

**ALPINE COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH SERVICES**

**CHAMBER LEACHING SYSTEMS POLICY
JANUARY 2004**

INTRODUCTION

The following guidelines are recommended for sizing, installing and inspecting chamber leach systems in Alpine County.

APPROVAL FOR USE IN ALPINE COUNTY

The Uniform Plumbing Code recognizes the use of plastic chamber leaching devices. Infiltrator products are approved in 15 states and 24 counties in California. These models include High Capacity, Standard, EQ 36 and EQ 24 Infiltrator Systems and are approved for use in Alpine County with the conditions noted in this policy and on the attached table. A permit must be obtained from the Alpine County Health Department, Environmental Health Division, for their installation as a wastewater leaching device.

SIZING

Attached to this policy is a sizing chart approved for use of four models of Infiltrator leaching chambers. The chart represents the sizing recommended by the Manufacturer with the exception that a 6-15 Minute Per Inch (MPI) percolation rate was combined with the 16-30 MPI range, thus the sizing criteria for 6-30 MPI soils are more conservative. The application rates from the USEPA Design Manual for Onsite Wastewater Treatment and Disposal Systems (DPA 625/1-80-012, table 7-2, p.214) provided the basis for sizing of Infiltrator chambered systems. A peak flow of 150 gallons per day per bedroom was used as estimated residential flows. A comparison of conventional rock filled trenches to Infiltrator chamber leachfields indicates that the amount of disposal area required is approximately equal. The conventional rock filled leach field requirements for a three bedroom house with 6-30 MPI soils would require a total of 138 lineal feet of trench that has 2 ½ feet of rock in an 18 inch wide trench.. The rock filled trenches would require approximately 552 square feet of disposal area. Use of the Infiltrator High Capacity model for the same parcel would require 125 lineal feet of chambers (20 chambers at 6.3 lineal feet per chamber). The Infiltrator system would require approximately 558 square feet of disposal area.

For commercial installation, only the Infiltrator High Capacity model will be permitted. Commercial systems will be designed based on the peak daily flow. The sizing chart indicates the peak gallons per day per chamber for different soil percolation rates.

INSTALLATION

1. All current separations and sanitary setbacks that apply to standard leachrock filled trenches shall apply to the installation and siting of all chamber leaching devices.
2. Slope constraints will be the same as for standard leachrock filled trenches. The maximum slope is 30%.
3. Trenches for the High Capacity and Standard Models shall be placed at least 3 feet edge to edge. The EQ 36 and EQ 24 shall be placed at least 2 feet edge to edge.
4. The manufacturer requires proper placement of native fill in the sidewall area to the top of the chamber slots prior to the placement of final cover. The fill shall be foot compacted into place to provide support and to achieve full strength. Final cover shall be screened of all boulders and rocks greater than 4 inches in diameter.
5. Inspection risers shall be provided at the end of each trench. The inspection pipe shall be secured to the chamber in a manner that prevents its accidental removal and permits soil from entering the chamber.
6. The infiltrator chambers are rated for light vehicular travel. They are not guaranteed for heavy loads such as cement or propane trucks. Sincere there is no way to assure what type of traffic will occur in driveways after installation, Alpine County will not approve the Infiltrator chambers for use in driveways or parking lots.

INSPECTIONS

Construction inspections shall be conducted at the open trench phase and when all units have been physically placed and connected. The installer shall demonstrate to the inspector that trenches are level and prepared (scarified) according to the manufacturer's instructions. Representative sections of each trench shall be left open until inspected. The installer shall read and follow the manufacturer's installation instructions.

CHAMBER LEACHING SIZING REQUIREMENTS
(Total Linear Feet of Trench/Number of Chambers)

MODEL	1-5 MPI	6-30 MPI	31-60 MPI	60-120 MPI
HIGH CAPACITY				
1 Bedroom	63/10	63/10	63/10	125/20
2 Bedrooms	63/10	88/14	113/18	250/40
3 Bedrooms	63/10	125/20	169/27	375/60
4 Bedrooms	88/14	169/27	225/36	500/80
Additional Bedrooms	19/3	44/7	57/9	125/20
Peak GPD/Chamber	42.9	22.2	16.7	7.5
STANDARD MODEL				
1 Bedroom	75/12	75/12	75/12	150/24
2 Bedrooms	75/12	100/16	138/22	300/48
3 Bedrooms	75/12	150/24	200/32	450/72
4 Bedrooms	100/16	200/32	269/43	600/96
Additional Bedrooms	25/4	50/8	69/11	150/24
Peak GPD/Chamber	37.5	18.8	14.0	6.3
EQ 36				
1 Bedroom	100/12	100/12	100/12	192/23
2 Bedrooms	100/12	125/15	175/21	375/45
3 Bedrooms	100/12	192/23	250/30	567/68
4 Bedrooms	126/15	250/30	334/40	750/90
Additional Bedrooms	34/4	67/8	84/10	192/23
Peak GPD/Chamber	40.0	20.0	15.0	6.7

