An **Infiltration Rain Garden** is a form of bioretention facility designed to have aesthetic appeal as well as a stormwater function. Rain gardens are commonly a concave landscaped area where runoff from roofs or paving infiltrates into deep constructed soils and subsoils below. On subsoils with low infiltration rates, Rain Gardens often have a drain rock reservoir and perforated drain system to convey away excess water.

1. **Tree, Shrub and Groundcover Plantings**
2. **Growing Medium Minimum 450mm Depth**
3. **Drain Rock Reservoir**
4. **Flat Subsoil - scarified**
5. **Perforated Drain Pipe 150mm Dia. Min.**
6. **Geotextile Along All Sides of Drain Rock Reservoir**
7. **Overflow (standpipe or swale)**
8. **Flow Restrictor Assembly**
9. **Secondary Overflow Inlet at Catch Basin**
10. **Outflow Pipe to Storm Drain or Swale System**
11. **Trench Dams at All Utility Crossings**

### Full Infiltration

Where all inflow is intended to infiltrate into the underlying subsoil. Candidate in sites with subsoil permeability > 30mm/hr. An overflow for large events is provided by pipe or swale to the storm drain system.

### Partial Infiltration

Designed so that most water may infiltrate into the underlying soil while the surplus overflow is drained by perforated pipes that are placed near the top of the drain rock reservoir. Suitable for sites with subsoil permeability > 15mm/hr.

### Partial Infiltration with Flow Restrictor

For sites with subsoil permeability < 1mm/hr, the addition of a flow restrictor assembly with a small orifice slowly drains the top portion of the reservoir and rain garden. Provides water quality treatment and some infiltration, while acting like a small detention facility.

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**Rain Garden**

**Stormwater Source Control Design Guidelines 2005**

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Detailed design guidelines can be found in the Design Guidelines 2005 report available at [www.gvrdbc.ca](http://www.gvrdbc.ca)