



# COMMUNITY DEVELOPMENT DEPARTMENT OWTS DIVISION

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## Minimum Distances Between Components of an On-site Wastewater Treatment System and Physical Features

### Colorado Department of Public Health & Environment- Water Quality Control Commission Regulation No. 43- On\_site Wastewater Treatment System Regulation, 5 CCR 1002-43

	Spring, Well <sup>1</sup> , Suction Line, Potable Water Supply Cistern <sup>4</sup>	Potable Water Supply Line <sup>2</sup>	Structure w/Basement, Crawl Space or Footing drains	Structure Without Basement, Crawl Space or Footing Drains	Property Lines, Piped or Lined Irrigation Ditch, Upslope Curtain Drain	Subsurface Drain, Intermittent Irrigation Lateral, Drywell, Stormwater Structure	Lake, Water Course, Irrigation Ditch, Stream, Wetland	Dry Gulch, Cut Bank, Fill Area (from Crest)	Septic Tank, Higher Level Treatment Unit, Dosing Tank, Vault or Privy
Septic Tank, Higher Level Treatment Unit, Dosing Tank, Vault or Vault Privy	50 <sup>(2)</sup>	10 <sup>(2)</sup>	5	5	10	10	50	10	--
Building Sewer or Effluent Lines	50 <sup>(2)</sup>	5 <sup>(6)</sup>	0	0	10 <sup>(2)</sup>	10 <sup>(2)</sup>	50 <sup>(2)</sup>	10 <sup>(2)</sup>	--
STA Trench, STA Bed, Unlined Sand Filter, Sub-surface Dispersal System, Seepage Pit	100 <sup>(3)</sup>	25 <sup>(2)</sup>	20	10	10	25	50 <sup>(3)</sup>	25	5
Lined Sand Filter	60	10 <sup>(2)</sup>	15	10	10	10	25	10	5
Lined Evapo- transpiration Field or Outside of Berm of Lined Wastewater Pond	60	10 <sup>(2)</sup>	15	15	10	10	25	10	5
Unlined Sand Filter in Soil With a Percolation Rate Slower than 60 Minutes per Inch, Unlined or Partially Lined Evapotrans- piration System, Outside of Berm of Unlined Wastewater Pond, or System Not Relying on STA for Treatment Other than Aerosol	100	25 <sup>(2)</sup>	15	15	10	25	25	15	10
Slit Trench Latrine, Pit Privy	100	50 <sup>(2)</sup>	25	25	25	25	100	25	N/A
System Not Relying on STA for Dispersal	100 <sup>(3)</sup>	10 <sup>(2)</sup>	125	125 <sup>(5)</sup>	10	0	25 <sup>(3)</sup>	10	10

NOTE: The minimum distances shown above must be maintained between the OWTS components and the features described. Where soil, geological or other conditions warrant, greater distances may be required by the local board of health or by the Water Quality Control Commission pursuant to section 25-8-206, C.R.S. and applicable regulations. For repair or upgrading of existing OWTS where the size of lot precludes adherence to these distances, a repaired OWTS must not be closer to setback features than the existing OWTS, as reviewed and approved by the local public health agency. Components that are not watertight should not extend into areas of the root system of nearby trees.

(1) Includes potable wells, irrigation wells and monitoring wells set within a potable aquifer and infiltration galleries permitted as wells by the Division of Water Resources.

(2) Crossings or encroachments may be permitted at the points as noted above provided that the water or wastewater conveyance pipe is encased for the minimum setback distance on each side of the crossing. A length of pipe with a minimum Schedule 40 rating [ASTM Standard D 3034-16 (2016 version)] of sufficient diameter to easily slide over and completely encase the conveyance must be used. Rigid end caps of at least Schedule 40 rating [ASTM Standard D 3034-16 (2016 version)] must be glued or secured in a watertight fashion to the ends of the encasement pipe. A hole of sufficient size to accommodate the pipe must be drilled in the lowest section of the rigid cap so that the conveyance pipe rests on the bottom of the encasement pipe. The area in which the pipe passes through the end caps must be sealed with an approved underground sealant compatible with the piping used. Other methods of encasement that provide equal protection are allowed. These methods must be reviewed and approved by the local public health agency.

(3) Add eight feet additional distance for each 100 gallons per day of design flows between 1,000 and 2,000 gallons per day, unless it can be demonstrated by a professional engineer or geologist by a hydrologic analysis or the use of a barrier, consisting of a minimum 30 mil PVC liner or equivalent, that contamination will be minimized. If effluent meets Treatment Level 3N and the local public health agency has a maintenance oversight program in accordance with section 14.D. of this regulation, the distance addition is not required. Flows greater than 2,000 gallons per day must be hydrologically analyzed for flow, velocity, hydraulic head, and other pertinent characteristics as means of estimating distances required to minimize contamination as part of the Division site application and permitting process.

(4) All horizontal setbacks to a potable water supply cistern must be met unless a variance by the Board of Examiners of Water Well Construction and Pump Installation Contractors is granted per section 18.2 of the Water Well Construction Rules, 2 CCR 402-2. Setback requirements which may necessitate a variance are found within section 10.2 or 11.4 of the Water Well Construction Rules, as applicable. The minimum horizontal setback that may be granted through a variance is to 25 feet.

(5) If the structure is not used as a habitable unit, the isolation may be reduced by the local board of health to no less than 50 feet.

(6) Building sewer installations shall meet the design requirements of the Colorado Plumbing Code.