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3.1 INTRODUCTION

The following pages incorporate State of California requirements, County Ordinances, Board of Supervisors (Board) Resolutions, and Environmental Management Department (EMD) policies, concerning water supplies and sewage disposal for lot creation. This Chapter describes what must be done to prove that each lot can support an onsite sewage disposal system and onsite water supply. This process shall be completed by an applicant prior to approval by the Planning Commission (Commission) or Zoning Administrator. For more information and definitions, please visit EMD's website at: www.edcgov.us/emd

Waste from within the Lake Tahoe watershed shall be placed only into a sewer system and treatment facility sufficient to handle and treat any such waste and transportation facilities sufficient to transport any resultant effluent outside the Lake Tahoe watershed (California Water Code Section 13951).

3.1.1 Zone Change and General Plan Amendments

For zone changes and *General Plan* amendment proposals that, if approved, will increase development densities in areas where public sewer and/or public water is not available, a feasibility report is required.

- A. Onsite Wastewater Treatment Systems: A site evaluation, including soil test pits and percolation tests on at least 10 percent of the proposed lots shall be conducted as part of the feasibility report for zone change approval. All soil types, as delineated in the USDA Soil Survey of El Dorado Area, California, that are present within the zone change request for a specific parcel(s) shall be included. Proposed test pit sites shall be spread throughout the project to obtain an accurate representation of the project sewage disposal capability and sites shall be pre-approved by EMD prior to digging. The test locations shall be accurately shown on a site map. Site evaluations shall be scheduled to include EMD staff in the process. EMD staff may require additional site evaluations and percolation tests when field conditions indicate that there may be development constraints for wastewater disposal.

3.2 SITE EVALUATION FOR WASTEWATER DISPOSAL

The purpose of the site evaluation is to determine whether or not a lot can accommodate an onsite wastewater treatment system, and is required for both ministerial and discretionary applications. The site evaluation includes a soil observation pit (test trench) and percolation test to determine the soil's ability to treat and dispose of wastewater. EMD shall observe all soil observation pits. The

Deleted: For Tentative Maps to be served by onsite sewage disposal systems, the applicant or his agent shall provide a feasibility report. Feasibility studies for onsite sewage disposal systems must be approved by EMD in the form of a written statement prior to a proposed project being scheduled for hearing with either the Commission or the Zoning Administrator. ¶

¶ A site evaluation and percolation test on at least 10 percent of the proposed lots shall be conducted as part of the feasibility report for Tentative Map approval. When less than 10 lots are proposed all lots shall be evaluated. Proposed lots shall have a sewage disposal area shown that meets section 3.3.3 of this Chapter. All soil types listed by the USDA Soil Survey of El Dorado Area, California, shall be included. Proposed test pit sites shall be spread throughout the project to obtain an accurate representation of the project sewage disposal capability and sites shall be pre-approved by EMD prior to digging. The test locations shall be accurately shown on the Tentative Map. Site evaluations shall be scheduled to include EMD staff in the process. EMD staff may require additional site evaluations and percolation tests when field conditions indicate the need in order to approve the proposal for onsite sewage disposal. ¶

¶ All proposed lots shall have a site evaluation conducted and meet criteria in section 3.3 of this Chapter as a condition for Final Map approval. ¶

overall site shall be evaluated by the Consultant/Designer¹. Any specific limitations or conditions that may affect the proposed onsite wastewater disposal system shall be addressed in the site evaluation report.

A site evaluation report is transferable and runs with the land. The report is based upon property conditions at the time of the site evaluation. Changes made to the property after the site evaluation may render the designated area unacceptable. Examples of types of changes include: grading, cuts and fills, new structures, wells, ponds, etc. The property owner must take care not to encumber or alter the designated area in a manner that affects the future system.

In addition, changes in State laws, regulations, County Ordinances, or other policies, governing onsite wastewater treatment systems may necessitate modifications to site evaluation and reporting requirements as well.

3.2.1 Site Evaluation Process

Only licensed Consultants/Designers shall conduct the site evaluation. The Consultant/Designer assists the property owner in locating the appropriate wastewater disposal site on the lot. The Consultant/Designer shall evaluate the soil observation pit(s), and prepare the site evaluation report. The Consultant/Designer shall schedule the time and date of the soil observation pits with EMD.

A. ¹ Consultant/Designer: For this chapter, see <http://www.edcgov.us/> for more information.

3.2.2 Soil Observation Pit(s)

The soil observation pits are to be dug in the area of the proposed wastewater disposal area. If needed, additional soil observation pits may be required to locate a suitable area for the wastewater disposal system, specifically in an area of potential groundwater or shallow soils (www.edcgov.us/emd).

3.2.3 Site Evaluation Report

The Site Evaluation Report shall have the following information on a site map that is drawn to scale:

- A. Required disposal area;
- B. Location of percolation test holes and test pits;
- C. Distance from disposal areas to property lines, easements, driveways, and structures;
- D. Existing structures;
- E. Existing or proposed cuts and/or fills on the property which may affect the onsite wastewater disposal system;
- F. Location of all wells on the lot or on adjacent lots that may affect the onsite wastewater disposal system;
- G. Location of rivers, streams, lakes, ponds, water supply(s), ditches, springs, and wetland areas that may affect the onsite wastewater disposal system;
- H. Percent of slope of the ground in the wastewater disposal area. (NOTE: All development of a lot shall reserve areas that are less than 30 percent slope for wastewater disposal.);
- I. Significant rock outcrops, cuts, fills, and slopes 30 percent or greater which may affect the onsite wastewater disposal system;
- J. Frontage road and all easements pertaining to the property which may affect the onsite wastewater disposal system.

The overall site shall be evaluated by the Consultant/Designer for considerations that may affect the lot's ability to support an onsite wastewater disposal system. Some of these considerations are slopes 30 percent or greater, and setbacks from wells, drainage courses, wetland areas, and cut banks. Any specific limitations or conditions that may impact the proposed onsite wastewater disposal system shall be addressed in the report.

3.3 SUITABLE WASTEWATER DISPOSAL AREAS

3.3.1 Soil and Groundwater Determination

- A. Effective soil depth shall be four feet below the bottom of the design depth.
- B. Depth to groundwater shall be a minimum of five feet below the bottom of the design depth.

- C. Slopes in designated sewage disposal area shall not exceed 30 percent.

3.3.2 Percolation Tests

- A. All percolation tests shall be conducted using standard procedures. See EMD's website: www.edcgov.us/emd.
- B. The location of the percolation test holes shall be evenly distributed horizontally and vertically in the proposed leaching area.
- C. The minimum number of test holes to be dug is four.
- D. Deep trench designs shall be tested at varying depths for proper evaluation of soil.

3.3.3 Minimum Area To Be Shown On Each Lot

For Tentative Maps to be served by onsite sewage disposal systems, the applicant or his agent shall provide a feasibility report. Feasibility studies for onsite sewage disposal systems must be approved by EMD in the form of a written statement prior to a proposed project being scheduled for hearing with either the Commission or the Zoning Administrator.

A site evaluation on at least 10 percent of the proposed lots shall be conducted as part of the feasibility report for Tentative Map approval. All soil types listed by the USDA Soil Survey of El Dorado Area, California, shall be included. Proposed test pit sites shall be spread throughout the project to obtain an accurate representation of the project sewage disposal capability and sites shall be pre-approved by EMD prior to digging. The test locations shall be accurately shown on the Tentative Map. Site evaluations shall be scheduled to include EMD staff in the process. EMD staff may require additional site evaluations when field conditions indicate the need in order to approve the proposal for onsite sewage disposal.

All proposed lots shall have a site evaluation conducted and meet criteria in Table 3.3.3 A. as a condition for Final Map approval.

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The suitable wastewater disposal areas shall be shown on all Tentative Maps. Suitable wastewater disposal areas shall meet all the requirements for an onsite wastewater disposal system, and shall be located so as not to conflict with any other applicable County requirements, including those contained in the County's *General Plan*.

A. The size of available wastewater disposal areas shown on each proposed lot shall correspond to the table below:

Table 3.3.3 A.

PERCOLATION RATE (minutes/inch)	MINIMUM DISPOSAL AREA (square feet)
Less than 10	3,500
11-20	4,800
21-40	6,700
41-60	8,200
61-80	9,500
81-100	10,700
101-120* ²	11,700
121-140	12,500
141-160	13,500
161-180	14,300
181-200	15,100
201-220	15,800
221-240	16,500
Greater than 240 CRWQCB requirement	unsuitable for wastewater disposal

B. Proposed subdivisions of greater than 99 lots shall be submitted for review to the California Regional Water Quality Control Board, Central Valley Region (CRWQCB).

3.4 COMMUNITY SEWAGE DISPOSAL SYSTEMS

3.4.1 Background

EMD shall consider applications for private community wastewater collection and on-site disposal systems (“community systems”). A “community system” is a system which serves more than one lot and may include packaged wastewater treatment plants as acceptable alternatives to traditional wastewater treatment facilities.

This section shall govern the management of all community systems not proposed to be connected to an existing public sewer facility. This section is

² Proposed State Water Quality Control Board regulations may limit percolation rates for new lots to below 120 minutes per inch (mpi). Presently limit is 240 mpi.

intended to regulate the use of new community systems or the expansion of capacity for existing community systems constructed after the effective date of this section for the treatment and disposal of domestic sewage. This section shall be applicable to those users, including residential, commercial, and industrial developments, whose waste discharge can be considered domestic sewage.

3.4.2 Requirements

Community systems shall meet the following requirements:

- A. Ensure protection of the public health.
- B. Assure reliable and reasonable service to the customer.
- C. Prevent degradation of surface and/or subsurface waters.
- D. Minimize any other detrimental environmental effects that could result from the collection, treatment, storage, and disposal of sewage or wastewater associated with on-site sewage disposal systems
- E. In order to set up a community system, the applicant shall cause to be formed a Property Owner's Association, Community Service District, Zone of Benefit, or similar body, hereinafter called "Body"*, which shall be responsible for the normal and routine operation of a community system.
- F. In the event of problems with the operation and maintenance by the Body, the Body shall take all steps necessary to correct the problems in a timely fashion to the satisfaction of EMD.
- G. A defined area of benefit and service fees shall be established prior to the recordation of a Final Map. The funding for this area of benefit shall be set up so as to accrue funds to provide for the future repair or replacement of major components of the system. The level of funding shall be reviewed under authority of the Board on a yearly basis to determine if sufficient monies are available to provide the necessary ability to correct any foreseeable problems with the system. The operating permit shall stipulate the manner in which this funding can be used for project repair or replacement.
- H. The County may require a bond or other accepted surety to cover the initial period until sufficient funds have accrued to the service areas to handle potential problems. The amount of surety may be reduced annually by the amount equal to the reserve funds accrued within the past year.
- I. The operating permit shall be continued until the system, in its entirety, has been abandoned and the dwelling units and other buildings served by such system have been connected to a public sewer system.
- J. This policy shall provide that when a sub regional sewer treatment plant and collection system becomes available, a review of the system will be made. If it is determined by EMD to be

advantageous, the system shall be connected to the public sewer system.

- K. All systems shall be designed by a qualified Registered Professional Engineer, Geologist, or Environmental Health Specialist. The design shall be approved by EMD or when applicable, the California Regional Water Quality Control Board, Central Valley Region. Construction shall be supervised by the appropriate agencies, Engineer, and Body.
- L. The Body will be accountable to the County for the correction of problems or nuisance conditions that may develop.
- M. Prior to recordation of the Final Map, the applicant must have approval assigned and contractual agreement with the Body.
- N. The County has no obligation to issue a permit or enter into a contractual agreement with the applicant solely as a result of this policy.
- O. The Body shall obtain an operating permit and be responsible for operation and maintenance of sewer facilities within the County-maintained streets. In the case of a single owner of a multi-unit residential or recreational type facility (such as a mobile home park or campground), the owner shall be the Body. Provisions shall be made in the operating permit to prevent the termination without the concurrence of all parties. The operating permit shall be tied to the property services so that EMD shall have the authority to assess the Body for any expense incurred, with the right to lien the property should the Body default. The Body must be able to collect funds for the normal operation and maintenance of the system. The Body must have in its employment or a contract with, a person(s) to operate, monitor, and routinely maintain the system on a day-to-day basis. This person(s) shall be a "Certified Onsite Wastewater System Inspector" or State-licensed "Wastewater Treatment Plant Operator". The level of certification shall be commensurate with the required duties and responsibilities.

3.5 SUPPLEMENTAL TREATMENT SYSTEMS

3.5.1 Background

Supplemental treatment systems perform additional wastewater treatment designed to reduce biochemical oxygen demand (BOD) and total suspended solids (TSS) concentrations, and are special design systems that may be used to serve individual single-family residences, multi-family residences, commercial establishments, and institutional or industrial facilities.

3.5.2 Requirements

- A. Subdivisions, multi residential, multi structural, commercial, and industrial developments utilizing supplemental treatment systems shall form an entity to manage the system.
- B. The system shall be installed by one of the following:
 - a. Licensed General Engineering Contractor (Class A),
 - b. General Building Contractor (Class B),
 - c. Sanitation System Contractor (Specialty Class C-42), or
 - d. Plumbing Contractor ("Specialty Class C-36" in accordance with the "California Business and Professions Code", Sections 7056, 7057, and 7058 and Article 3, Division 8); Title 16 of the "California Code of Regulations"; and who is familiar with the supplemental treatment system being installed.
- C. Notwithstanding any other provisions, final approval of the proposed supplemental treatment system(s) shall be at the discretion of the Director of EMD.
- D. Gray water systems shall comply with "Title 22 of the State Water Code" and "Gray water Regulations" of the "Uniform Plumbing Code".

3.5.3 Design Standards

- A. Engineering plans and site data for supplemental treatment systems shall be submitted in accordance with EMD's standard wastewater disposal application procedures.
- B. Site evaluations, including soil profile and percolation testing, shall be conducted in accordance with EMD's standard procedures.
- C. Soil separation between the bottom of the dispersal field and high seasonal groundwater, impervious layer of soil or bedrock, or fractured/weathered bedrock may be reduced to 3 feet.
- D. Onsite Wastewater Treatment Systems with supplemental treatment components shall:
 - 1. Be equipped with a visual or audible alarm, as well as a telemetric alarm, that alert the owner and service provider in the event of system malfunction.
 - 2. At a minimum, provide for 24-hour wastewater storage based on design flow as a means to minimize pollution from overflow discharge after a system malfunction or power outage.

3.5.4 Inspections

- A. Designs for supplemental treatment systems shall be signed by a Consultant/Designer.
 - 1. The Consultant/Designer shall also be responsible for inspection of system installation to assure conformance with approved plans, and shall provide an "As-Built" drawing of the installation to the County and property owner.
 - 2. The construction inspection by the Consultant/Designer shall be in addition to standard County inspection.

- B. The Consultant/Designer shall provide a construction inspection schedule with the design plan which identifies critical points during construction at which time he will make inspections.
- C. Owner/applicant shall grant access to EMD for the periodic inspection of system operation.

3.5.5 Operation, Maintenance and Monitoring Instructions

The Consultant/Designer shall provide operation, maintenance, and monitoring instructions in the design which are brief and simple guidelines regarding the operation of the system, owner responsibilities, and system monitoring requirements.

3.6 OPERATING PERMITS

- A. In addition to a construction permit, an operating permit is required for:
 - 1. All supplemental treatment systems;
 - 2. Pump stations connected to a public sewer system;
 - 3. Large commercial systems;
 - 4. All existing systems requiring repair or additions that are multi family developments with sewage flows exceeding 2500 gallons per day;
 - 5. All commercial and industrial developments not operating under waste discharge requirements set by the State's Regional Water Quality Control Board, Central Valley District; and
 - 6. Any special design systems requiring operating permits, as determined by the Director of EMD.
- B. Operating permits shall be issued at the time of final approval of the system; they are required to be renewed every year at a minimum. Operating permits shall also be renewed at the time of sale or, in the case of commercial properties, upon change of occupants.
- C. An operating permit shall include a contract with a "Certified Onsite Wastewater System Inspector" ("COWA", "NAWT", "NEHA", or other recognized certification program for Onsite Wastewater Treatment inspectors) or a State-licensed Wastewater Treatment Plant Operator, to inspect the system every six months and file a report with EMD within 30 days after the inspection. Further, if the system has a grease trap or interceptor, it shall be inspected and cleaned every three months or as needed.
- D. Operating permits are intended to serve as the tool for verifying the adequacy of the system performance and maintenance and operation.

Permit conditions shall include monitoring and inspection requirements, and other provisions as specified by the Consultant/Designer.

- E. Renewal of an operating permit requires the submission of an application, an application fee, and the written results of required system monitoring and inspection.
- F. Failure to submit a renewal application, the required fee, or specified monitoring and inspection data; or failure to undertake any required corrective work specified by EMD, may be cause for non-renewal or revocation of the operating permit, as well as referral to County Counsel for collection, and the District Attorney for prosecution.
- G. Monitoring requirements shall be recorded with the County of El Dorado Recorder's Office.

3.7 PERFORMANCE MONITORING AND REPORTING

3.7.1 Systems under Operating Permits

- A. Monitoring of systems shall be conducted by or under the supervision of the Consultant/Designer. The County shall conduct spot-check inspections of the systems and may also be present to observe the performance of monitoring activities by others.
- B. Monitoring results shall be submitted to EMD annually, by July 1st, for the preceding 12-month period ending on May 31st.
 - 1. The monitoring report shall be signed by the Certified Onsite Wastewater System Inspector or a State-licensed Wastewater Treatment Plant Operator responsible for the monitoring.
 - 2. Notwithstanding the annual report, the County shall be notified immediately of any significant system problems observed during routine inspection and monitoring or at any other time.
- C. Monitoring requirements will vary depending upon the specific type of system but, in general, they will include the following
 - 1. Recording of wastewater flow based on water meter readings, pump event counters, elapsed time meters, or other approved methods.
 - 2. Inspection and recording of water levels in any monitoring points in the disposal field.
 - 3. Inspection and observation of pump operation or other mechanical equipment; and general inspection of treatment and disposal area for evidence of seepage, effluent surfacing, erosion, or other indicators of system malfunction.

4. The frequency and monitoring shall be in accordance with the supplemental treatment performance requirements of the State Water Quality Control Board as well as the Consultant/Designer's criteria.
- D. Monitoring frequency may be increased if system problems are experienced. Monitoring frequency for each system or type of system will be established by the Consultant/Designer with agreement of EMD.

3.8 MINIMUM SETBACK DISTANCES FOR SEWAGE DISPOSAL AREAS

Table 3.8 A.

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FEATURE REQUIRING SETBACK (4)	DISPOSAL FIELD AND REPLACEMENT AREA	SEPTIC TANK
Perennial stream, lake, pond, marsh or wetland (2)	100'	50'
Well, spring (public or domestic)	100'	100'
Seasonal wet area	50'	50'
Intermittent stream or drainage course (1)	50'	25'
Lake or pond used for drinking water (2)	200'	100'
Road easements, driveways, Buildings (3)	10'	5'
Domestic water service line	5'	5'
Cuts or fills (down gradient)	4x height or depth of cut or fill, 25' maximum	10'
Swimming pools	10'	5'
Property line adjoining private property	10'	5'

1. Measured from the edge

2. Measured from the 10-year high water mark

3. Buildings include porches and steps, whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, walks, covered driveways, and similar structures or appurtenances

4. Definitions in this table are from Resolution #259-99.

3.9 LAND DEVELOPMENT WATER SUPPLY STANDARDS

3.9.1 Proof of Water for Tentative Map Approval

3.9.1.1 Background

As part of the review and approval process, to be submitted with the Tentative Map, the applicant shall demonstrate through production testing, water quality testing, and other studies, that the groundwater supply is adequate to meet the highest demand associated with the project in question. The report must be signed and stamped by the Consultant/Designer.

For lot development dependent on groundwater wells, proof of an adequate water supply shall also be determined from well production and water quality testing (see General Plan Policy 5.2.3.2).

3.9.1.2 Testing Requirements

- A. For Tentative Maps, of more than 10 proposed lots, a minimum of 10 percent of the proposed lots shall have a well drilled. For proof of adequate water quantity, these wells shall then have a 24 hour pump test conducted. The well sites shall be spread throughout the project area to provide an accurate representation of the project water supply. The well sites shall be accurately shown on a site map and submitted with the Tentative Map.

Wells that do not meet the minimum quantity or quality requirements of this section shall be replaced and tested by at least two additional wells, in addition to the 10 percent required above, as determined appropriate by EMD. If a well is drilled on every proposed lot meeting the minimum production criteria of County Policy 800-02 or the "Well Construction and Water Supply Standards Ordinance" and minimum water quality standards, the map may be deemed acceptable for proof of adequate water. For Tentative Maps of 10 lots or less, a feasibility report may be substituted for well drilling.

- B. For Parcel Maps, a minimum of one well shall have a 24 hour pump test or there shall be a well drilled on each parcel that meets the minimum standards of County Policy 800-02 or the "Well Construction and Water Supply Standards Ordinance". For Parcel Maps, a feasibility report may be substituted for well drilling.
- C. Tentative Maps that include rezoning may require a larger percentage of lots to show adequate quantity and quality of water.
- D. The test method shall be approved by EMD prior to testing. These wells shall also be tested for water quality requirements.
- E. The 24 hour production capacity of each tested well shall meet or exceed five gallons per minute.
- F. Water sources may not be combined to meet the minimum production requirement for proposed lots.
- G. Proposed well sites shall be spread throughout the project to obtain an accurate representation of the project water supply and sites shall be pre-approved by EMD prior to drilling. The well locations shall be accurately shown on the Tentative Map.
- H. Water quality testing shall be performed on these pump-tested wells for the following:
 - 1. Primary acute health risks
 - a. Total and fecal coliform
 - b. Nitrate (as NO₃)
 - c. Nitrite (as nitrogen)
 - d. Nitrate plus Nitrite (sum as nitrogen)

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2. Primary chronic (long term use) health risks
 - a. Aluminum
 - b. Antimony
 - c. Arsenic
 - d. Asbestos
 - e. Barium
 - f. Beryllium
 - g. Cadmium
 - h. Chromium
 - i. Fluoride
 - j. Mercury
 - k. Nickel
 - l. Selenium
 - m. Thallium

3. Secondary standards for taste, odor, appearance
 - a. Bicarbonate, carbonate, and hydroxide alkalinity
 - b. Foaming agents (MBAS)
 - c. Odor-threshold
 - d. Methyl-tert-butyl ether (MTBE)-also a primary health standard
 - e. Specific conductance or total dissolved solids
 - f. Calcium
 - g. Chloride
 - h. Color
 - i. Copper
 - j. Iron
 - k. Magnesium
 - l. Manganese
 - m. pH
 - n. Silver
 - o. Sodium
 - p. Sulfate
 - q. Thiobencarb
 - r. Turbidity
 - s. Total hardness
 - t. Zinc

4. Initial results that exceed standards shall be re-sampled by an approved third party to determine compliance.

5. If the level of any inorganic chemical exceeds the MCL, a second sample shall be collected within 14 days to confirm the result. If the second sample result again exceeds the MCL, the well will not be acceptable as proof of an adequate water supply for the purpose of land development.

6. If the second sample result does not exceed the MCL, a third sample shall be taken to confirm the result.
7. If testing confirms that the water quality exceeds State primary acute health risk standards, the well shall not be acceptable as proof of an adequate water supply for the purpose of land development.
8. If testing confirms that the water quality exceeds State primary chronic (long term use) health risk standards (listed above), EMD may consider approval of a treatment process to meet safe health standards for a potable water supply. (See below under Section 3.9.1.3.)
9. Water systems that serve five or more connections shall be operated by a legally created public entity.
10. For lot development dependent on creation of a public water system, all State regulations relating to public water systems, including adequate Technical, Managerial, and Financial Capabilities, shall be met. Please contact, California Department of Public Health, Division of Drinking Water and Environmental Management at (916) 449-5600, or visit <http://ww2.cdph.ca.gov/certlic/drinkingwater/Pages/default.aspx>
11. Public Water System wells are required to be pump tested following criteria specified by the California Department of Public Health, Division of Drinking Water and Environmental Management.

3.9.1.3 Treatment Process

A. Applicability and Intent

1. Treatment and monitoring shall be implemented in cases when State primary chronic (long term use) health risk standards are exceeded.
2. This section shall govern the management of individual systems not proposed to be connected to an existing public water supply. This section shall be applicable to those users, including residential, commercial, and industrial developments, whose water is supplied by individual wells.
3. This section shall be liberally construed to:
 - a. Ensure protection of the public health;
 - b. To assure reliable and reasonable service to the property owner.

B. Requirements:

1. The proposal shall provide, at a minimum, all of the following:

- a. A treatment process, certified by a third party (ANSI, NSF, State Department of Public Health, or other official agency), that will consistently maintain the level of the chemical(s) to a safe level.
 - b. The applicant shall cause to be formed a Property Owner's Association, Community Service District, Zone of Benefit, or similar body, (hereinafter called "Body"), which shall be responsible for the normal and routine maintenance and operation of the system(s).
 - c. The Body shall provide a State Certified Water Treatment Plant Operator to operate and maintain the treatment system; and to report to EMD.
2. An operating permit shall be obtained from EMD and stipulate the manner in which this funding can be used for project repair or replacement.
 3. The County may require a bond or other accepted surety to cover the initial period until sufficient funds have accrued to the service areas to handle potential problems. The amount of surety may be reduced annually by the amount equal to the reserve funds accrued within the past year.
 4. The operating permit shall be continued until the system, in its entirety, has been abandoned and the dwelling units and other buildings served by such system have been connected to a public water system.
 5. The Body will be accountable to the County for the correction of problems or nuisance conditions that may develop.
 6. Prior to recordation of Final Map, the applicant shall have created the Body that will be responsible for operation and maintenance of all water facilities within the development.
 7. In the event of problems with the operation and maintenance by the Body, the Body shall take all steps necessary to correct the problems in a timely fashion to the satisfaction of the EMD.
 8. A defined area of benefit and service fees within shall be established prior to the recordation of a Final Map. The funding for this area of benefit shall be set up so as to accrue funds to provide for the future repair or replacement of major components of the system(s). The level of funding shall be reviewed under authority of the Board on a yearly basis to determine if sufficient monies are available to provide the necessary ability to correct any foreseeable problems with the system(s).

3.9.2 Lot Size

Pursuant to *General Plan* Policies 5.2.3.5 and 5.3.1.2, all lots using individual wells ~~and individual septic systems~~ shall ~~average~~ at least 5 acres. ~~Adjustments may be considered consistent with the parcel size exception policy and ordinances.~~ In areas with groundwater supply limitations, the lot size ~~may be required to average not~~ less than 10 acres.

Deleted: for the domestic water source

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Deleted: (This includes both ministerial and discretionary applications.)

3.9.3 Setbacks

Table 3.9.3 A.

Potential Contamination Source	Minimum Setback Distance to Well (in feet) ³
Sewer line (main or lateral)	50
Public drinking water main	50
Onsite wastewater treatment system (both septic tank and leach lines)	100
Animal or fowl enclosure with solid wastes constituting a nuisance ⁴	100
Abandoned dump site	1000
Flooded areas and drainages	Avoid or divert away from well

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Notes:

- A. It is recommended that a well be placed at least 100 feet from a property line to protect the well from development on an adjacent lot.
- B. If a drill site is located within zoning setbacks (as prescribed in the County's "Title 17 Zoning Ordinance"), no structure over 30" high can be constructed over the wellhead.

3.9.4 Justification for Final Map Approval

Prior to the filing of a Final Map, acceptable proof shall be provided to EMD that each lot has a safe and reliable water supply.

3.9.5 Water Requirements for Final Map Approval

- A. Water wells must be:
 - 1. Constructed to the standards specified in "Water Well Standards", State of California, Department of Water Resources, Bulletins 74-81, 74-90, and subsequent supplements or revisions;
 - 2. Capable of providing to each connection a minimum of five gallons per minute, either from the well itself or a combination of well and storage (See Chapter 2, section 2.5.6, of this manual and also the applicable fire protection district for fire protection water storage requirements.);
- B. Wells producing less than one gallon per minute shall not be accepted as an adequate water supply for the purpose of a building permit.
- C. The production capacity of a well for a single family dwelling shall be determined from a four hour well production test per EMD's requirements.

³ Lesser or greater separation distances may be approved by the Environmental Management Department based on specific site conditions.

⁴ As defined in the County's "Solid Waste Management Ordinance"

The production capacity is valid for two years from the date of testing and shall be certified with an original signature by a licensed Well Driller, Pump Contractor, or other professional person approved by EMD.

- D. Well production test reports shall include the start and end time of the test period. Test reports shall be submitted on company letterhead and signed by the person performing the test.
- E. A report of water quality, analyzed by a California State certified laboratory, shall be submitted to EMD on the proposed water supply.
- F. Water quality reports shall include, at a minimum, all of the required constituents in section 3.9.1 of this Chapter.
- G. Water supplies that exceed State primary drinking water health standards for chronic contaminants shall have a deed restriction recorded on the lot that the water supply is not potable without installation of a certified treatment system that reduces the contaminant level to safe health standards.
- H. Additional water quality parameters may be required depending on the location of the lot, susceptibility to other contaminants, results of testing conducted during Tentative Map proof of water documentation, and future drinking water standards.

3.9.6 Zone Change and General Plan Amendments

This section applies to water supplies for individual wells.

For zone changes, a minimum of 10 percent of the maximum allowable lots shall have a well drilled. For proof of adequate water quantity, these wells shall then have a 24 hour pump test conducted. The well sites shall be spread throughout the project area to provide an accurate representation of the project water supply. The well sites shall be accurately shown on a site map and submitted with the zone change land feasibility report.

3.10 AIR QUALITY

3.10.1 Emission Sources

Several types of emission sources need to be considered when evaluating the impacts of a project under CEQA.

- A. Indirect Sources: For many development projects, motor vehicle trips are the principal source of air pollution. Projects in this category, such as shopping centers, office buildings, arenas, and residential developments, are often referred to as "indirect sources." This is because they do not

directly emit significant amounts of air pollutants from onsite activities, but cause additional emissions from motor vehicles traveling to and from the development.

- B. Area Sources: Most development projects also generate “area source” emissions. Area sources are sources that individually emit fairly small quantities of air pollutants, but which cumulatively may represent significant quantities of emissions. Water heaters, fireplaces, lawn maintenance equipment, and application of paints and lacquers are examples of area source emissions.
- C. Stationary Sources: Certain projects also may directly generate stationary or “point” source emissions from operations. Although most area sources discussed above are stationary, the term stationary or point source usually refers to equipment or devices operating at industrial and commercial facilities. Examples of facilities with stationary sources include manufacturing plants, quarries, print shops and gasoline stations.
- D. Temporary Sources: Finally, consideration must be given to emissions from the operation of equipment and vehicles, as well as dust emissions, during the construction phase of a project. In some cases, construction emissions, even though they are temporary, may be greater than emissions from subsequent operation of the project.
- E. Land Use: Land use decisions are critical to air quality planning because land use patterns greatly influence transportation needs, and motor vehicles are the largest source of air pollution in the Air Pollution Control District (District). The location, intensity, and design of land use development projects significantly influence how people travel. For example, land use strategies such as locating moderate or high-density development near transit stations increases opportunities for residents/employees to use transit rather than drive their cars. Similarly, design considerations such as orienting a building entrance towards a sidewalk and/or transit stop increases the attractiveness of walking and transit as an alternative to driving.

3.10.2 Design Elements

Some important land use and design elements that help improve air quality include the following:

- A. Encourage the development of higher density housing and employment centers near transit stations;
- B. Encourage compact development featuring a mix of uses that locates residences near jobs and services;

- C. Provide neighborhood retail within or adjacent to large residential developments;
- D. Provide services, such as restaurants, banks, copy shops, post office, etc., within office parks and other large employment centers. Encourage infill development;
- E. Be sure that the design of streets, sidewalks, and bike paths/routes within a development encourages walking and biking;
- F. Orient building entrances towards sidewalks and transit stops;
- G. Provide landscaping to reduce energy demand for cooling;
- H. Orient buildings to minimize energy required for heating and cooling.

By incorporating such measures in local plans and addressing them during initial contacts with project proponents, the environmental impacts of development proposals may be lessened and environmental review processes simplified. The District encourages project proponents to use computer tools that analyze emissions from development projects and assist in developing different designs or alternatives with reduced air quality impacts. Contact the District for information or assistance.

3.10.3 Permit Requirements

State law requires any facility that has the potential to emit air contaminants to apply for a permit from the District. If you have any question about whether you need a permit, contact the District at (530) 621-6662.

Air Pollution Control District
(530) 621-6662
www.edcgov.us/emd