

CHAPTER 3 – SEWAGE, WATER REQUIREMENTS, AND AIR QUALITY (draft rev. 10/01/10; Source Doc Draft 1-6-11)

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"Shall" (or similar) Statement	Implementing State/Federal Law, General Plan Policy, or County Ordinance
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3.1 Introduction

The following pages incorporate State 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 of this manual 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, visit EMD’s website. (See Chapter 7, Section 7.1 of this manual for contact and website information.)

County Ordinance Chapter 16.68

County Ordinance Chapter 15.32

County Ordinance Chapter 8.39

BOS Resolution 259-99

California Regional Water Quality Control Board, Central

Valley Region Basin Plan,

Guidelines For Waste Disposal

From Land Developments

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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).

California Regional Water

Quality Control Board, Lahonton

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3.1.1 Zone Change and General Plan Amendments

A feasibility report is **required** for proposed projects that would require a zone change or *General Plan* amendment that, if approved, would increase development densities in areas where public sewer and/or public water is not available.

General Plan Policy 2.2.5.3

County Ordinance Chapter 16.68
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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.

County Ordinance Chapter 15.32
BOS Resolution 259-99
County Ordinance Chapter 16.68

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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 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.

County Ordinance Chapter 15.32
BOS Resolution 259-99

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¹ For this Chapter of this manual.

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.

County Ordinance Chapter 15.32

BOS Resolution 259-99

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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.

3.2.3 Site Evaluation Report

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

County Ordinance Chapter 15.32

BOS Resolution 259-99

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- 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: Areas of lots that are less than 30 percent slope **shall** be reserved for wastewater disposal.),
- I. Significant rock outcrops, cuts, fills, and slopes 30 percent or greater which may affect the onsite wastewater disposal system, and
- 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 property lines, easements, 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.

County Ordinance Chapter 15.32

BOS Resolution 259-99
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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.

County Ordinance Chapter 15.32

BOS Resolution 259-99

California Regional Water Quality Control Board, Central Valley Region Basin Plan, Guidelines For Waste Disposal From Land Developments

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3.3.2 Percolation Tests

County Ordinance Chapter

- A. All percolation tests **shall** be conducted using standard procedures. See EMD’s website. 15.32
BOS Resolution 259-99
- B. The location of the percolation test holes **shall** be evenly distributed horizontally and vertically in the proposed leaching area. ???
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- 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 agent **shall** provide a feasibility report. Feasibility reports 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.

California Regional Water Quality Control Board, Central Valley Region Basin Plan, Guidelines For Waste Disposal From Land Developments Modified By SAGE
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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 in the process. EMD may require additional site evaluations when field conditions indicate the need in order to approve the proposal for onsite sewage disposal.

County Ordinance Chapter 15.32
BOS Resolution 259-99
County Ordinance Chapter 16.68
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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.

???General Plan Goal 5.3
California Regional Water Quality Control Board, Central Valley Region Basin Plan, Guidelines For Waste Disposal

From Land Developments

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 *General Plan*.

General Plan Goal 5.3
California Regional Water
Quality Control Board, Central
Valley Region Basin Plan,
Guidelines For Waste Disposal
From Land Developments

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

California Regional Water Quality Control Board, Central Valley Region Basin Plan, Guidelines For Waste Disposal From Land Developments

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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 ⁽¹⁾	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

⁽¹⁾ Proposed State Water Quality Control Board regulations may limit percolation rates for new lots to below 120 minutes per inch (mpi).

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).

California Regional Water Quality Control Board, Central Valley Region Basin Plan, Guidelines For Waste Disposal From Land Developments

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3.4 Community Sewage Disposal Systems

General Plan Policy 5.3.1.4

3.4.1 Background

EMD **shall** consider applications for private community wastewater collection and on-site disposal systems

County Ordinance Chapter 15.32 BOS Resolution 259-99

(“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 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.

County Ordinance Chapter
15.32 ???

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3.4.2 Requirements

County Ordinance Chapter
15.32

Community systems **shall** meet the following requirements:

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- 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. 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 Specialist² as approved by EMD. The design **shall** be approved by EMD or when applicable, the CRWQCB. 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 approved 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 section or these requirements,
- 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

² A person registered as an Environmental Health Specialist (REHS) by the State of California.

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

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| A. | Subdivisions, multi residential, multi structural, commercial, and industrial developments using supplemental treatment systems shall form an entity to manage the system. | <u>County Ordinance Chapter 15.32</u>
<u>???</u> |
| B. | The system shall be installed by one of the following licensed contractors: | <u>County Ordinance Chapter 15.32</u> <u>???</u> |
| | 1. Licensed General Engineering Contractor (Class A), | |
| | 2. General Building Contractor (Class B), | |
| | 3. Sanitation System Contractor (Specialty Class C-42), or | |
| | 4. 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 EMD Director. | <u>County Ordinance Chapter 15.32</u>
<u>???</u> |
| D. | Gray water systems shall comply with Title 22 of the State Water Code and Gray Water Regulations of the Uniform Plumbing Code. | <u>Title 22 and Uniform Plumbing Code, Sections/Chapters 16axxx</u> |

3.5.3 Design Standards

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| A. | Engineering plans and site data for supplemental treatment systems shall be submitted in accordance with EMD's standard wastewater disposal application procedures. | <u>County Ordinance Chapter 15.32</u>
<u>???</u> |
| B. | Site evaluations, including soil profile and percolation testing, shall be conducted in accordance with EMD's standard procedures. | <u>???</u> |
| 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 three feet. | |

D. Onsite Wastewater Treatment Systems with supplemental treatment components **shall**: County Ordinance Chapter 15.32

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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 a 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.

County Ordinance Chapter 15.32 BOS Resolution 259-

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1. The Consultant/Designer **shall** also be responsible for the 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.

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2. The construction inspection by the Consultant/Designer **shall** be in addition to standard County inspection.

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B. The Consultant/Designer **shall** provide a construction inspection schedule with the design plan which identifies critical points during construction at which time inspections will occur.

County Ordinance Chapter 15.32 BOS Resolution 259-

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C. Owner/applicant **shall** grant access to EMD for the periodic inspections of system operation.

County Ordinance Chapter 15.32 BOS Resolution 259-99

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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.

County Ordinance Chapter 15.32 General Plan Policy

5.3.2.4 BOS Resolution 259-99???

3.6 Operating Permits

- A. In addition to a construction permit, an operating permit is **required** for: County Ordinance Chapter 15.32 BOS Resolution 259-99
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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 CRWQCB, and
 6. Any special design systems requiring operating permits, as determined by the EMD Director.
- B. Operating permits **shall** be issued at the time of final approval of the system and 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. County Ordinance Chapter 15.32 General Plan Policy 5.3.2.4 BOS Resolution 259-99???
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- 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. County Ordinance Chapter 15.32 General Plan Policy 5.3.2.4 BOS Resolution 259-99???
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- 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. County Ordinance Chapter 15.32 General Plan Policy 5.3.2.4 BOS Resolution 259-99
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- 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 Recorder’s Office. County Ordinance Chapter 15.32 General Plan Policy 5.3.2.4 BOS Resolution 259-99???

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. County Ordinance Chapter 15.32 General Plan Policy 5.3.2.4 BOS Resolution 259-99???
- 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. County Ordinance Chapter 15.32 General Plan Policy 5.3.2.4 BOS Resolution 259-99???
 - 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 CRWQCB as well as the Consultant/Designer’s criteria. County Ordinance Chapter 15.32 General Plan Policy 5.3.2.4 BOS Resolution 259-99???

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 from EMD.

3.8 Minimum Setback Distances for Sewage Disposal Areas

Table 3.8.A.

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 El Dorado County Board of Supervisors 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 for a Tentative Map, the applicant **shall** demonstrate through production testing, water quality testing, and other studies, that the

General Plan Policy 5.2.3.2

General Plan Policy 5.2.3.4

General Plan Objective 5.2.3

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. ???

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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*). **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** have a 24 hour pump test conducted. 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. General Plan Policy 5.2.3.4
General Plan Policy 5.2.3.2
California Code of Regulations Title 17 and 22
General Plan Objective 5.2.3

B. 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 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. ???
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C. 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. ???
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D. Tentative Maps that include rezoning may **require** a larger percentage of lots to show adequate ???
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- quantity and quality of water.
- E. The test method **shall** be approved by EMD prior to testing. These wells **shall** also be tested for water quality requirements.
- F. The 24 hour production capacity of each tested well **shall** meet or exceed five gallons per minute. ???
- G. Water sources **may not** be combined to meet the minimum production requirement for proposed lots. ???
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- H. Water quality testing **shall** be performed on these pump-tested wells for the following: ???
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1. Primary acute health risks:
 - a. Total and fecal coliform,
 - b. Nitrate (as NO₃),
 - c. Nitrite (as nitrogen), and
 - d. Nitrate plus Nitrite (sum as nitrogen).
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, and
 - m. Thallium.
3. Secondary standards for taste, odor, and 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, and
 t. Zinc.
4. Initial results that exceed standards **shall** be re-sampled by an approved third-party to determine compliance. California Code of Regulations Title 17 and 22 General Plan Objective 5.2.3
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5. If the level of any inorganic chemical exceeds the Maximum Containment Level (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. California Code of Regulations Title 17 and 22 General Plan Objective 5.2.3
California Code of Regulations Title 17 and 22???
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.** ???
California Code of Regulations Title 17 and 22 General Plan Objective 5.2.3
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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 Section 3.9.1.3 of this Chapter.)
9. Water systems that serve five or more connections **shall** be operated by a legally created public entity. California Code of Regulations Title 17 and 22 General Plan Objective 5.2.3
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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. Contact California Department of Public Health, Division of

Drinking Water and Environmental Management. (See Chapter 7, Section 7.1 of this manual for contact and website information.) ???

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. California Code of Regulations Title 17 and 22
General Plan Objective 5.2.3
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3.9.1.3 Treatment Process

- A. Applicability and Intent California Code of Regulations Title 17 and 22
1. Treatment and monitoring **shall** be implemented in cases when State primary chronic (long term use) health risk standards are exceeded. General Plan Objective 5.2.3
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 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, and ???
 - 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: California Code of Regulations Title 17 and 22???
General Plan Objective 5.2.3
 - 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, CSD, 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 **shall** be accountable to the County for the correction of problems or nuisance conditions that may develop.
 6. Prior to recordation of the 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 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.

General Plan Policies 5.2.3.5 and 5.3.1.2

General Plan Policies 5.2.3.5 and 5.3.1.2

3.9.3 Setbacks

Table 3.9.3.A.

Potential Contamination Source	Minimum Setback Distance to Well (in feet) ⁽¹⁾
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 ⁽²⁾	100
Abandoned dump site	1000
Flooded areas and drainages	Avoid or divert away from well

⁽¹⁾ Lesser or greater separation distances may be approved by EMD based on specific site conditions.

⁽²⁾ As defined in the County’s “Solid Waste Management Ordinance”.

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.

General Plan Objective 5.2.3

???

3.9.5 Water Requirements for Final Map Approval

A. Water wells **must** be:

General Plan Objective 5.2.3

???

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, and
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 of this manual and the fire protection district having jurisdiction).

- 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. EMD Policy 800-02 General Plan Objective 5.2.3
County Ordinance Chapter 8.39
???
- 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. 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. EMD Policy 800-02 General Plan Objective 5.2.3
County Ordinance Chapter 8.39
???
???
- 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. EMD Policy 800-02 General Plan Objective 5.2.3
County Ordinance Chapter 8.39
???
???
- E. A report of water quality, analyzed by a California State certified laboratory, **shall** be submitted to EMD on the proposed water supply. County Ordinance Chapter 8.39
California Code of Regulations Title 17 and 22???
- F. Water quality reports **shall** include, at a minimum, all of the required constituents in Section 3.9.1 of this Chapter. California Code of Regulations Title 17 and 22???
- 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. California Code of Regulations Title 17 and 22
???
- 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. California Code of Regulations Title 17 and 22???

3.9.6 Zone Change and General Plan AmendmentsGeneral Plan Policy 2.2.5.3

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** 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.

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3.10 Air Quality

3.10.1 Permit Requirements

State law **requires** any facility that has the potential to emit air contaminants to apply for a permit from the AQMD. Contact the District for further information.

???**CEQA**