capacity allowed by the OWTS Ordinance is considered to be exceeded and an alternative OWTS is required. The feasibly report shall include the volume of water dispersed, the percolation rate and the required calculations.

3. At or before 24 hours later, after a successful presoak achieving a minimum 10 feet drop, the level of the water remaining in the pit is measured and considered the starting level for the percolation testing (Zero Level). Then, clear water under constant pressure is continuously metered into the test pit to the proposed cap level through a hose with a minimum diameter size, corresponding with the water meter being used. The water is allowed to drop for equal intervals of 30 to 60 minutes. The water level shall be measured and documented after each equal interval during the 8-hour period. The pit is re-filled with water to the cap level after each drop. At the end of the 8-hour testing, the pit is filled back up with water to the cap level for one final time.

4. Twenty-four (24) hours after the start of the 8-hour testing period or 16 hours after the end of percolation test, the water level in the test pit shall be measured to determine that there has been at least a 10 feet drop in the water. The volume of water dispersed during the percolation test is computed based on the “effective height”, which is measured by subtracting the height (level) of the remaining water from the cap level. The total amount of water that percolated into the soil is then calculated by subtracting the volume of water remaining in the test pit from the total volume of water metered into the test pit over the 8-hour testing period.

5. After completion of the percolation test, where water is remaining at the bottom of the test pit, the test pit shall be periodically monitored for the next 16 hours by a QP to observe the fluctuation in water level, lack of absorption or any infiltration of the subsurface water into test pit to rule out the possibility of mounding and to observe whether the remaining water has been partially or completely dissipated. The geologist shall explain why the remaining water in the test pit after 24 hours from the start of the testing will not adversely affect the dispersal of expected wastewater load and attest that mounding will not occur in future. For the intent of this section, mounding is defined as any elevation in water level, above the level recorded after 24 hours from the start of the 8-hour percolation test.

### Calculation

The percolation rate is calculated by adding the sum of the surface area of the bottom of the pit and sidewall area of the seepage pit that absorbed the water (total area of sidewall shall be calculated based on the "effective height" as described under number 4 above). Then the total number of gallons of water that the pit absorbed is divided by the sum of the areas; the result is the percolation rate.

- The seepage pit(s) must have an interstitial storage volume large enough to hold five times the capacity of the septic tank divided by the total volume of water absorbed. Available storage shall exclude the volume of the rock particles (i.e. pore volume only). Seepage pit engineered plans shall show calculations for interstitial volume capacity based on specified rock fill voids.

- When volumetric determinations are being made for testing in a two foot boring, credit will be given for 23.5 gallons per vertical foot that the water drops.

- The volume of water absorbed by the 2 feet diameter test hole may be adjusted to a larger volume based on the ratio of the side wall surface areas:

    - A 4 feet diameter pit would be given credit for 2 times the volume percolated in a 2 feet diameter test hole.
    - A 5 feet diameter pit would be given credit for 2.5 times the volume percolated in a 2 feet diameter test hole.
    - A 6 feet diameter pit would be given credit for 3 times the volume percolated in a 2 feet diameter test hole.

- Sidewall determinations are based on the boring diameter. Volumetric calculations are based on the liner diameter. The pilot hole for reaming out a pit is not calculated in the sizing of a pit and shall not extend to within 10 feet of the level of groundwater.

Seepage pits shall be constructed with 6 inches of washed gravel between the pit lining and the excavated sidewall and shall have an excavated diameter of not less than four feet.

## 4.11 ALTERNATIVE ONSITE WASTEWATER TREATMENT SYSTEMS

Alternative OWTS are used to overcome specific site constraints that limit the use of a conventional OWTS. Typically, the most significant site constraint resulting in the need for alternative treatment is a lack of adequate soil depth below the dispersal field. Alternative OWTS utilize either a method of wastewater treatment other than a conventional septic tank and/or a method of wastewater dispersal other than a conventional leach field or seepage pit for the purpose of producing a higher quality wastewater effluent and improved effluent dispersal performance and siting options.

Alternative OWTS must be designed by a Qualified Professional in conformance with the provision set forth on the LAMP, the City's OWTS Ordinance and State guidelines.

Prior to final approval, the property owner shall be required to record a deed restriction indicating that an alternative system has been installed on the property. This notification shall run with the land and will act as constructive notice to any future property owner that the property is served by an alternative OWTS and is therefore subject to an operating permit with regular maintenance, monitoring and reporting

requirements. A copy of the recorded document and an operation and maintenance contract with a QP shall be provided to the City before final system approval.

To ensure that the system continues to function properly, a qualified service provider must inspect the system at least annually. Maintenance frequencies will be directed based upon manufacturer specifications or industry standards. Inspection reports must be submitted to the City by the QP detailing the findings of the inspection within 30 days of its completion so that the City can track routine inspections and document the owner conducting the required maintenance.

### Vertical Separation to Groundwater

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 4.11.1.

**Table 4.11.1 Minimum Vertical Separation to Groundwater for Alternative OWTS Dispersal Systems and Required Wastewater Constituents Treated**

| Type of Dispersal System | Minimum Vertical Separation to Groundwater | | | |
|---|---|---|---|---|
| | 2 feet* | 3 feet* | 5 feet* | 10 feet* |
| Mound System | | BOD, TSS, TN, Disinfection | Supplemental Treatment Not Required | Supplemental Treatment Not Required |
| At-Grade System | | | Supplemental Treatment Not Required | Supplemental Treatment Not Required |
| Conventional Dispersal Trench more than 10 feet total depth | | BOD, TSS, TN, Disinfection | BOD, TSS, TN | BOD, TSS, TN |
| Raised Sand Filter Bed w/ Supplemental Treatment | BOD, TSS, TN, Disinfection | BOD, TSS, TN | N/A | N/A |
| Conventional Seepage Pit for replacement systems | - | - | - | Supplemental Treatment Not Required |
| Seepage Pit w/ Supplemental Treatment | | | BOD, TSS, TN, Disinfection | BOD, TSS, TN |
| Shallow Pressure Distribution | - | - | Supplemental Treatment Not Required | Supplemental Treatment Not Required |
| Shallow Pressure Distribution w/ Supplemental Treatment | BOD, TSS, TN, Disinfection | BOD, TSS, TN | N/A | N/A |
| Shallow Drip Dispersal w/ Supplemental Treatment | BOD, TSS, TN, Disinfection | BOD, TSS, TN | N/A | N/A |

* Measured from the bottom of the dispersal trench, bed or piping (in the case of drip dispersal).

## Horizontal Setback Distances for Alternative OWTS

Horizontal setback distances for alternative OWTS should be the same as those specified for conventional septic tanks and dispersal systems in Appendix F to the extent practical. The qualified professional designing the alternative OWTS shall indicate how the proposed alternative OWTS component(s) will allow for a horizontal setback reduction without compromising water quality and/or public health.

For new OWTS, installed on parcels of record existing at the time of the effective date of the LAMP 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 and any other mitigation measures that are prescribed by the City if it is determined by the City Engineer that the reduced setback may result in an increased risk to water quality and/or public health.

## Alternative OWTS with Supplemental Treatment Systems

Supplemental treatment is generally required to be incorporated into an OWTS when effluent quality has potential to impact groundwater or surface water, or when use of an alternative dispersal system is necessary to overcome a limiting site constraint and requires an alternative dispersal system with clarified effluent to prevent clogging of the system. A variety of supplemental treatment technologies is available to meet specific objectives. In addition to meeting site and design requirements, alternative OWTS utilizing supplemental treatment shall be designed to meet the minimum effluent constituent limitations specified by Table 4.11.2.

Biological Oxygen Demand (BOD), Total Suspended Solids (TSS), Fats, Oils & Greases (FOG) and Total Nitrogen (TN) are constituents in wastewater that can be measured to evaluate the relative strength of wastewater. High concentrations of BOD, TSS and FOG are known to contribute to increased OWTS failure rates by creating a clogging mat along the infiltrative surface of the dispersal system. Total nitrogen is first converted to ammonium in an OWTS, then to nitrite and finally nitrate. Hydrophilic, water-loving nitrate bonds with water and is carried through the soil, eventually coming into contact with groundwater. The maximum allowable concentration of BOD, TSS and TN varies depending upon the type dispersal system proposed and the distance between the bottom of the dispersal system and groundwater and is specified by Table 4.11.2. FOG is not commonly monitored in residential OWTS and therefore, no standards are proposed with the LAMP.

**Table 4.11.2 Effluent Constituent Limitations for Supplemental Treatment Systems**

| Type of Dispersal System | Average Effluent Concentrations (mg/L) | | |
|---|---|---|---|
| | 5-Day Biological Oxygen Demand (BOD)[3] | 30-Day Average Total Suspended Solids (TSS)[3] | Total Nitrogen (TN)[1,2,3] |
| Conventional Dispersal Systems with required supplemental treatment, including seepage pits | 30 | 30 | 50% reduction or 25 mg/L, whichever is lower |
| Drip Dispersal Systems | 20 | 20 | Not required when vertical separation to groundwater per Table 4.3.1 can be met, otherwise 50% reduction or 25 mg/L, whichever is lower. |
| Alternative Dispersal Systems Installed to Overcome Minimum Horizontal Setbacks to Groundwater, per Table 4.3.1. | 30 | 30 | 50% reduction or 25 mg/L, whichever is lower |

[1] Determined as the sum of nitrate-nitrogen plus total kjeldahl nitrogen

[2] Unless specifically required by the LAMP, supplemental treatment systems are not required to meet effluent limitations for Total Nitrogen.

[3] Detection limits for constituents are as follows: BOD = 2 mg/L; TSS = 5 mg/L; TN = 1 mg/L

When disinfection is required, the add-on component to the supplemental treatment system shall be designed to meet a minimum fecal coliform concentration of 200 Mean Probable Number (MPN) per 100 milliliters, log mean value. Disinfection units shall be operated in accordance with manufacturer recommendations and NSF Standard 46. UV disinfection systems may require additional reduction of TSS and BOD to meet manufacturer specifications.

### Alternative OWTS Installation Requirements

- Any component of an alternative OWTS must be installed by a Qualified Installer that is certified to install the specific alternative OWTS component proposed and the system must be installed according to specifications for location, components, size and depth specified by the qualified professional that designed the system.
- An alternative OWTS treatment unit tank shall include a sample tap on the dosing pump discharge line or other suitable location as agreed upon by the City for effluent sampling.
- All components of the alternative OWTS shall be qualified in writing by the qualified professional who designed the system that the installation was completed per the approved design. This written qualification must meet the satisfaction of the City prior to final inspection of the system.

## Subsurface Drip Systems

All wastewater discharged to a subsurface drip system shall have supplemental treatment. Subsurface drip dispersal 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 and installed by a qualified professional. The maximum slope allowed for the installation of a drip dispersal system shall be 50 percent.

The drip fields must be placed in native soil, unless fill material has been specifically engineered for that purpose and installed as level as possible and parallel to elevation contours. Up to 12 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 meet the STS requirements of this document for Disinfection. The area of the drip dispersal system shall be designed, located and maintained to prevent vehicular traffic over it and planted with appropriate vegetation upon installation to allow for uptake of nutrients from the wastewater.

The setbacks for subsurface drip systems shall be the same as for conventional dispersal fields. Under no circumstances shall a drip system be installed that will result in adverse effects to a building, structure, or improvements which are located on the subject property or offsite. If a reduced tree setback is proposed, an arborist or other qualified professional must prepare a report indicating that neither the tree nor the subsurface drip system would be negatively impacted by the setback reduction.

Additional drip dispersal system design and installation standards that shall be required are as follows:

- Head loss calculations shall be provided to ensure proper hydraulic pressure at the emitter since drip dispersal systems are pressure distribution systems.
- Emitter lines shall be designed as a continuous loop circuit with no dead-ends.
- Vacuum release valves shall be installed at the highpoint of the emitter lines.
- The maximum emitter longitudinal spacing on an emitter line shall be two feet. The maximum spacing between adjacent emitter lines in an absorption bed configuration shall be two feet. Emmitters on adjacent lines shall be staggered in position to achieve more uniform distribution of the effluent.
- Drip dispersal systems shall be time dosed over a 24-hour period. Demand control dosing shall override timed dosing in periods of flow where timed dosing cannot accommodate the excessive flow.
- Drip dispersal systems shall be designed to have a minimum operating pressure at the emitter head of 10 pounds per square inch (“psi”), a maximum operating pressure of 45 psi, a maximum system operation pressure of 60 psi, and a maximum discharge rate per emitter of 1.5 gallons per hour.
- All drip dispersal systems shall incorporate an automatic mechanism for backwashing or flushing the drip lines and filters.
- Because drip dispersal systems vary in design and operation among manufacturers, it is required that all drip dispersal systems be designed, installed and operated in accordance with manufacturers recommendations.

## Use of Proprietary Alternative OWTS

The City must approve any proposed method of supplemental treatment prior to approval for use within the City of Atascadero LAMP area. All supplemental treatment systems submitted for City approval must be tested and certified by an independent testing organization such as National Science Foundation (NSF). Part of the testing must include an evaluation of the system's effectiveness in reducing TSS, BOD and TN. Any supplemental treatment system shall be listed by the 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.

Advanced or alternative OWTS 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 total suspended solids of 30 milligrams per liter and shall further achieve an effluent fecal coliform bacteria concentration less than or equal to 200 Most Probable Number ("MPN") per 100 millimeters.

A manufacturer, distributer or other applicant may request that the City review a particular proprietary alternative OWTS for conformance with the City's minimum requirements by submitting to the City a "Request for Service" application with a deposit to cover staff time to review the application materials in accordance with such fees as are adopted by the City Council. The application materials may include, but are not limited to the following:

- NSF certification
- Product specifications, design standards and treatment objectives
- Installation manual
- Sample Operation & Maintenance manual
- Sample Service Contract
- List of Qualified Service Providers in the City of Atascadero
- Parts and/or service distributor information
- List of jurisdictions where the system is currently approved for use

## Supplemental Treatment Systems Maintenance Contract

Because supplemental treatment is used as a mitigation factor to overcome site constraints such as high groundwater or shallow soils, it is essential that the treatment system receive regular maintenance by a qualified professional to ensure that it is operating as designed. The City requires that a maintenance contract be signed and in place prior to final inspection of the system. An agreement is to remain in force for the life of the supplemental treatment system.

### Alternative OWTS Deed Restriction

Prior to the City of Atascadero's final inspection of an alternative dispersal systems or supplemental treatment unit, the owner must record a notice of the installation of the system or component in the Office of the Recorder of the County of San Luis Obispo. This notice shall run with the land and is intended to serve as notice to all future owners that the property is served by an alternative OWTS that is subject to operating permits as a well as maintenance, monitoring and reporting requirements. The owner must provide a copy of the recorded document to the City of Atascadero as a prerequisite to the final inspection.

### Alternative OWTS Operating Permit

Operating permits will be required for OWTS that utilize an alternative dispersal system or supplemental treatment unit to ensure that they are functioning properly and as designed. Permit conditions would require regular (at a minimum, annual) inspection of the system by a Qualified Professional at recurring intervals. Water quality testing may be required for on-site potable water wells and/or community water systems to monitor groundwater conditions as deemed necessary by the City of Atascadero. A report detailing the findings of the inspection must be submitted to City of Atascadero for review in accordance with the operating permit conditions. An OWTS inspection report, as required by the provisions of the LAMP, should be developed and submitted for review and approval by the City of Atascadero.

## 4.12 LIMITATIONS ON SUB-DIVISIONS PROPOSING TO UTILIZE OWTS

Land development projects including Conditional Use Permits and parcel sub-division projects where public sewer is not available and that are proposed after the effective date of the LAMP, as adopted by the City of Atascadero and approved by the Central Coast RWQCB, shall not exceed a density of one (1) OWTS per 0.5 acres and be supported by the findings of a QP which shall be documented in a Feasibility Report.

Minimum lot size as shown in Table 1 of the OWTS Policy is based upon protection of water resources from nitrate and pathogen degradation. As noted in Section 2.8, Private Wells, the majority of private domestic wells within the City of Atascadero are located on parcels that could not be subdivided to a greater density than one (1) OWTS per 2.5 acres. There are currently no domestic wells on parcels less than 1.0 acre in size within the City.

Determination of maximum average lot density for new subdivisions proposing OWTS systems shall be based upon PRISM parcel-level precipitation data. Precipitation data shall be obtained from the PRISM Climate Group (http://www.prism.oregonstate.edu/explorer/), using the 30-year PRISM normal data from the most recent 30-years data, with 800 meter resolution. Average lot densities are to be based upon Table 4.12.1. When a subdivision is proposed within the City which would create an average lot density greater than the density in 4.12.1, the City will require an additional OWTS analysis as part of the feasibility report which provides technical justification (Fate and Transport analysis or equal as approved by City Engineer) that the proposed OWTS system will not degrade water resources beyond the property boundaries.

**Table 4.12.1. Allowable Average Densities per Subdivision**

| 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 | 1.0 |
| >35-40 | .75 |
| >40 | 0.5 |

## 4.13 ONSITE WASTEWATER TREATMENT SYSTEMS IN DEGRADED BASINS

If the City or Central Coast Water Board identifies a groundwater basin or sub-basin where the use of OWTS in Atascadero is causing or contributing to significant degradation, the City will develop an Advanced Groundwater Protection Management Program (AGPMP) in close consultation with and approved by the Central Coast Water Board. During development of the AGPMP, the City and the Central Coast Water Board shall work together to identify the coverage area of the Advanced Groundwater Protection Program (geographical area where OWTS's are contributing to groundwater degradation). The AGPMP must provide the same level of protection as Tier 3 standards in the OWTS 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 requirements for existing systems will be consistent with Tier 4 of the OWTS 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 OWTS Policy are not allowed in areas covered by an AGPMP.

## 4.14 ADVANCED PROTECTION MANAGEMENT PLAN

The OWTS 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 City is designated by the Central Coast Water Board as impaired or significantly degraded as a result of the use of OWTS, the City of Atascadero 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 OWTS Policy. In the absence of a TMDL or an APMP approved by the Central Coast Water Board, the provisions of Tier 3 of the OWTS Policy shall apply to OWTS adjacent to water body segments listed in Attachment 2 of the OWTS Policy.

# PART 5 REPAIR / REPLACEMENT OF EXISTING OWTS

## 5.1 EXISTING FUNCTIONING OWTS

Consistent with the criteria outlined in Tier 0 of the OWTS Policy, systems that are functioning properly will not be affected by the 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 OWTS Policy and City standards.

The current practice of voluntary maintenance for standard systems will continue 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 Professional (QP) 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. In conjunction with the service call, the QP shall prepare a written report that includes the property owner's name and address, a description of the system and any deficiencies noted during the inspection. In the event that the QP determines that the OWTS requires a major repair or replacement, then a report must be submitted to the City within 30 days of the date of the servicing/inspection. A copy of the approved inspection form can be found in Appendix G. 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 the City, it will be reviewed and the information contained in the report shall be entered into the City database. If the report identifies any deficiencies, a notice will be generated and mailed to the property owner. Depending on the severity of the problem, the notice will recommend either that corrective action be taken or direct that corrective action be taken. A list of the most common tank deficiencies is provided in Appendix K.

## 5.2 FAILED OWTS

The primary functions of the voluntary inspection 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 (QC) 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 the City has a permit record, the replacement dispersal field shall meet the requirements for a conventional dispersal system as described in previous sections of this document. In the event that the replacement system cannot meet the subject requirements, then an Alternative OWTS will be required and be subject to the requirements included in the LAMP.

A replacement system that meets the requirements of the provisions of the LAMP and the City's OWTS 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.

For replacement OWTS that do not meet the specified horizontal separation requirements (Appendix F), the replacement OWTS shall meet the horizontal separation to the greatest extent practicable. In such cases, the replacement OWTS shall utilize supplemental treatment and other mitigation measures, unless the City 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.

## 5.3 OWTS 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 shall be properly abandoned, repaired or replaced upon discovery.
- Severely damaged or deteriorated tanks, bottomless tanks, redwood tanks, brick tanks or otherwise non-watertight tanks shall be replaced with one that meets the City and State standards.

## 5.4 EXISTING ONSITE OWTS EVALUATION / MODIFICATION

Existing functioning OWTS that would otherwise be expected to continue to function properly may become inadequate 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 managed reliably. Examples of changes in a residence that would indicate an increased flow to the system include the addition of a bedroom. Examples of changes in a commercial facility that would indicate an increased flow would include increased building occupancy or fixtures. For information regarding addition of secondary dwelling units, see Section 4.3.

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 the City. As part of the evaluation, the City reviews the proposed changes or project, any City 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.

## 5.5 OWTS ABANDONMENT STANDARDS

Unless properly abandoned, an out-of-service OWTS 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, the City 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, Pea-gravel, or drain rock..

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 by disconnecting from the system and capping / filling the abandoned pipe.
- If hollow chambers were used, the chambers must be removed and backfilled with inert soil or other suitable material to be approved by the City. Hollow leaching chambers may remain in place with City approval.

# PART 6 SPECIAL OWTS MANAGEMENT ISSUES

## 6.1 EDUCATION AND OUTREACH

An OWTS is a significant investment for the property owner and a potential health hazard to the public if the system is poorly designed or fails. This is especially so with the increased costs of newer systems that depend on supplemental treatment. Yet, there is a lot of myth and misinformation about how to take care of and maintain OWTS. Education and outreach is vital to supporting an informed consumer who is better able to assure proper maintenance that reduces the chance of failure. Some examples of OWTS informational handouts are included in Appendix K.

### Direct Staff Contact

The primary method of education and outreach is by direct interaction between City staff and the public. The City 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 the City's role in the planning process, City staff 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 Atascadero City Council.

### City of Atascadero Website

All OWTS permit application forms and instructions are available on the City website. In addition to the forms, the City posts or provides links to the various regulations such as the applicable sections of the Central Coast RWQCB's Basin Plan and the City'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 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.
- 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

The City of Atascadero is committed to identifying and implementing opportunities to collaborate with other interest groups such as the California Onsite Wastewater Association (COWA), homeowners' organizations, real estate groups, and the building industry to provide reliable and accurate information about septic system functioning and proper maintenance. See Appendix L for a sample OWTS educational flyer.

The City 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 City of Atascadero conventional OWTS 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, the City 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. These materials will be made available to the public through links that are placed on the City's website

The education and outreach program can be updated and expanded by the City over time, subject to funding authorization from the Atascadero City Council, to include OWTS related actions such as:

- Emphasize the need to prevent fats, oil and grease from entering the OWTS. Include information on how fats, oil and grease should be managed, avoiding discharge to the OWTS, and information on where the resident may take such waste for proper disposal.
- Discourage the use of garbage disposal units and explain the reasons to system users, namely:
    - they contribute substantial quantities of detrimental solids to the wastewater load, increasing the rate of sludge and scum accumulation in the septic tank;
    - this results in a greater need for and frequency of septage removal; and
    - it results in higher amounts of solids and BOD discharged to disposal field, increasing the potential for soil clogging and system failure.
- Maintain a current list of qualified septic tank pumper/haulers within the City of Atascadero, for easy reference.
- Update description of OWTS maintenance, inspection and reporting requirements.
- Provide educational information on the environmental concerns related to disposal of unused pharmaceuticals, including advice on appropriate handling and disposal practices. Discourage disposal of unused pharmaceuticals into OWTS. Notify the public where such materials can be taken to for proper disposal, including taking unused pharmaceuticals back to any local pharmacy.
- Provide information to residents not to flush items such as dental floss, feminine hygiene products, condoms and other plastics, diapers, cotton swabs, cigarette butts, coffee grounds, cat litter, paper towels, and hazardous chemicals.
- Provide information on the availability and benefits of low-flow plumbing fixtures and other high efficiency water saving devices. This would be done in coordination with the AMWC.
- Inform the public of the benefits of fixing leaky plumbing, thus conserving water, saving on water costs, and reducing load to the OWTS.

- Provide information on the environmental concerns related to water softener brine discharges, including a list of suitable alternatives to conventional onsite self-regenerating water softeners.
- Advise the public to minimize or refrain from using caustic drain openers to un-clog drains. Such chemicals are harmful to bacteria in the septic tank and can upset the biological system necessary for sewage treatment.

## 6.2 ENFORCEMENT

The City of Atascadero has a well-established ordinance and procedure related to OWTS code enforcement. It should be noted that the City's OWTS Ordinance may be updated and revised periodically in response to the City's experience in applying the previsions set forth in the LAMP and to accommodate the development of new technologies. 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 the City initiating enforcement are described below.

### Failure to Obtain a Permit

The OWTS 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 City.

Should the City be made aware of or discover that an OWTS is being installed, modified, repaired or abandoned without a permit, the matter shall be referred to the City Code Enforcement Office for appropriate action. 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 the City 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 the City that system meets all applicable provisions of the OWTS Ordinance.

It is important to note that there was no requirement for a permit to construct an OWTS until the 1950's. 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 permits were required 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 sufficient evidence that the work was completed to the satisfaction of the City. Such evidence might include a letter from the QI that performed the work, QP, photographs of the work, bills for materials etc.

### Surface Effluent

When the City responds to a confirmed complaint of surfacing sewage, the property owner is notified to pump the tank immediately. The City may issue a Notice of Violation indicating that the septic tank must be continually pumped as needed to prevent surfacing effluent until the necessary OWTS repair or replacement is made under a valid permit from the City.

When a structure is tenant-occupied and the effluent is unable to be contained by either pumping the tank or damming/berming the sewage to prevent negative impacts to water quality or the environment, it may be necessary to prohibit occupancy and give a notice to vacate determined by the City. The tenant is notified that water use in the structure should be strictly limited to prevent further contamination of the surrounding environment. Every effort is made to contact the property owner to have the tank pumped and initiate an OWTS repair permit application. In such situations, a Notice of Violation is posted on the dwelling and a copy is mailed to the property owner's address on file with the City of Atascadero. Notwithstanding the provisions of the LAMP, all code enforcement matters shall be implemented with the existing City procedures.

### Inspection/Maintenance

As described in previous sections of the LAMP, the City does not require ongoing, routine inspections of standard (conventional) 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 the City 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. 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. 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, the City 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 provisions of the LAMP and the City's OWTS Ordinance and corrective action is necessary to avoid additional enforcement measures. If a property owner fails to take remedial action after receiving a second Notice of Violation, the City will issue a Notice of Determination of Fine (NDF).

The NDF will list 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.

## 6.3 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 be pumped. The liquid waste pumped from the tank is referred to as septage. Septage is essentially sewage and like sewage must be disposed of in a manner that protects public health.

The Septage Pumping Program is overseen by San Luis Obispo County Environmental Health Services Department. All septic tank waste shall be handled, hauled and disposed of in accordance with County Code Title 8, and all applicable State Laws. All septic pumpers in San Luis Obispo County shall have a current permit with the Department of Environmental Health Services. Whenever a septic tank is pumped, all septage shall be removed from both sides of the tank and transported to a facility approved for the disposal of septage. Septage shall never be released on the surface of the ground, into any sewer manway or cleanout, or into any storm drain.

## 6.4 CESSPOOL DISCONTINUANCE AND PHASE-OUT

The use of cesspools for sewage disposal is not authorized under the OWTS Ordinance. Cesspools are deemed failing systems and must be immediately corrected. Due to the age of many homes in the City (>50 years old) a number of cesspools still exist and continue to be discovered from time-to-time. Historically, discovery and abandonment of existing cesspools has come about: (a) voluntarily by the property owner, (b) in response to complaints, or (c) through OWTS inspections associated with property transfers or building addition or remodeling projects. In the City, the Septage Pumper reporting requirements is expected to accelerate the identification and gradual phase-out of the remaining cesspools in the county.