



DESCRIPTION:

A family of systems in which the majority of the runoff from small storms is infiltrated into the ground rather than discharged to a surface water body. Infiltration systems include: ponds, vaults, trenches, dry wells, porous pavement, and concrete grids.

APPLICATION:

- ▶ Suitable site soils and geologic conditions; low potential for long-term erosion in the watershed.

INSTALLATION/APPLICATION CRITERIA:

- ▶ Volume sized to capture a particular fraction of annual runoff.
- ▶ Pretreatment is necessary in fine soils.
- ▶ Emergency overflow or bypass for larger storms is needed.
- ▶ Observation wells are required in trenches.
- ▶ Infiltration surface must be protected during construction.
- ▶ Pond sides need vegetation to prevent erosion.
- ▶ During construction frequent inspection for clogging is necessary.
- ▶ Line sides of trench with permeable filter fabric
- ▶ Trench should be filled with clean washed stone or gravel. (1.5-3.0 in.)
- ▶ A six inch sand filter layer; cloth lines the bottom of trench.

LIMITATIONS:

- ▶ Loss of infiltrative capacity and high maintenance cost in fine soils.
- ▶ Low removal of dissolved pollutants in very coarse soils.
- ▶ Not suitable on fill sites or steep slopes.
- ▶ The risk of ground water contamination in very coarse soils, may require ground water monitoring.

MAINTENANCE:

- ▶ Remove sediment at a frequency appropriate to avoid excessive concentrations of pollutants and loss of infiltrative capacity.
- ▶ Frequent cleaning of porous pavements is required.
- ▶ Maintenance is difficult and costly for underground trenches.

CONSIDERATIONS

- Soils
- Area Required
- Slope
- Water Availability
- Aesthetics
- Hydraulic Head
- Environmental Side Effects



WEBER COUNTY

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TARGETED POLLUTANTS

- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substance
- Oil & Grease
- Floatable Materials
- Bacteria & Viruses
- High Impact
- Medium Impact
- Low or Unknown Impact

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training
- High
- Medium
- Low