

Sustainable Gardens

Rain Gardens

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What We'll Cover Tonight

- **What is a Rain Garden**
- **Why have a Rain Garden**
- **How does a Rain Garden work**
- **Design**
- **Retrofit Case Study**
- **Questions**

A Rain Garden is

- **Sustainable**
- **Low maintenance**
- **Green**
- **Good for environment**
- **Water Sensitive Urban Design**
- **Small Scale**
- **Make a difference (at home)**

What is a Rain Garden

- Part of Stormwater System – downpipes, driveways
- Part of Landscaping
- Can be big – 30m² or more
- Can be small – 1 to 2 m²
- Simplest form of Water Sensitive Urban Design (WSUD)
- Treats Stormwater



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Why

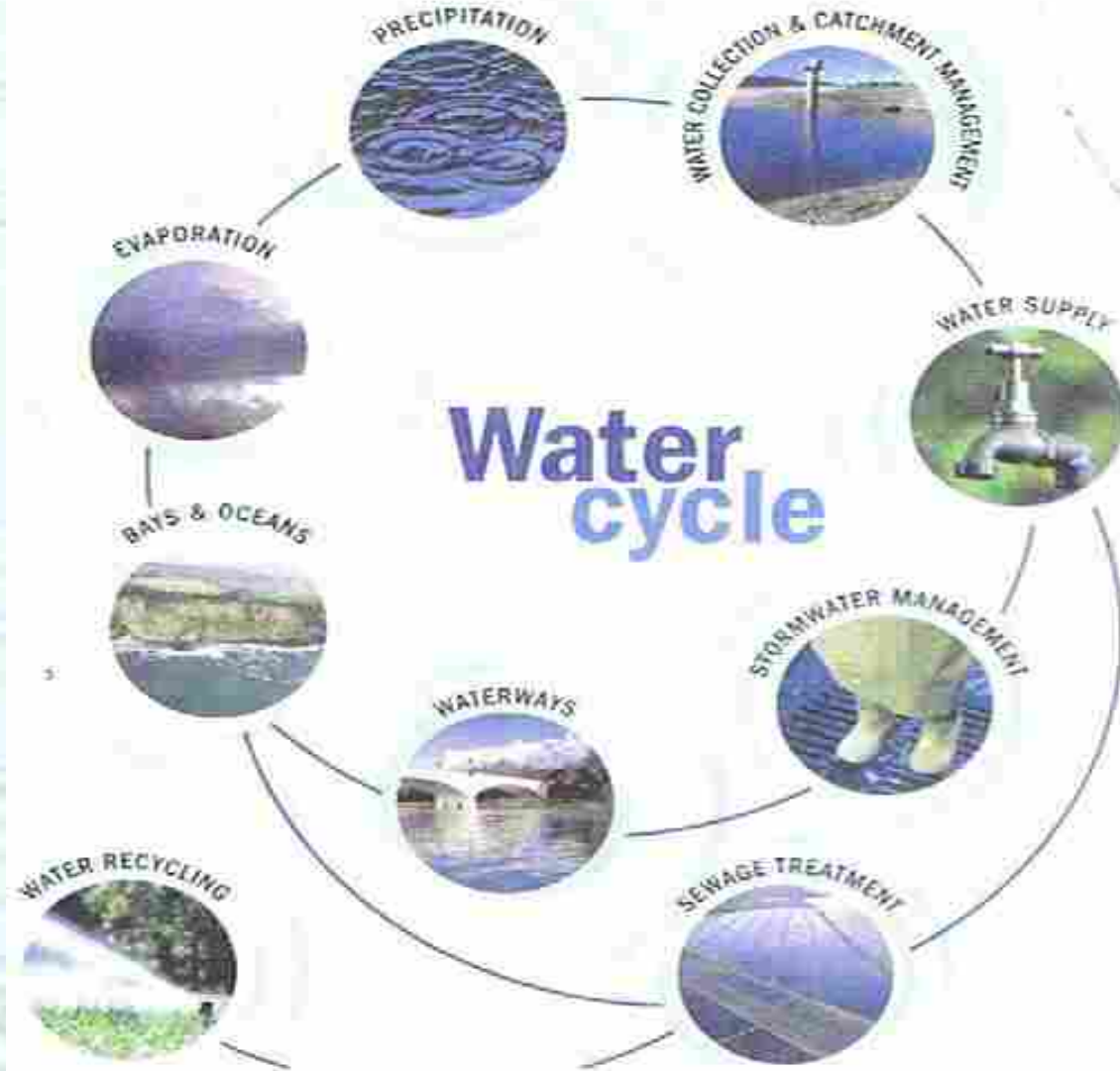


Diagram
Courtesy of
Melbourne Water

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What's so bad about stormwater?

Chemicals – ie oil, grease

Nutrients – ie fertilisers

Physical contaminants

Microbial pathogens (dog poo etc)

Storm impacts

Aesthetic contaminants

Typical Gross Pollutants in Urban Stormwater

Typical*
Percentage
by weight

Man made materials eg

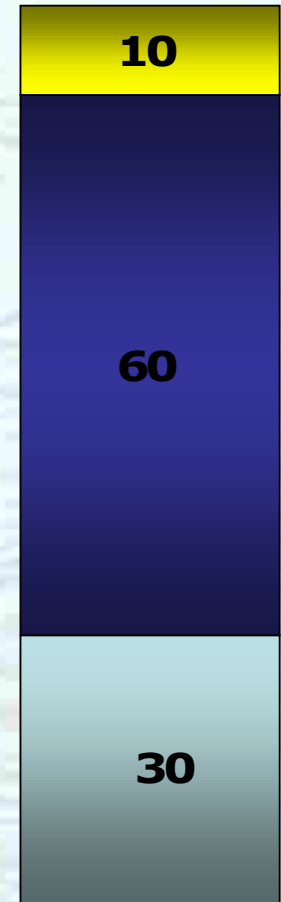
Polystyrene, tennis balls, plastic bags, drink cans, newspapers, plastic bottles, litter, cigarette butts, syringes etc...

Vegetative Material

Leaves, grass clippings, seeds, etc...

Sediment

Fine and coarse with attached hydrocarbons, heavy metals and nutrients



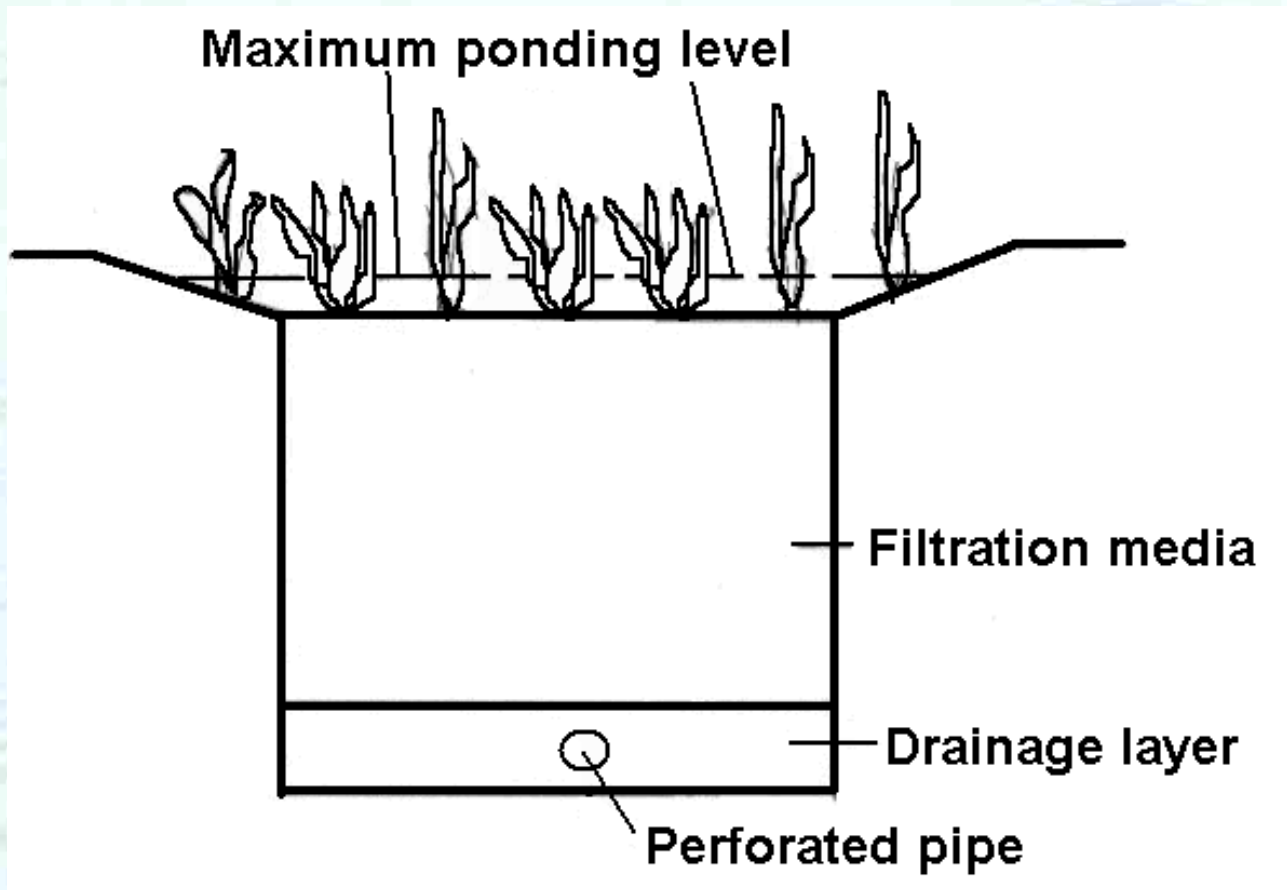
Not a Typical Aesthetic Contaminant



Why Do It – Why a Rain Garden

Why do it?	Why a Rain Garden?
Protect natural systems	Removal of N, P, fine sediment, not rapid disposal
Integrated landscaping	Water efficient landscaping
Protect water quality	Removal of N, P, fine sediment
Reduce runoff and peak flows	Detention of stormwater, not rapid disposal
Add capital value	Minimal development costs

How Does a Rain Garden Work



I Want One – What Now?

- Where is the water coming from
- Location
- Proximity to buildings
- Reactive soils
- New development or retrofit

I Want One – What Now?

- Garden size / location
- Plant selection
- Soil characteristics / mulch
- Depth (ponding & detention time)
- Aggi pipe size
- Overflow

Design

- What works – Get design early
- What doesn't – leaving design as add on
- Caution – retrofits

retrofit pictures

(tips for the unwary)



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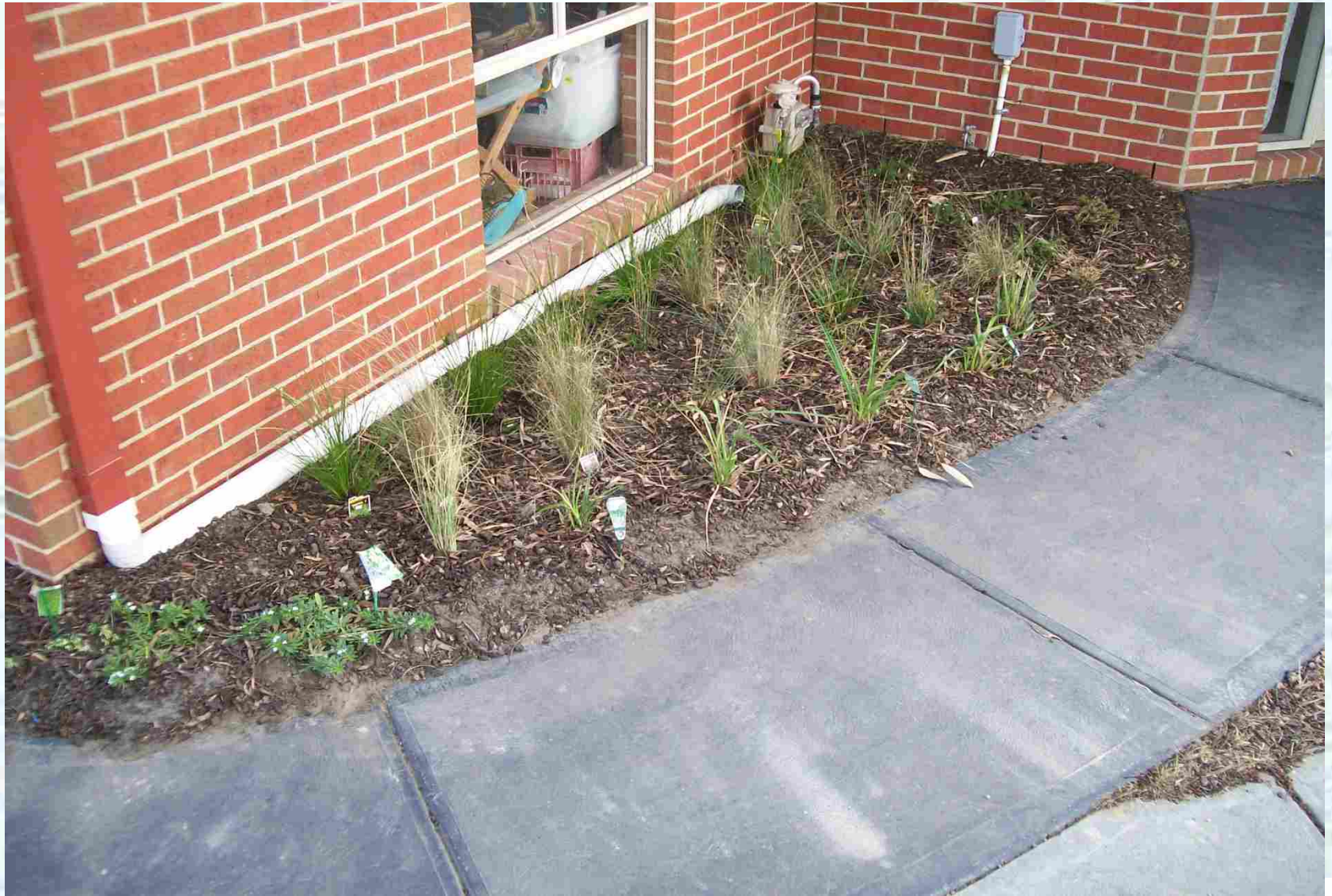
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**Rain Gardens
because**

Gardens that clean are green

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