



# **BROCHURE # 56**

## **ONSITE STORMWATER MANAGEMENT FOR MINOR DEVELOPMENTS (RESIDENTIAL)**

### **ONSITE STORMWATER MANAGEMENT**

Chapter 5 of the Kitsap County Stormwater Design Manual (KCSDM) details different methods for handling your on site stormwater: infiltration trenches and Low Impact Development (LID) options such as rain gardens.

Both types of systems are designed to infiltrate runoff from roof downspout drains or other impervious surfaces that are not subject to vehicular traffic. If you intend to direct runoff from your driveway into either system, water quality must be provided per Chapter 6 of the KCSDM..

Minor development projects do not typically require an engineered design. Keep in mind that areas of critical concern (i.e. poor drainage areas, steep slopes, waterfront) or plat conditions may warrant the involvement of a geotechnical and/or civil engineer.

#### **Infiltration Trenches**

Installation of an infiltration trench is the most common way to provide on site stormwater management. To construct an infiltration trench, dig a two foot wide trench to a depth of 18". Downspouts are then directed into the trench which is then filled with 12" of 3/4" - 1 1/2" washed rock. Top the trench with a geotextile sheet cover and 6" of dirt. See Figure 5.1 in the KCSDM for complete construction details.

General requirements to keep in mind when deciding if an infiltration trench is right for you:

- Maximum length of the trench must not exceed 100 feet from the inlet sump (catch basin).
- A geotechnical analysis and report is required if trenches are constructed on slopes over 15% or located within 200' of the top of a steep slope or geologically hazardous area.

- Trenches must be a minimum of 10' from any structure, property line or environmentally sensitive area.
- Trenches shall meet minimum setback requirements to septic drainfields. See the Kitsap County Health District Regulations for setback requirements.
- Trench bottom must be a minimum of 12" above the seasonal maximum groundwater elevation or impermeable layer (hard pan).

#### **Rain Gardens**

Rain gardens (bioretention facilities) are attractive stormwater management features that can be installed in lieu of an infiltration trench. Rain gardens offer a bonus that infiltration trenches do not in that they can receive runoff from any surface (including pollution generating surfaces) without the need for additional water quality treatment.

For guidelines on how to plan, construct and size your rain garden, refer to the latest version for the Low Impact Development (LID) Guidance Manual.

A copy is available for viewing at the DCD Permit Center or online at [http://www.kitsapgov.com/dcd/dev\\_eng](http://www.kitsapgov.com/dcd/dev_eng)

#### **What Do I Provide to the County?**

For information on submittal requirements, choosing a rain garden design, SWPPP requirements, or questions regarding impervious surfaces, please refer to:

- Checklist #5301C - Residential Onsite Stormwater Management and Pollution Prevention Plan Checklist
- Brochure #5351B - Construction Stormwater Pollution Prevention Plan (SWPPP) Brochure
- Brochure #5357B - Soil Management Plan Brochure

