

Infiltration Trench

Description

An infiltration trench is typically a long, narrow, gravel-filled trench that captures stormwater runoff for use in groundwater recharge. Infiltration trenches capture stormwater from surrounding areas and store the stormwater in void spaces within the gravel before infiltrating into the soil. Pretreatment features such as buffer strips, swales, or detention basins are recommended in order to reduce the amount of coarse sediment captured by the trench, which can reduce an infiltration trench's effectiveness.

Advantages

- Reduces runoff from surrounding drainage area
- Effective at removing common stormwater pollutants
- Provides groundwater recharge
- Reduces regional flooding
- Suitable for small sites and/or where space is limited

Limitations

- Installation of pretreatment features are required for effective treatment of total suspended solids, metals, bacteria, and other pollutants
- Requires frequent maintenance to avoid clogging from sediment and other debris
- Not suitable in areas with contaminated groundwater and/or slope stability issues, or sites that release flows with high concentrations of pollutants
- Does not provide habitat for wildlife or pollinators, or suitable conditions for plant/vegetation growth



Typical Infiltration Trench

Photo Credit: keneulie.wordpress.com