* Rain Gardens

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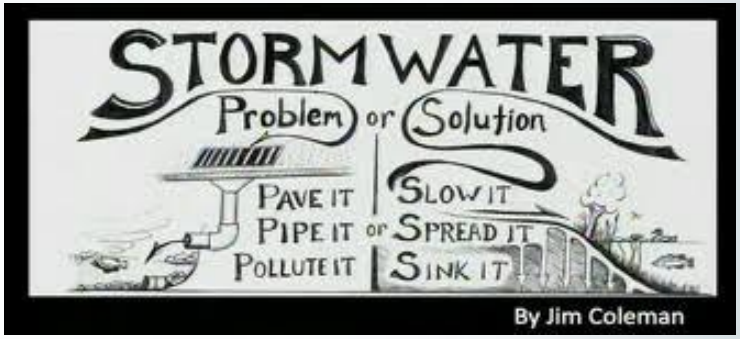
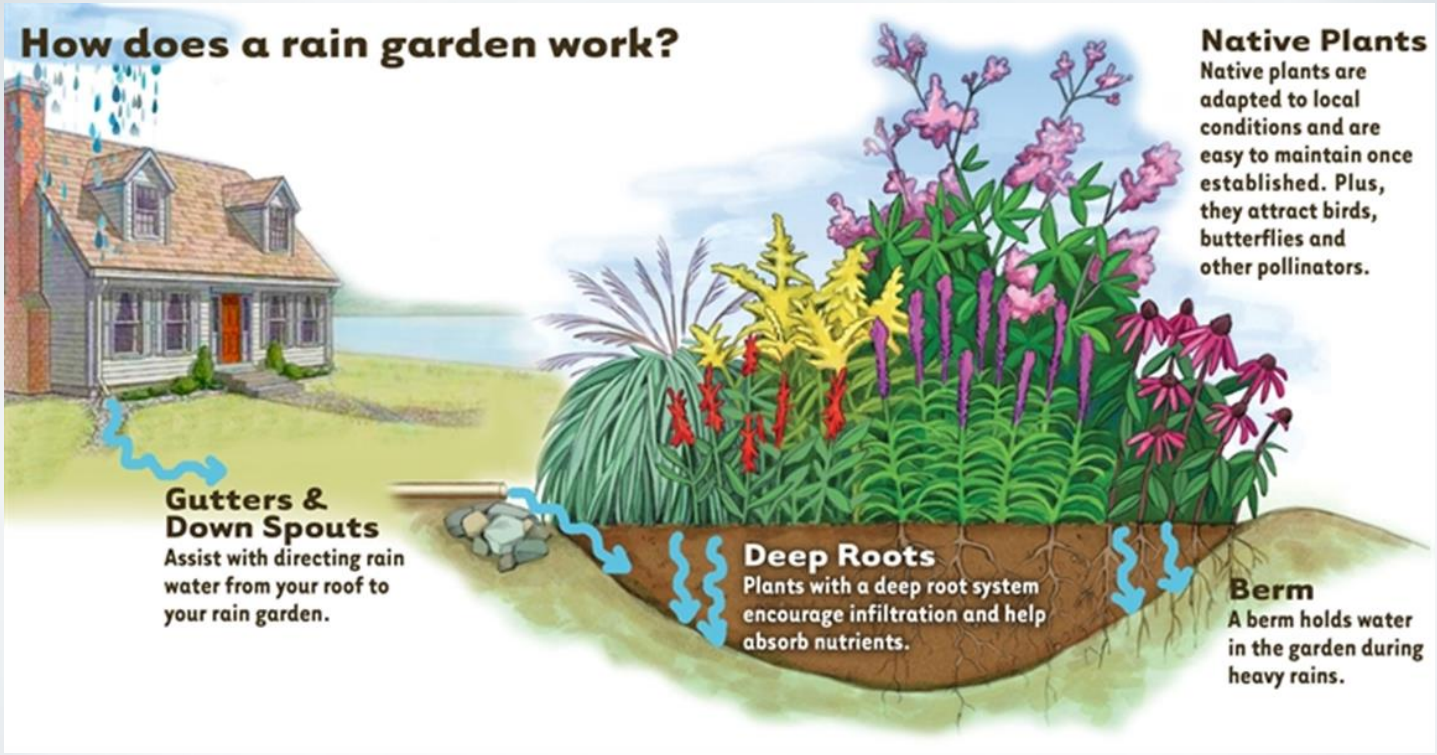
because every drop counts

EasyLiving LANDSCAPING

Rainwater – how we view it

- Nourishing to our plants
- Cleansing
- Flood risk – property damage
- Get it off the property as quickly as possible
- Put it in a pipe and get it out to the ocean





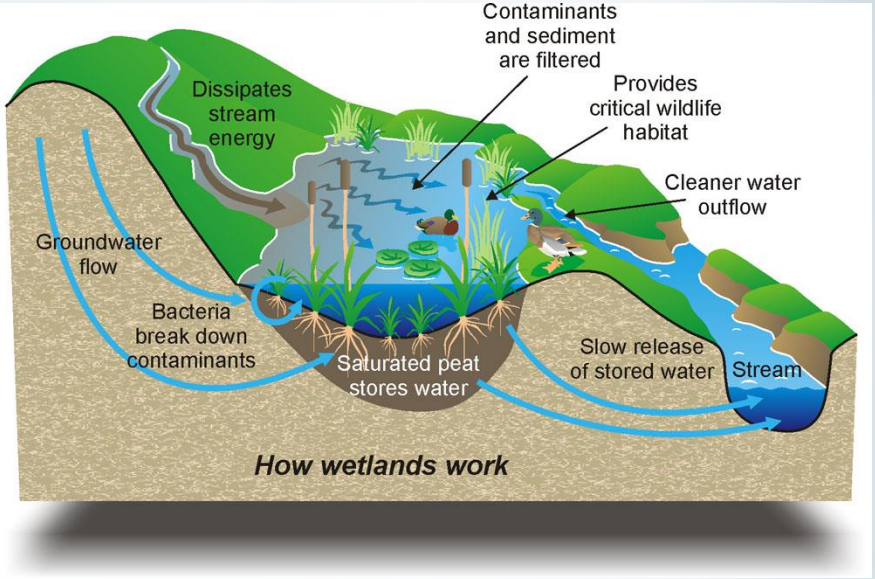
A landscape element that is a vegetated depression, used to collect and improve water quality by reducing run-off, storing and filtering it and returning it to the soil.

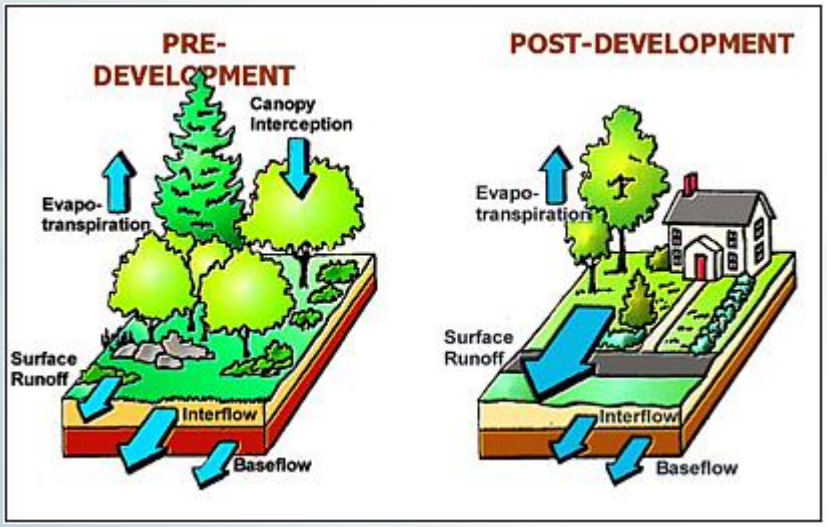
*What is a rain garden?

Mother Nature's Sponge

* Wetlands and rain gardens serve a very strong ecological purpose.

* Due to increased development and housing, many of these natural functions have disappeared causing a surplus of rainwater to manage within our environment



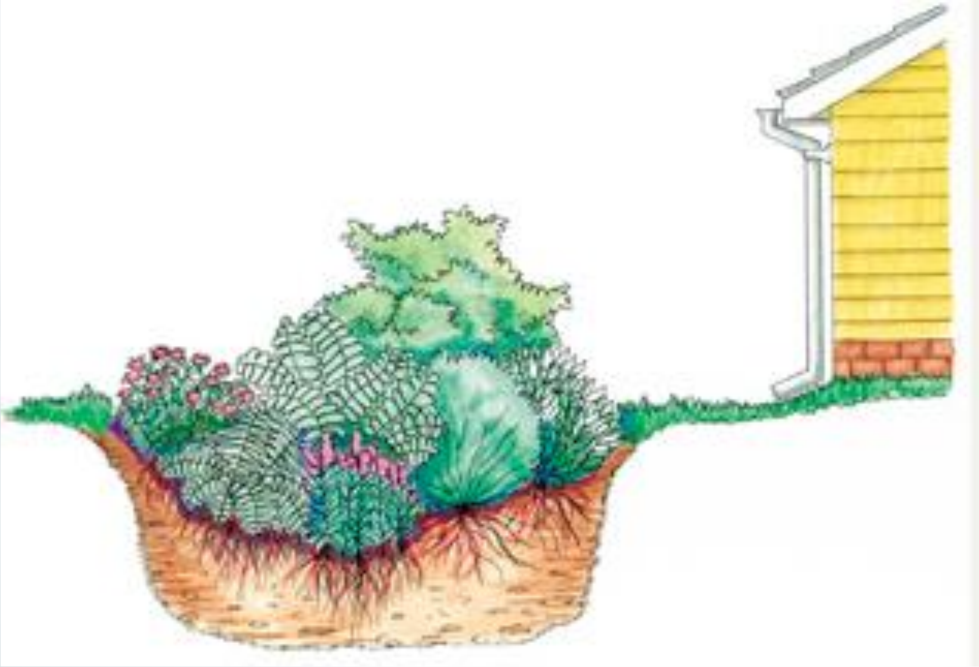


* In developed conditions, on average 30% more water flows directly into streams and rivers rather than absorbing and nourishing the soil on which it falls

*Reasons to slow, capture, infiltrate

- ☑ Reduce local flooding potential
- ☑ Promote infiltration of water back into the ground (recharge aquifers)
- ☑ Filter pollutants such as oil, metals, road salt, pesticides etc. out of stormwater runoff
- ☑ Conserve water & create a beautiful landscape
- ☑ Reduce amount of polluted stormwater reaching our rivers and the ocean

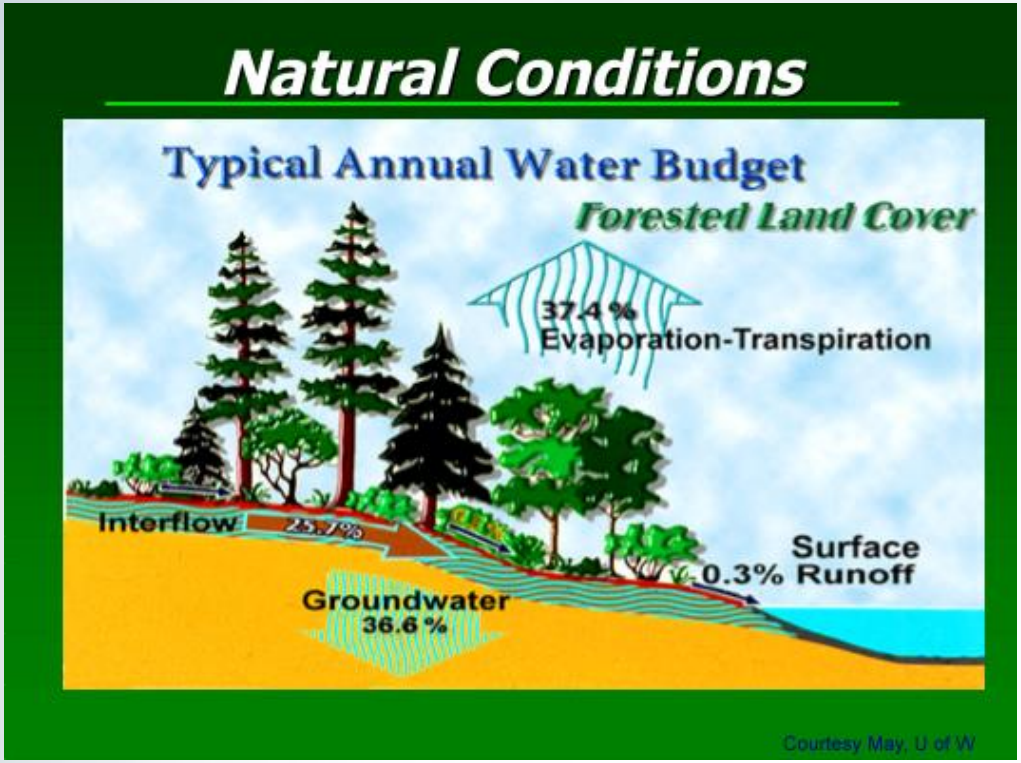
* As rainwater hits the ground, it has great potential to increase velocity and pick up pollutants in its path.
* Plant material will disburse the stormwater path and reduce the velocity
* Fewer pollutants will be picked up and carried along with the rainwater



*Slow

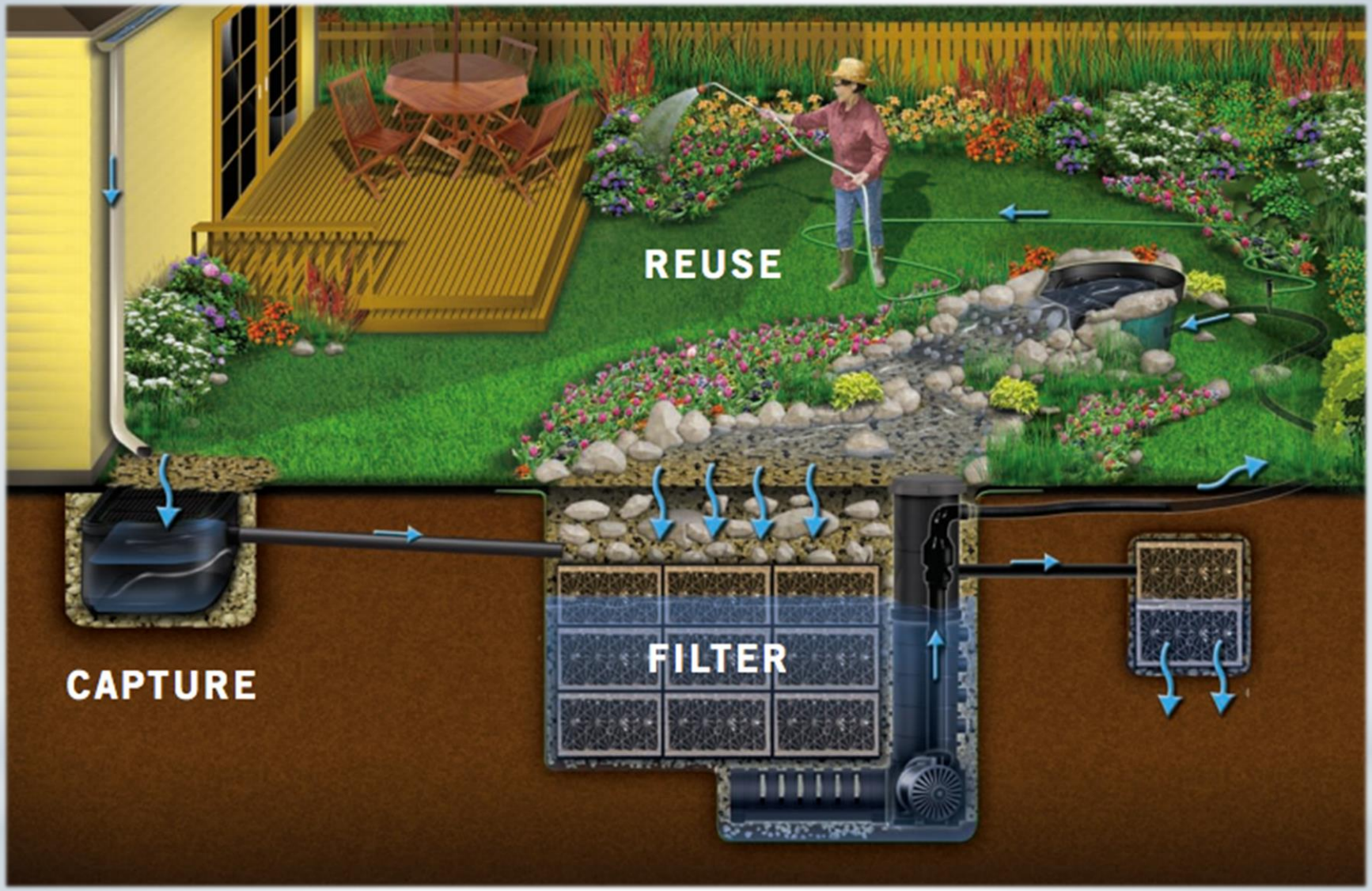
* Excess stormwater is allowed to collect in the landscape depression
* Rather than flow in unwanted areas and cause damage, rainwater is contained is a lovely landscape feature

* Capture



*Infiltrate

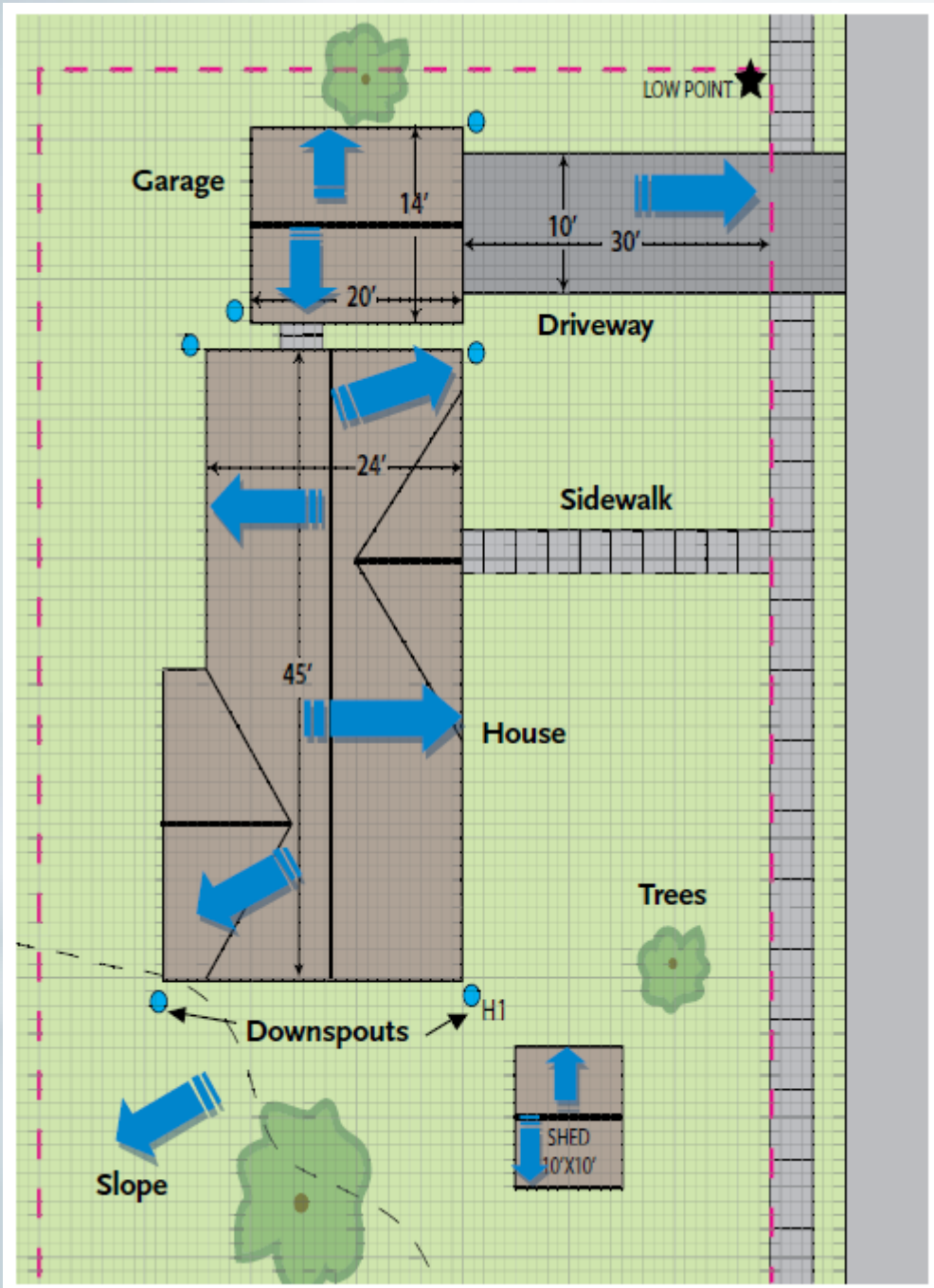
* Water will infiltrate into the ground and contribute to the groundwater systems and ecological functions as nature intended
* As water infiltrates into the soil it nourished surrounding plant life and pollutants are filtered out



*Re-use

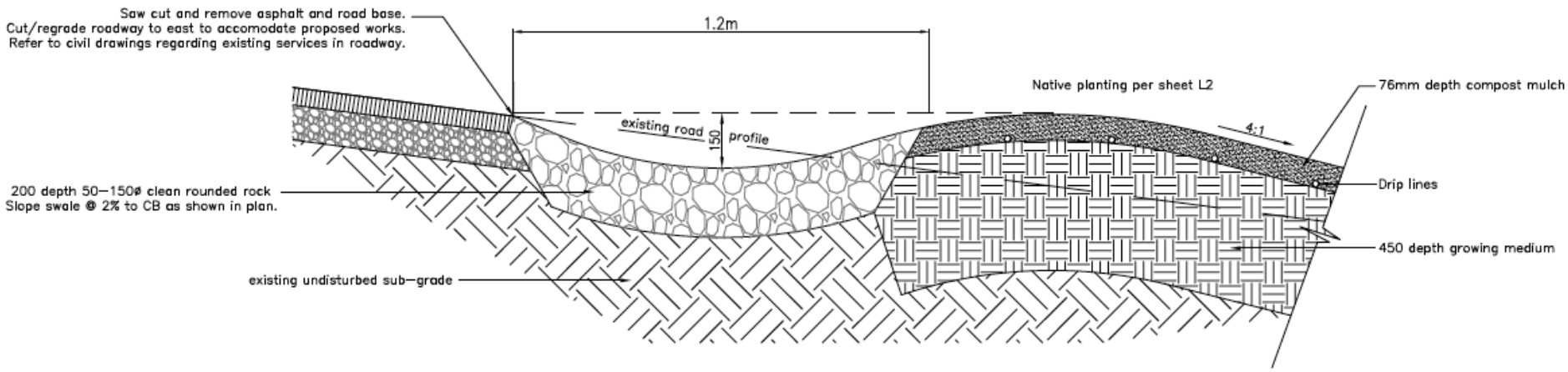
Step by Step Process

* 1) Observe and map your site
* 2) Determine best location for rain garden
* 3) Assess the soil
* 4) Determine size of the rain garden
* 5) Construction (excavating, grading, berms)
* 6) Planting (right plant, right place)
* 7) Maintenance

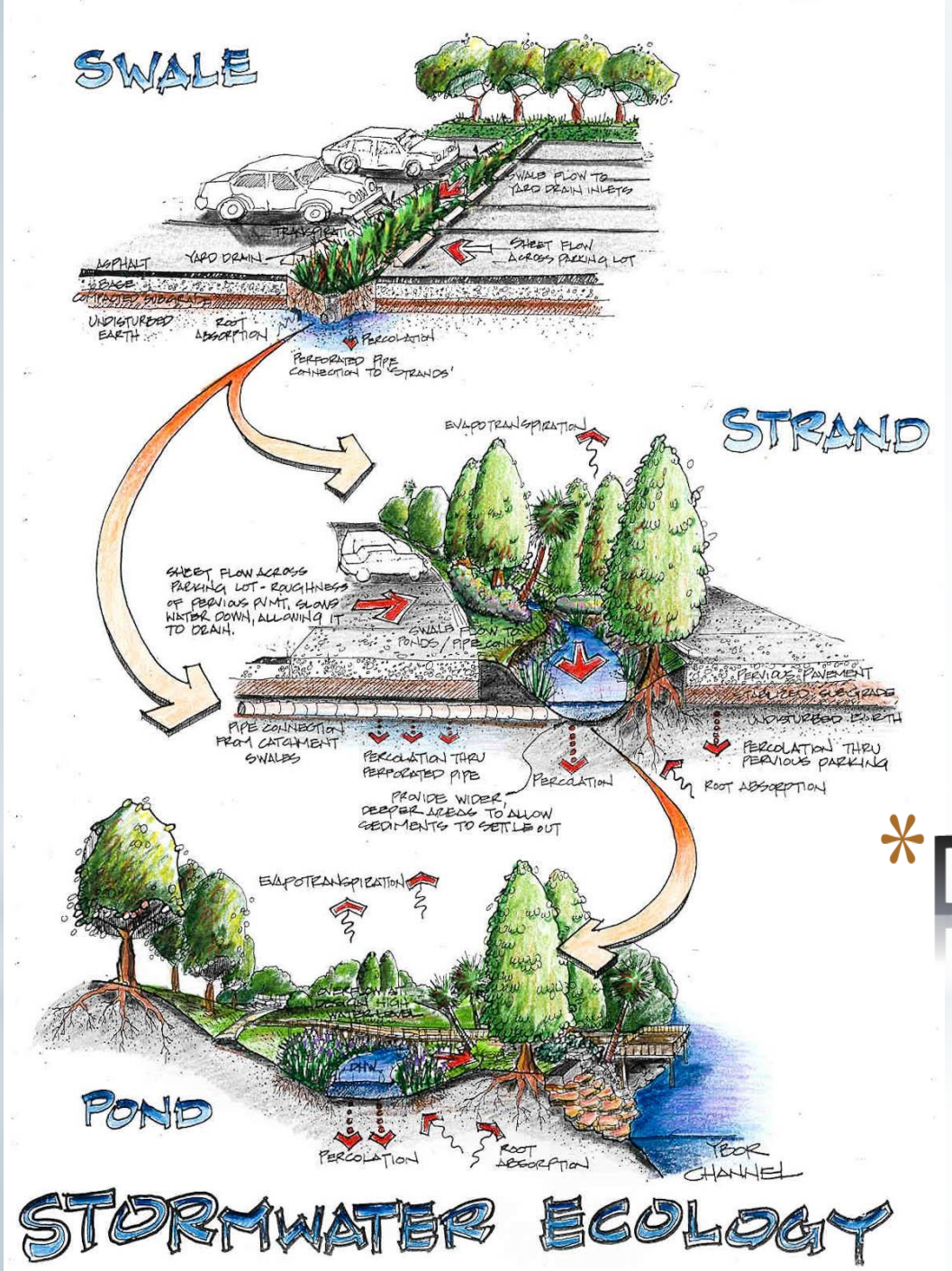


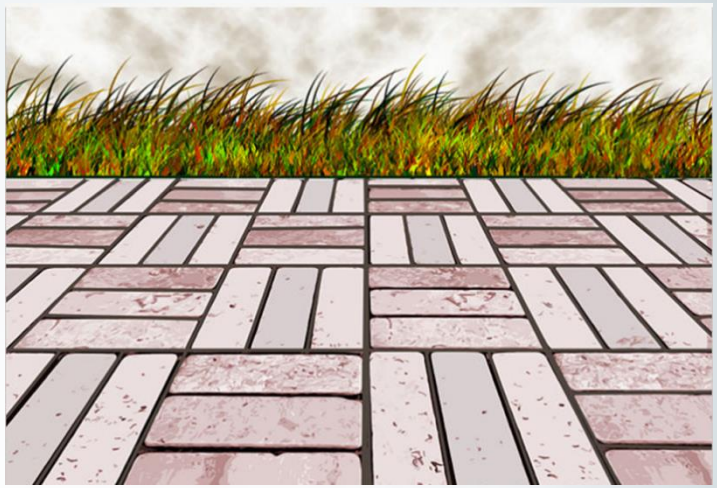
*Design Example: Suburban/ Urban lot

*Design example: Condo building

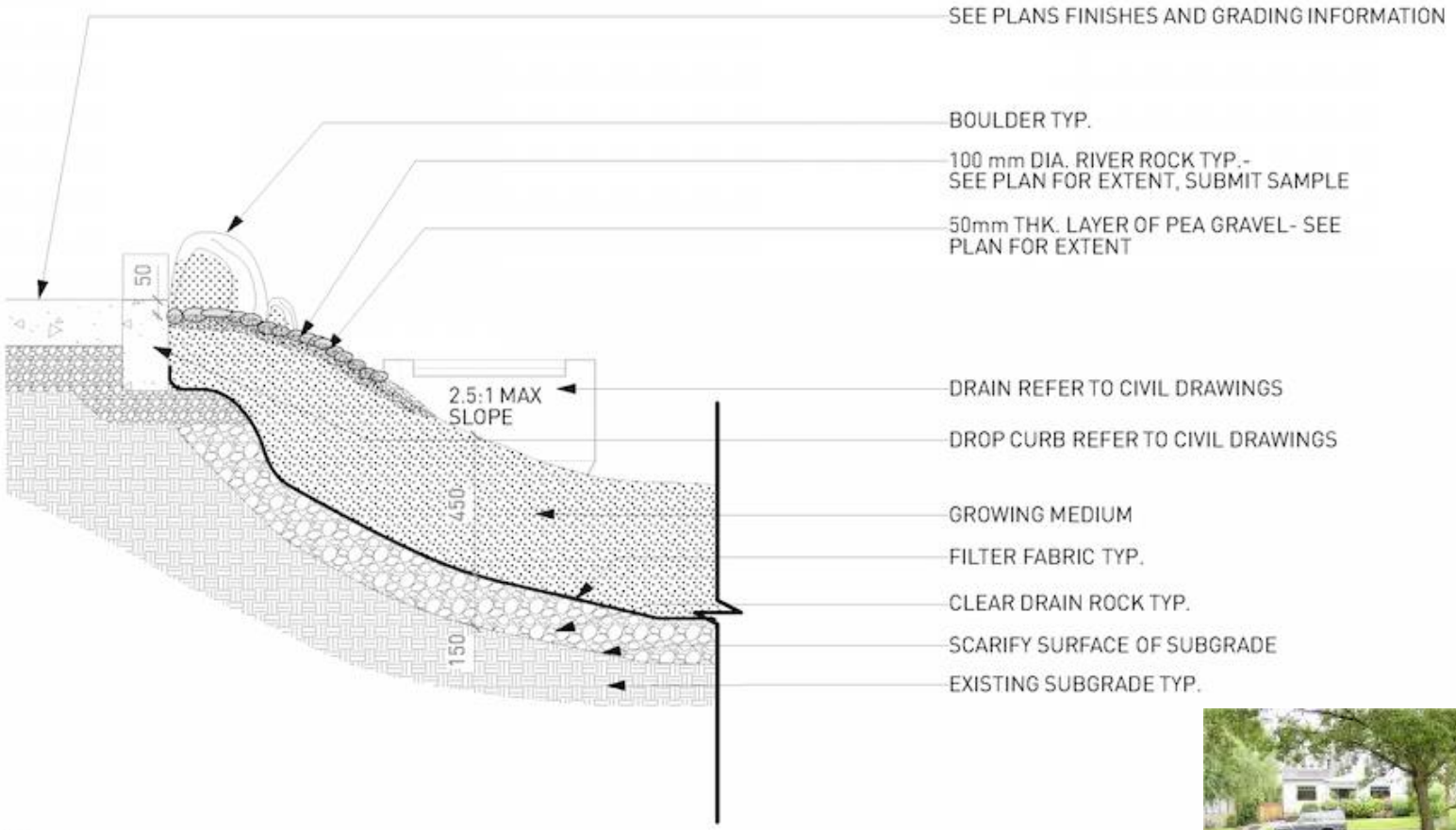


Section B–B Interceptor Swale NTS





* Design example: Parking Lot



NOTE:
1. CONTRACTOR TO COORDINATE WITH LANDSCAPE ARCHITECT ON INSTALLATION OF RAIN GARDEN.
3. REFER TO CIVIL ENGINEER DWGS. FOR MORE INFORMATION.

3 RAIN GARDEN SECTION
Scale: 1:20

* Design Example: City Boulevard

General Construction/ Installation Steps

* Determine proper location on property
  * Must be a low spot where water naturally drains
* Dig a test pit and determine soil type

* Determine size depending on expected water flow
  * Will you be tying your downspouts into the system?
  * Is the area currently saturated? (high water table?)
  * Does your soil have absorbent characteristics? (compacted?)
  * Should you build a depression or a berm?

A Little bit about Soils

* A single shovel of rich soil contains thousands of microorganisms that contribute to the nourishment of your plants as well as aid in filtering out pollutants from the stormwater

* Air moves freely in the upper 8” of the soil and is renewed every hour so it’s important to ensure compact does not occur

* Composted mulch will feed and enhance soil organisms, protect soil surface from sun rays, reduce sun evaporation and improve soil structure

Materials Needed

- ✓Spongy soil (living soil)
  - Peat Moss
  - Compost

- ✓Shovels (sometimes an excavator) and a sunny afternoon

- ✓Drain rock

- ✓Drought and Water tolerant plants
  - Bergenia
  - Creek dogwood
  - Sedges
  - Camas

- ✓Mulch

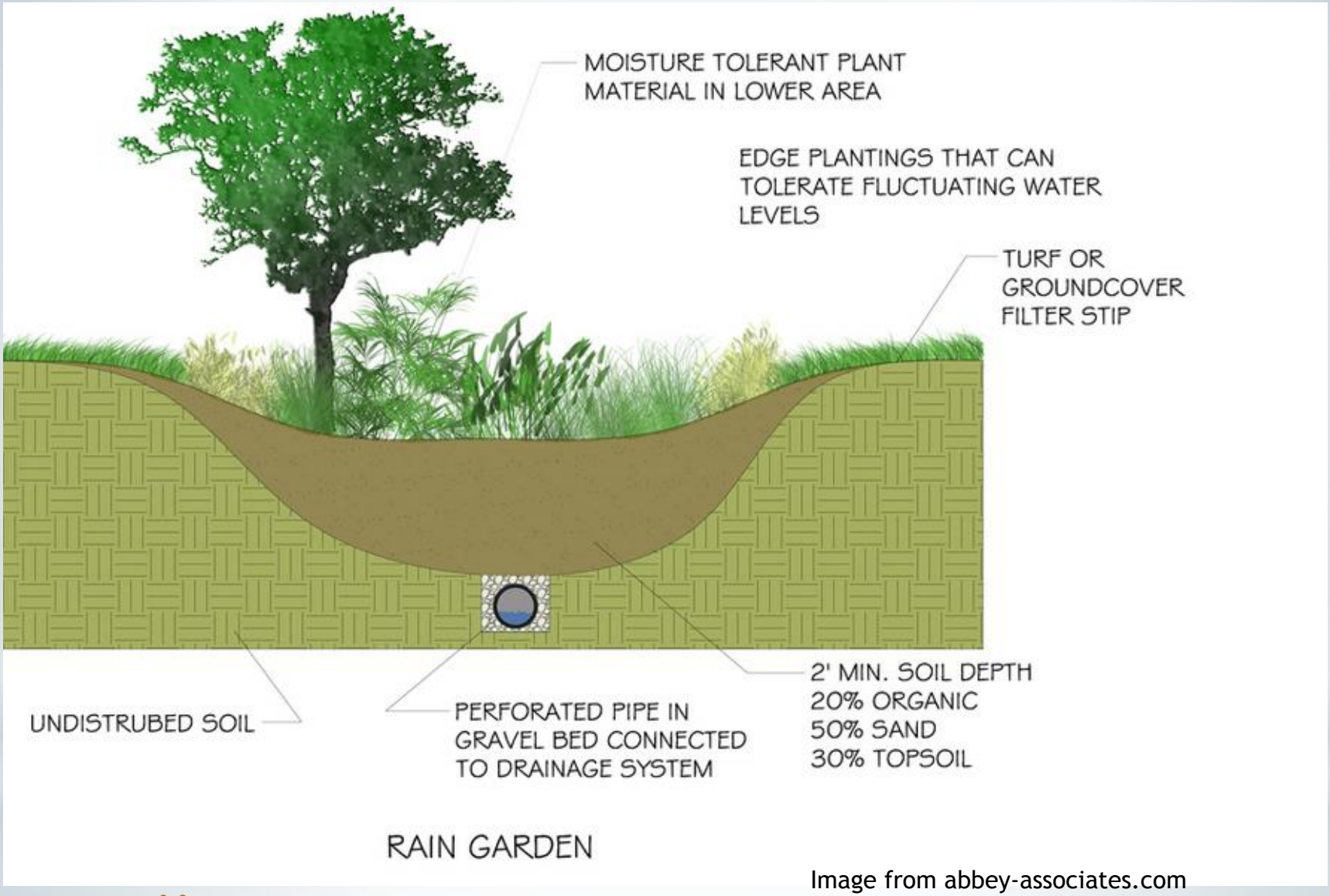


Image from abbey-associates.com

*Now you are ready to dig!

- ☑ A good rain garden depends on the healthy function of plant life
- ☑ Stay on top of weeding
- ☑ Do pruning at appropriate times of the year
- ☑ Diligent maintenance will ensure the rain garden won't become too much work in the long run
- ☑ Avoid using synthetic fertilizers or pesticides as they can harm the organisms in the soil

*Maintenance Required

Overall benefits

- Build healthier communities
  - Meet your neighbours
  - Natural area for wildlife such as songbirds and squirrels
- Build healthier watersheds
  - Keep pollutants out of streams, creeks and oceans
  - Build Stronger fish habitat
- Save time and money on your water bill
  - You can capture the water your divert and use for irrigation around the property
  - Increased moisture will improve the overall quality of soil on your property

Outdoor component: practice rain garden site selection

THANK YOU!

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