

WAC 246-272B-06800 Recirculating gravel filters. (1) A recirculating gravel filter may be used to meet Treatment Level C.

(2) Pressure distribution of the effluent to the filter media is required.

(3) Filter media must meet the following specifications:

(a) Effective particle size between three mm and five mm; and

(b) Uniformity coefficient less than or equal to two.

(4) Filter media depth must be at least thirty-six inches.

(5) The recirculating pump must be controlled by a timer.

(6) The dosing schedule must provide for at least forty-eight doses per day, equally spaced throughout the day.

(7) Doses must be uniform in volume.

(8) The influent or filtrate mixture must cycle through the filter five times before dispersal.

(9) The maximum hydraulic loading rate for the gravel filter is five gallons per day per square foot, if influent BOD₅ is no greater than 230 mg/L.

(10) The hydraulic loading rate must be calculated on the basis of the incoming BOD as follows:

$$\text{Loading Rate (expressed as gpd/ft}^2\text{)} = \frac{1150}{\text{BOD}_5 \text{ of septic tank effluent}}$$

(11) The maximum influent values are:

(a) BOD₅ - 575 mg/L; and

(b) O&G - 30 mg/L.

(12) The minimum horizontal setback from the recirculating gravel filter must meet the sewage tank requirements in Table 3 in WAC 246-272B-06050.

(13) The filter bed must be contained in:

(a) A flexible membrane-lined pit where the membrane has a minimum thickness of thirty mm and there is a three-inch layer of sand beneath the membrane; or

(b) A concrete vessel that is water tight, durable, and structurally sound.

(14) Monitoring ports for recirculating gravel filters must meet the requirements in WAC 246-272B-06400 (3)(b).

(15) Two monitoring ports must be installed every one thousand square feet in the recirculating gravel filter and distributed uniformly throughout the filter area.

(a) One monitoring port must be installed to the top of the media interface; and

(b) One monitoring port must be installed to the bottom of the underdrain.

(16) The minimum volume of a recirculating mixing tank is:

(a) One hundred fifty percent of the daily design flow for residential applications; or

(b) One hundred percent of the daily design flow for nonresidential applications.

(17) Underdrain and filtrate handling must be designed as required in WAC 246-272B-06750 (11), (12), and (13).

(18) The return flow from the recirculating gravel filter must be split to direct:

(a) A minimum of eighty percent of the effluent back to the recirculating or mixing tank; and

(b) The remainder to the drainfield or next downstream LOSS component.

[Statutory Authority: RCW 70.118B.020. WSR 11-12-035, §
246-272B-06800, filed 5/25/11, effective 7/1/11.]