Smart Watering

SNOHOMISH

CONSERVATION DISTRICT

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Overview

- Smart watering tips and tricks
- Stormwater
- Rain gardens
- Rain catchment

Why water smart?

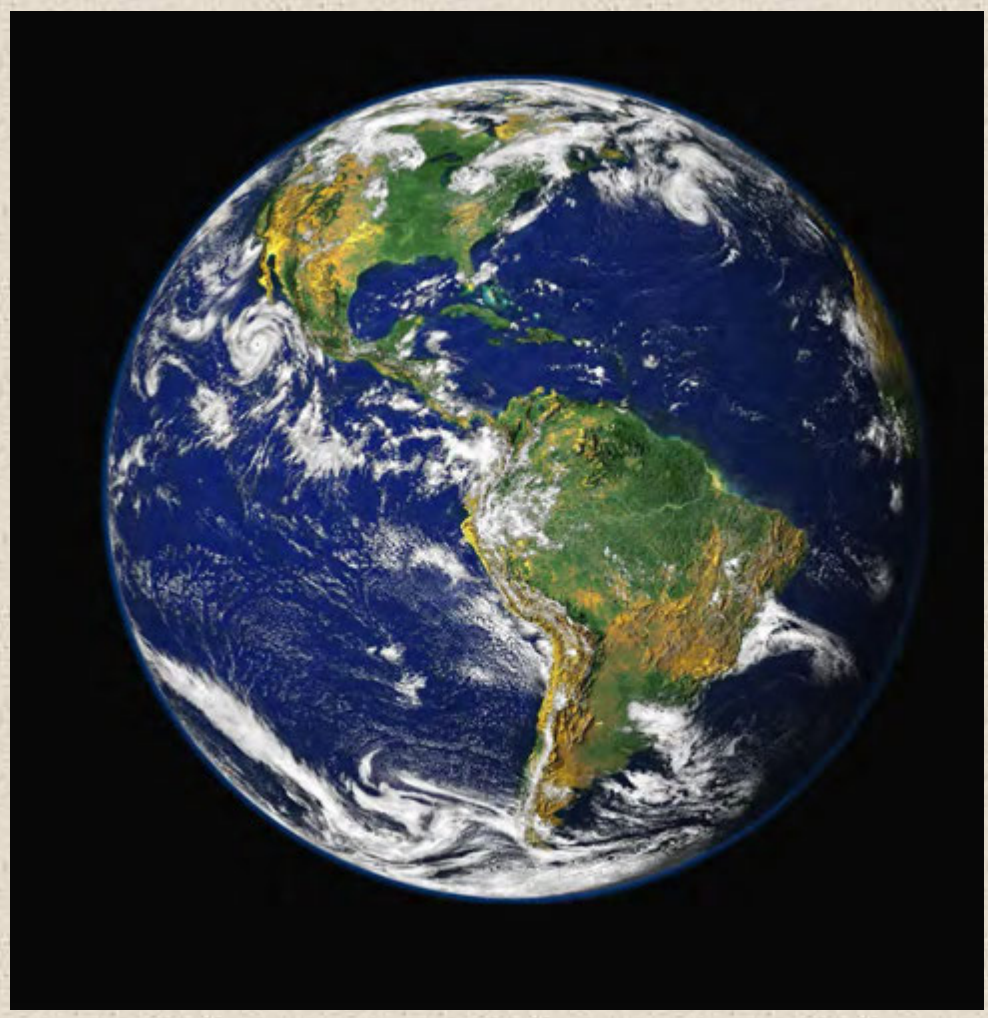

SAVE


Healthy gardens


et.com
Natural News

Conserve

Did you know?



- 2/3 covered in water
- Only 3% is freshwater


0.3%

50%

10X fertilizers

>


May-Sept X 2


Lose ~50%


Let’s water smart!

Start off right
Year 1

- Spring through fall when weather is dry
  - Planting: Water as soon in ground. Soak in, water again.
  - Week one: Daily or every other day
  - Week two and onward: Decrease to 2-3 times/week. Unless weather is extremely hot.

Start off right
Years 2 & 3

- Water deeply 1-2/week
  - Depends upon soil conditions

Start off right
Year 3 and onward

- Plants well established
- Drought tolerant plants- no supplemental water
- Shallow rooted/high water demand- may need watered weekly
- Many plants, when selected for conditions- 1-2/month

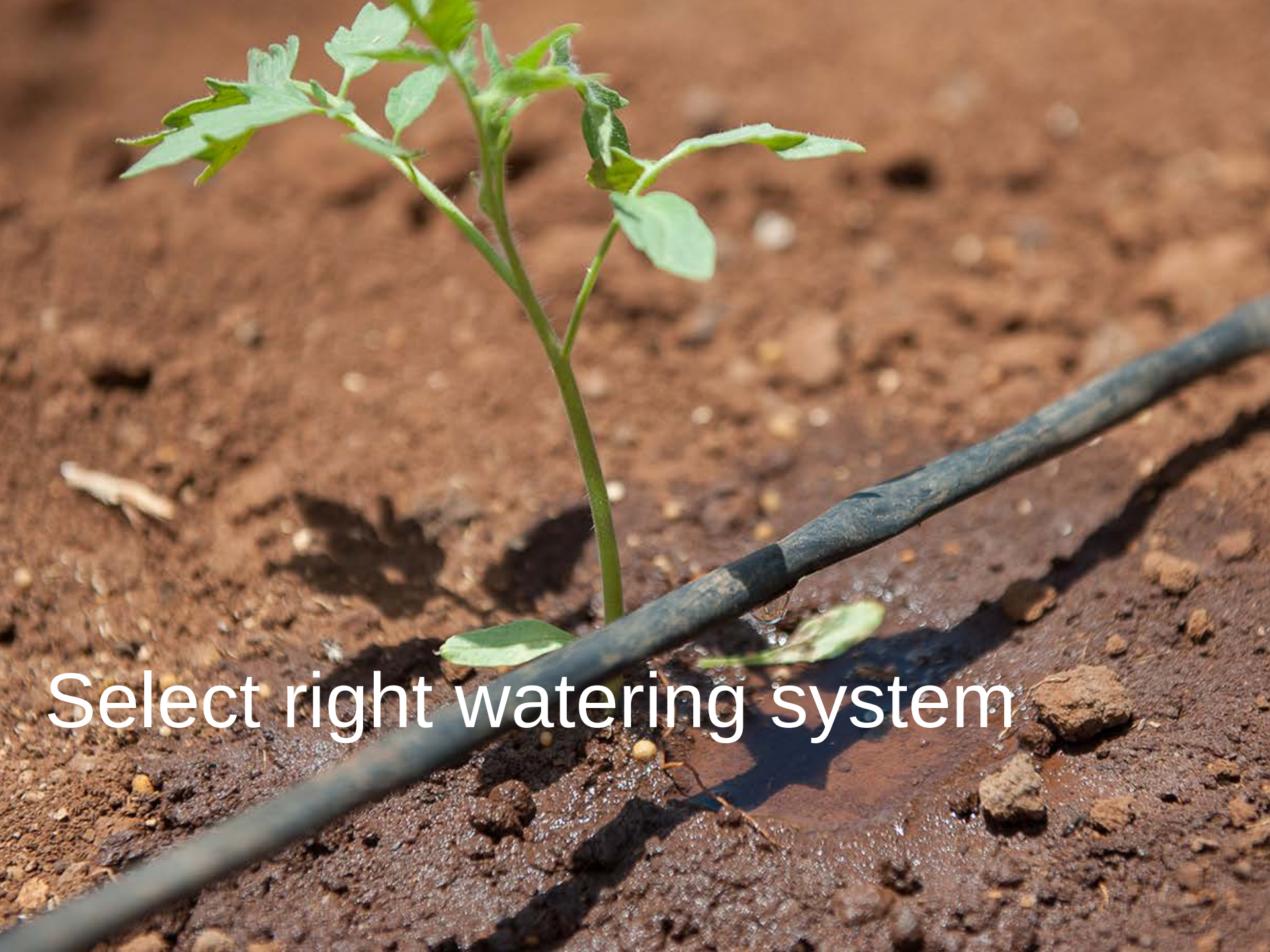

Compost


Mulch


Group plants
according to
water needs


Plan lawns accordingly


Make every drop count!


Select right watering system

Drip vs. Soaker

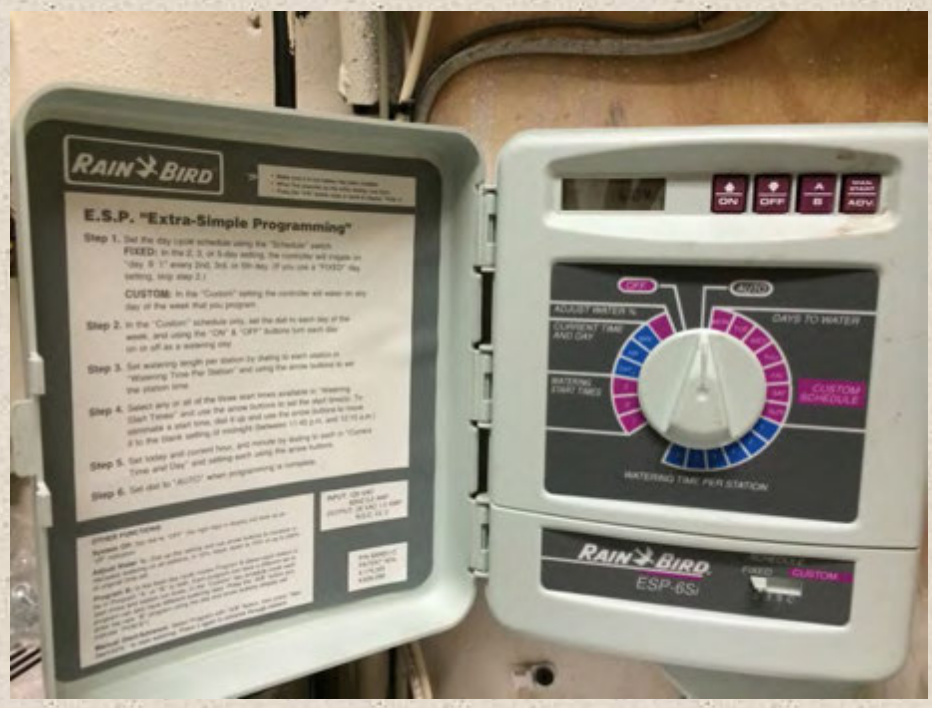

Deeper and less frequent


Timing


Leaky faucets

Automatic Sprinklers

- Adjust schedule for seasons
- Rain shut off device
- Inspect throughout season
- Hire irrigation professional



When and How Much? Annuals

- Roots-
  - Top 12”
- Signs
  - Soil is dry below surface
  - Wilted leaves
- When/how much
  - Check soil often
  - Moist 1-2” down

When and How Much? Trees, Shrubs, Perennials

- Roots-
  - A couple feet to 2-5 times branch spread
- Signs
  - Deciduous leaves turn yellow
  - Evergreens leaves are dull or bronze
- When/how much
  - Needs vary
  - Research

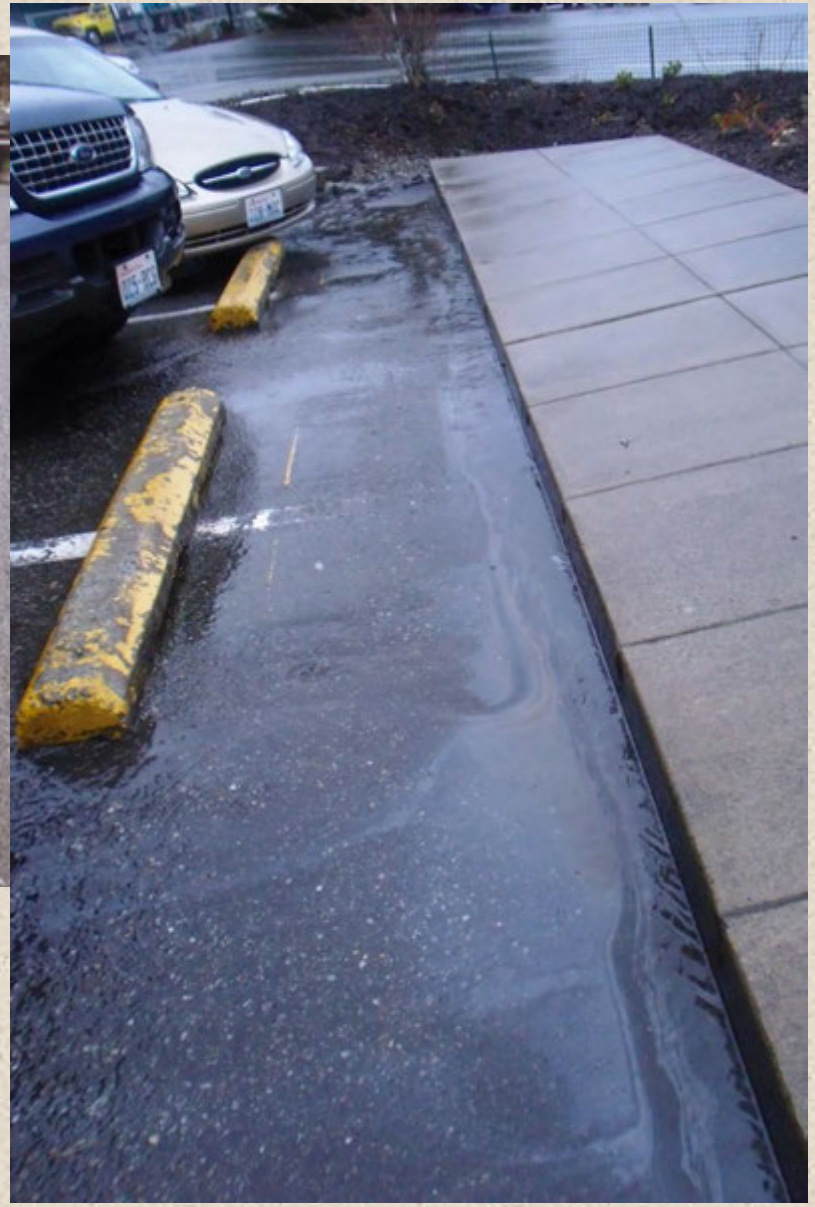
When and How Much? Lawns

- Roots-
  - 4-6”
- Signs
  - Dull green color
  - Footprints show
  - Difficult to push tool into soil
- When/how much
  - No more than 1”/week
  - BE BOLD GO GOLD
    - Thorough soaking once/month

Leading cause of pollution?

Stormwater

The Issue



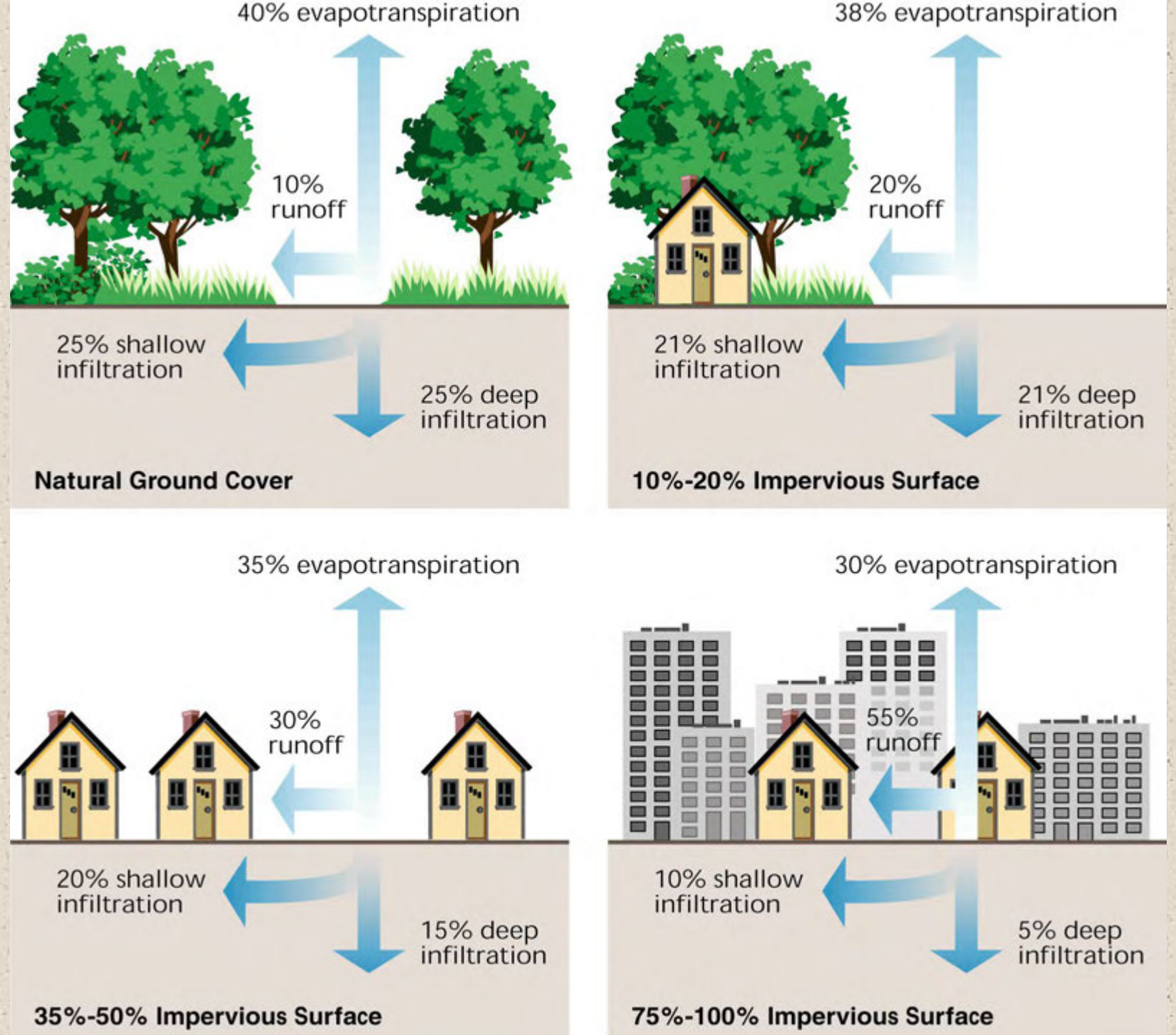
Do you know where your runoff goes?

Hot Topic

LID/GSI

The Goal of Stormwater Design

is to make this….function more like this


40% evapotranspiration
10% runoff
25% shallow infiltration
25% deep infiltration
Natural Ground Cover
38% evapotranspiration
20% runoff
21% shallow infiltration
21% deep infiltration
10%-20% Impervious Surface
35% evapotranspiration
30% runoff
20% shallow infiltration
15% deep infiltration
35%-50% Impervious Surface
30% evapotranspiration
55% runoff
10% shallow infiltration
5% deep infiltration
75%-100% Impervious Surface

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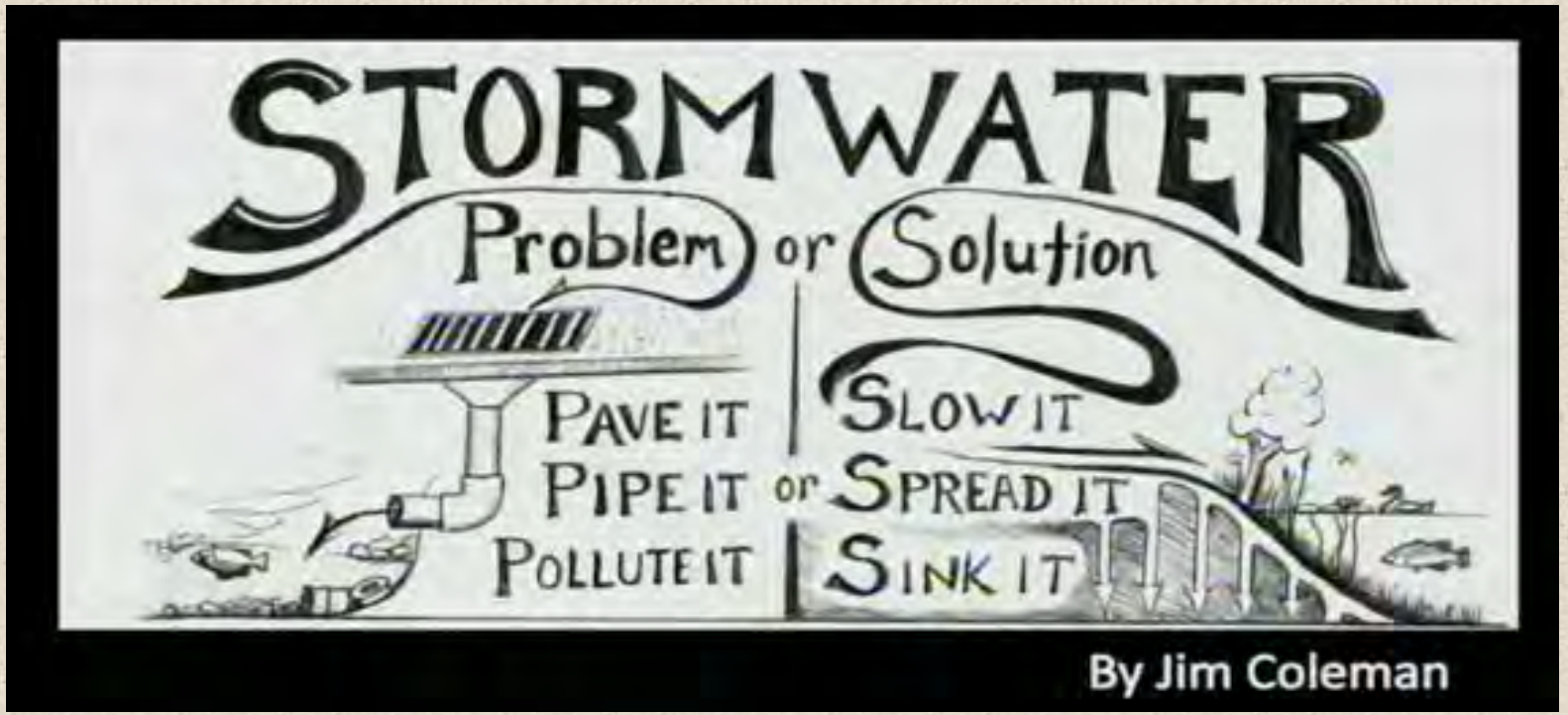
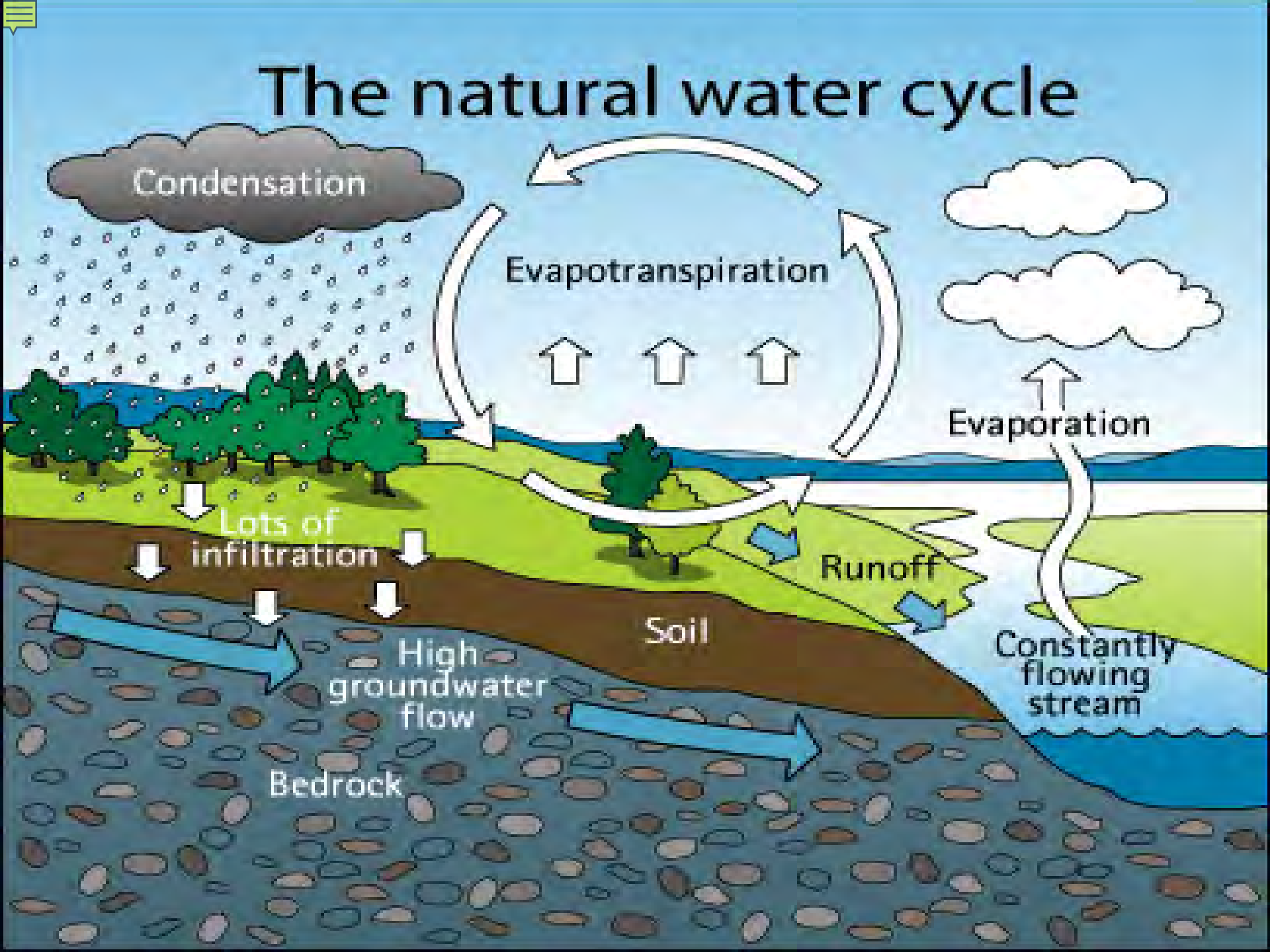
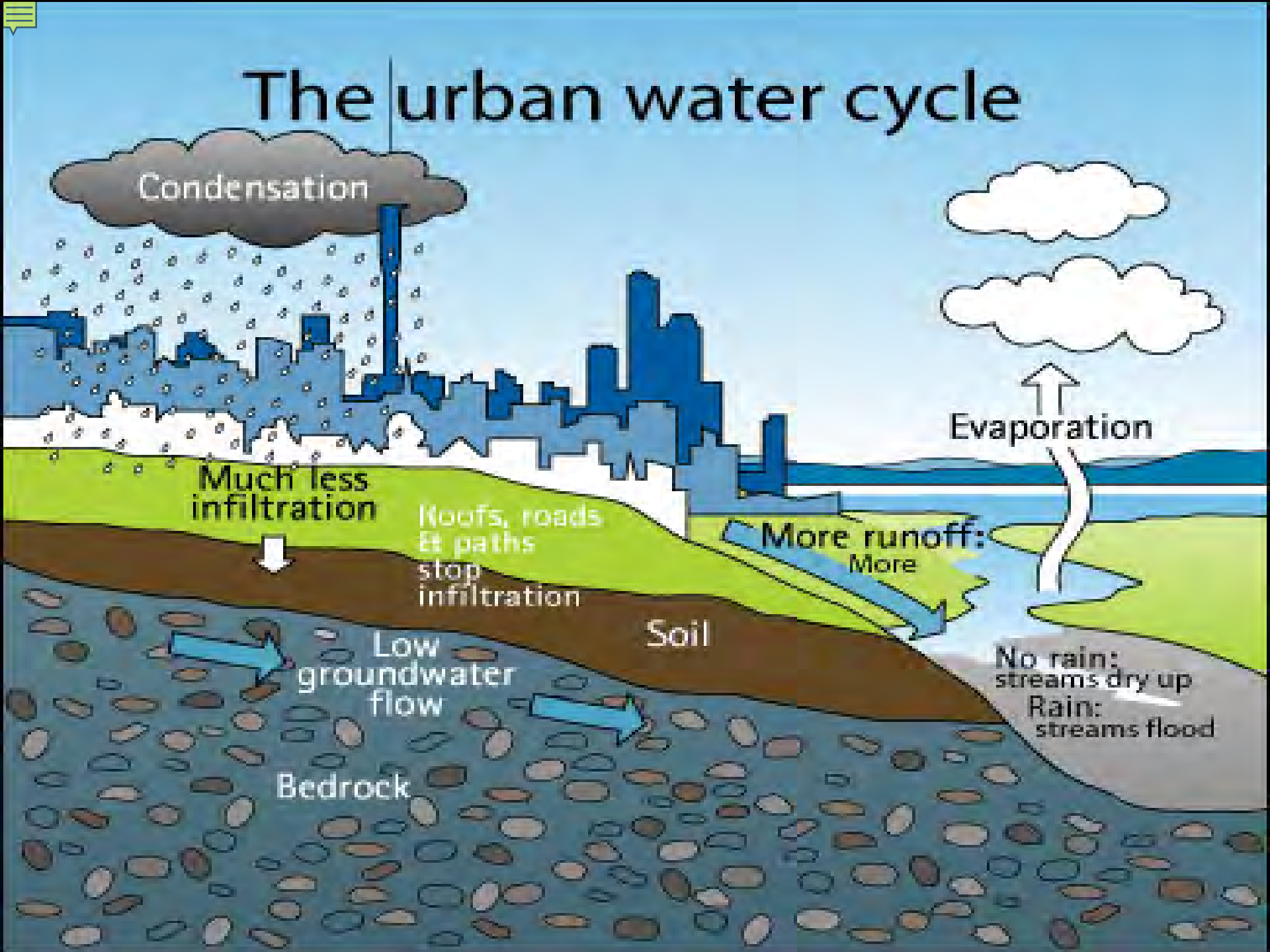
What is the solution?



SLOW IT, SPREAD IT, SINK IT


The natural water cycle
Condensation
Evapotranspiration
Evaporation
Lots of infiltration
Runoff
Soil
High groundwater flow
Constantly flowing stream
Bedrock

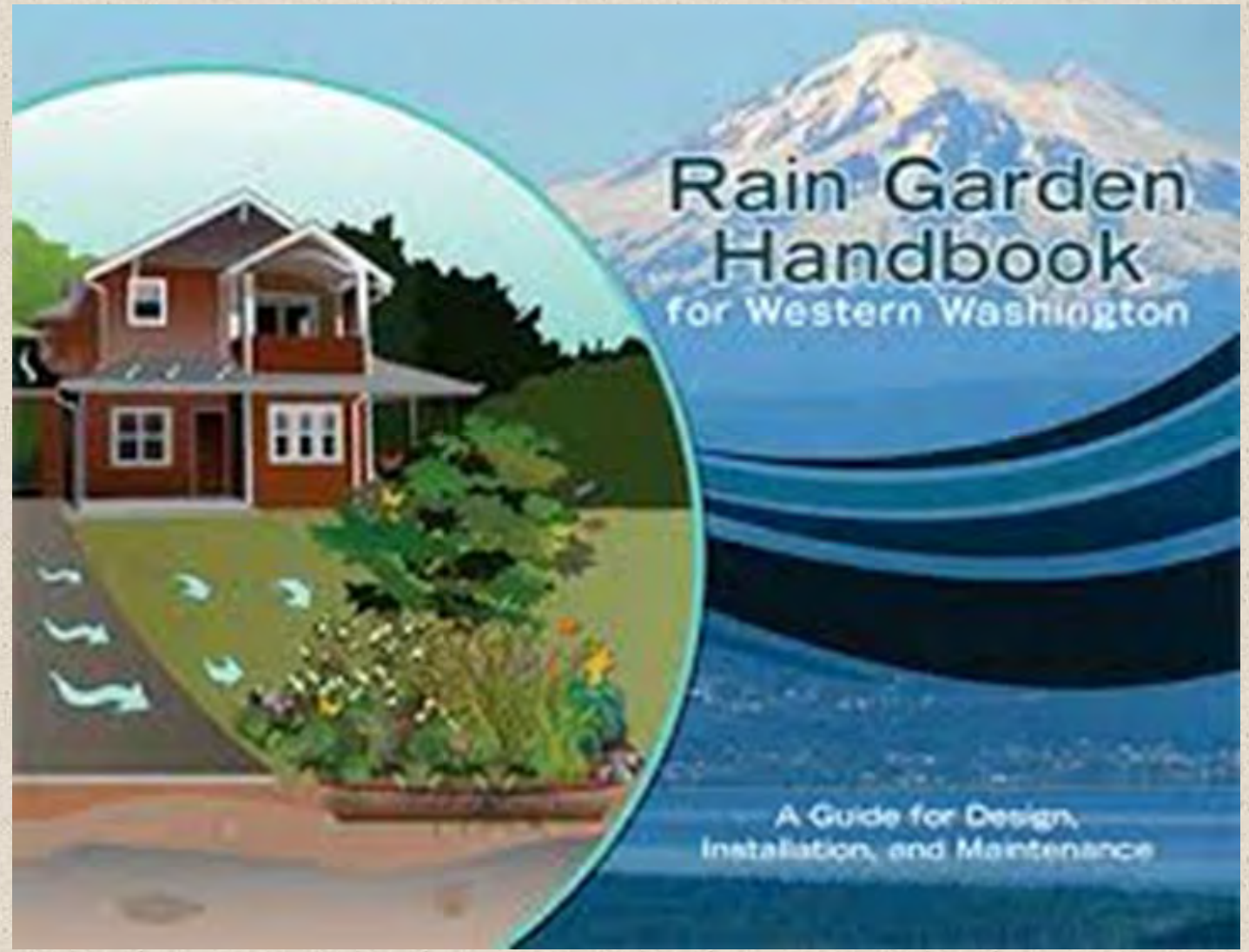

The urban water cycle
Condensation
Evaporation
Much less infiltration
Roofs, roads & paths stop infiltration
More runoff: More
Soil
Low groundwater flow
Bedrock
No rain: streams dry up
Rain: streams flood

Towards a more sustainable urban water cycle

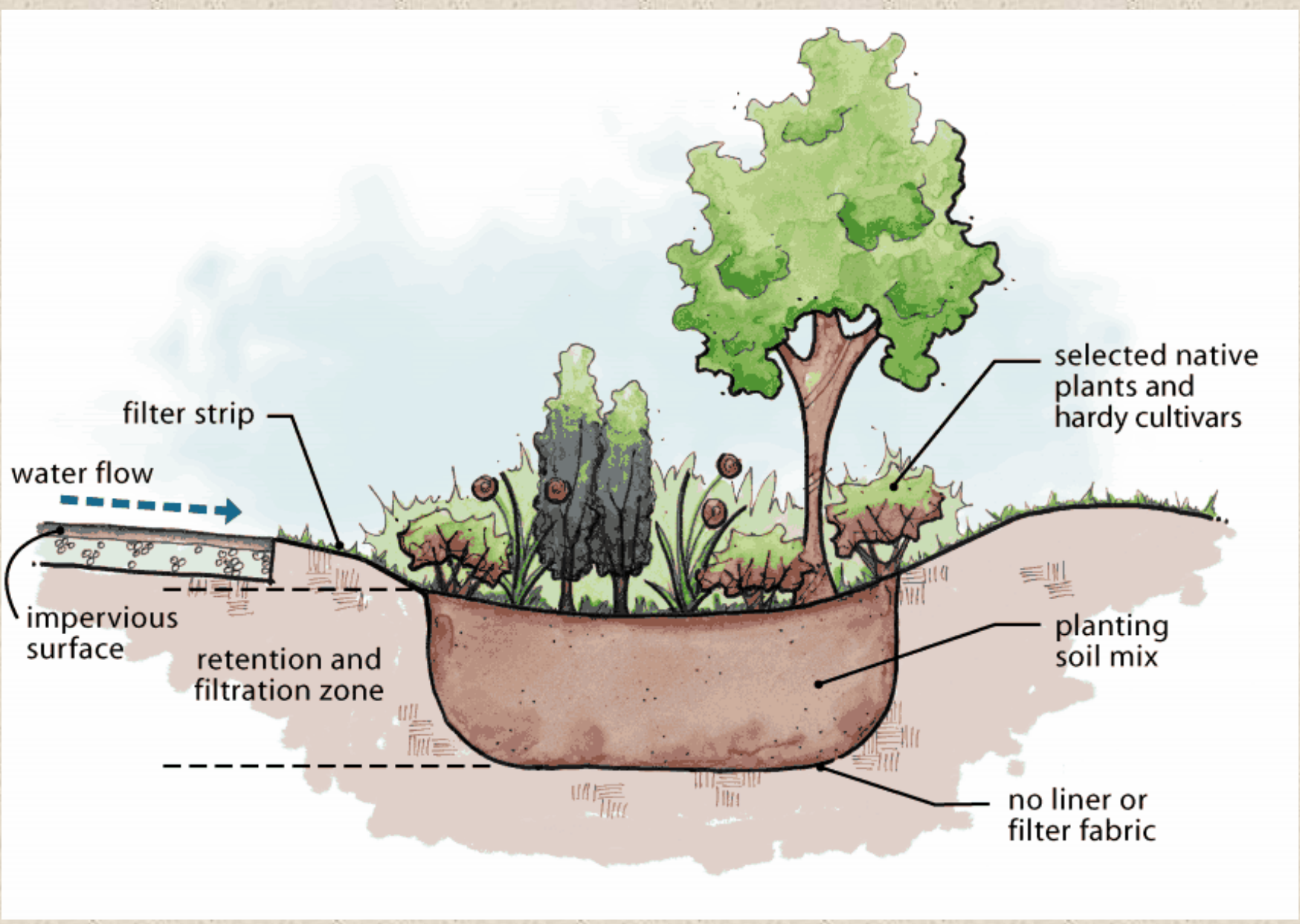

Questions?


You can be part of the solution

Rain Gardens for Home Owners



What is a Rain Garden?



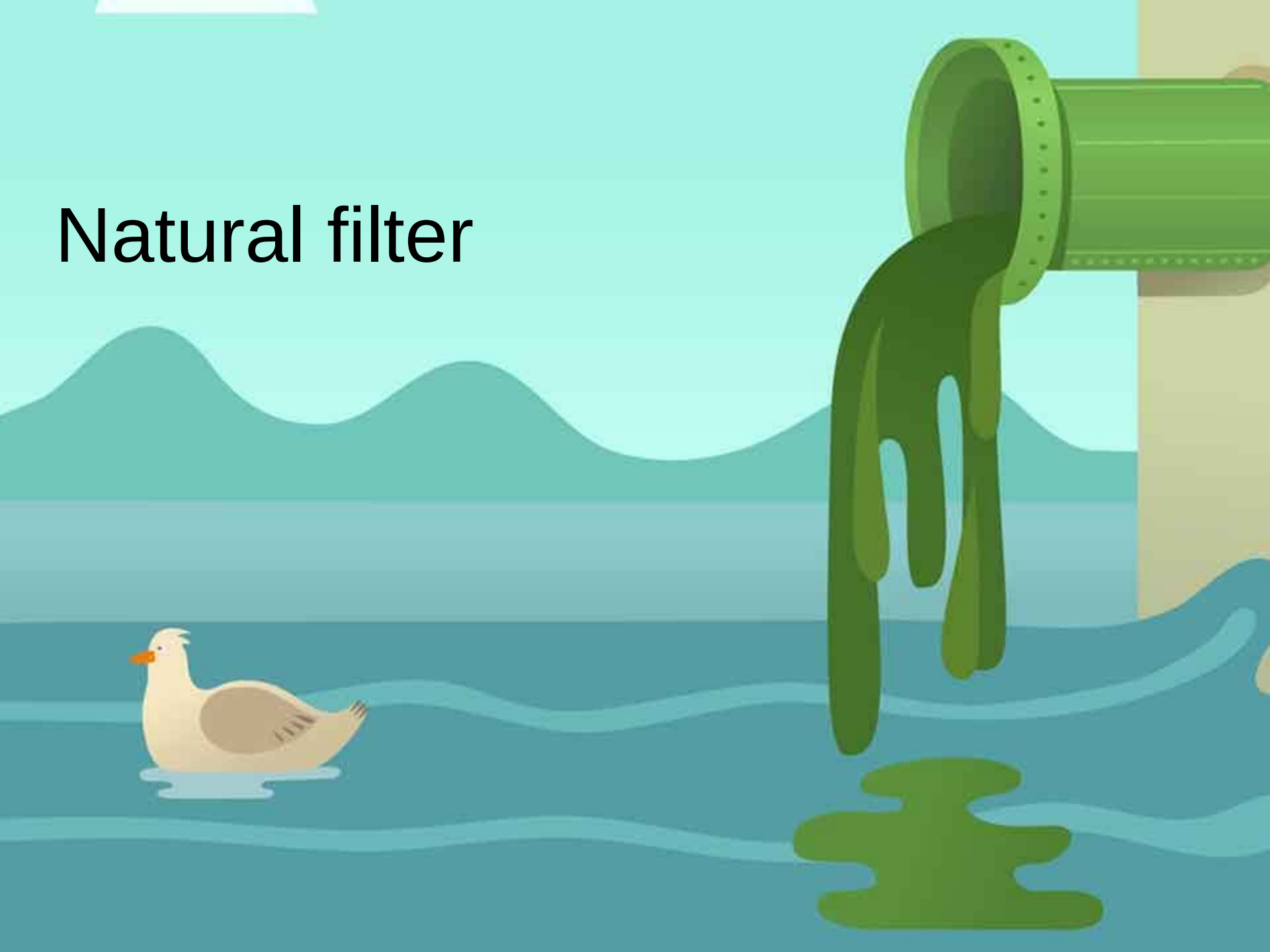

Why install a rain garden?


Drainage & Flooding

Less lawn to mow


Enhance Landscape

Natural filter




Wildlife Habitat

Increased Property Value

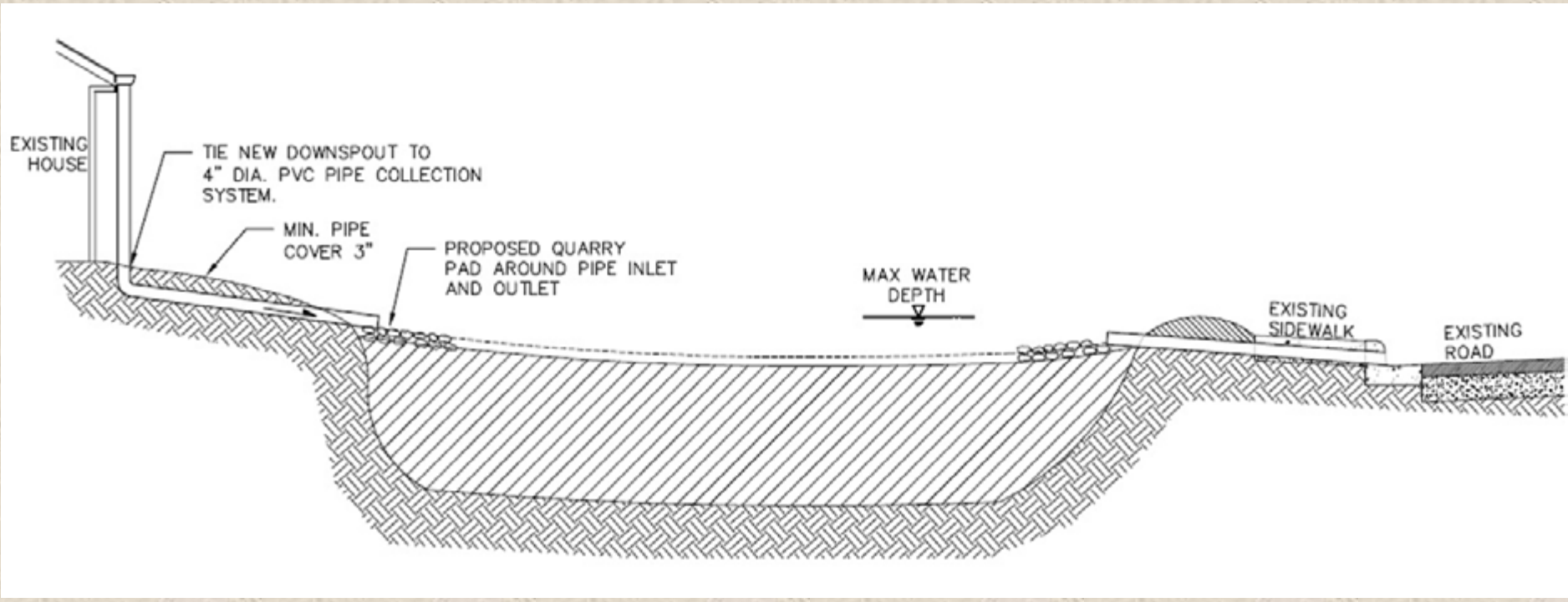
So, you want to build a rain garden?

Location


Test Soils


Sizing

Inlet and Overflow Design



Planting Plan

Zone 3 for plants that prefer drier conditions

Zone 2 for plants that can tolerate occassional standing water.

Zone 1 for plants that can tolerate wetter conditions.

Ideally, all plants should be drought-tolerant.

For planting techniques to improve survival of your rain garden plants go to: "Plant it Right: Restoration Planting Techniques" at http://wawater.wsu.edu


Planting Zones
3
2
1


Construction


Timing and Maintenance


Understand
Surroundings

Wrong Plant, Wrong Place

Plants grow

- Big Picture Thinking
  - Consider plant surroundings
  - Question plan when necessary
  - Obstructions?

Use of Stone for Aesthetics


12,000
RAIN GARDENS

Install Mulch under Rock


BEFORE


AFTER

Before

After

Getting Ready for the Rain

Why Collect Rain?


Protect drinking water
&
Freshwater Habitats

Save Money


Provide water in places without plumbing

Reduce Flooding


Reduce Runoff


Better for
Plants

Smaller Carbon Footprint


WHO OWNS THE RAIN?
The State does!

Calculating your Runoff

RULE OF THUMB

WITH 1000 SQUARE FEET OF CATCHMENT AREA

1 INCH OF RAIN WILL COLLECT 550 GALLONS OF WATER

~40 in/year in PNW

40 x 550 = 22,000 gal/yr

Choose your containers

Choose your containers

Choose your containers

Choose your containers

Rain Barrel Tips


Location


Tightly covered barrels or tanks


Do not use this water for drinking.
No utilice esta agua para beber.


Every System Needs:


Sturdy Base

Downspout Extension

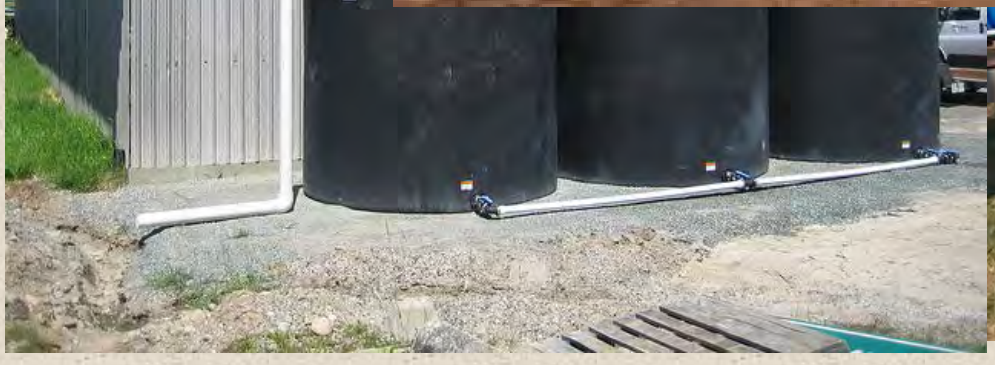
Debris Filters

Lid and Screen


Outlet

Overflow

Connecting multiple barrels



How to Disguise Your Rain Barrel

More Disguises!

System Maintenance

1. Rinse your barrel at the end of each season
2. Monitor intakes and overflows regularly for leaves and other debris from the roof.
3. Check your roof and gutters often. Remove any leaves, branches, dirt or other litter.
4. Trim or remove any plant materials that overhang your house
5. Check your barrel or cistern and its cover.
6. Prevent ice damage

Using Collected Rain Water

- Non-potable uses only
- Divert the first flush (10 gallons/ 1000ft^2 roof)

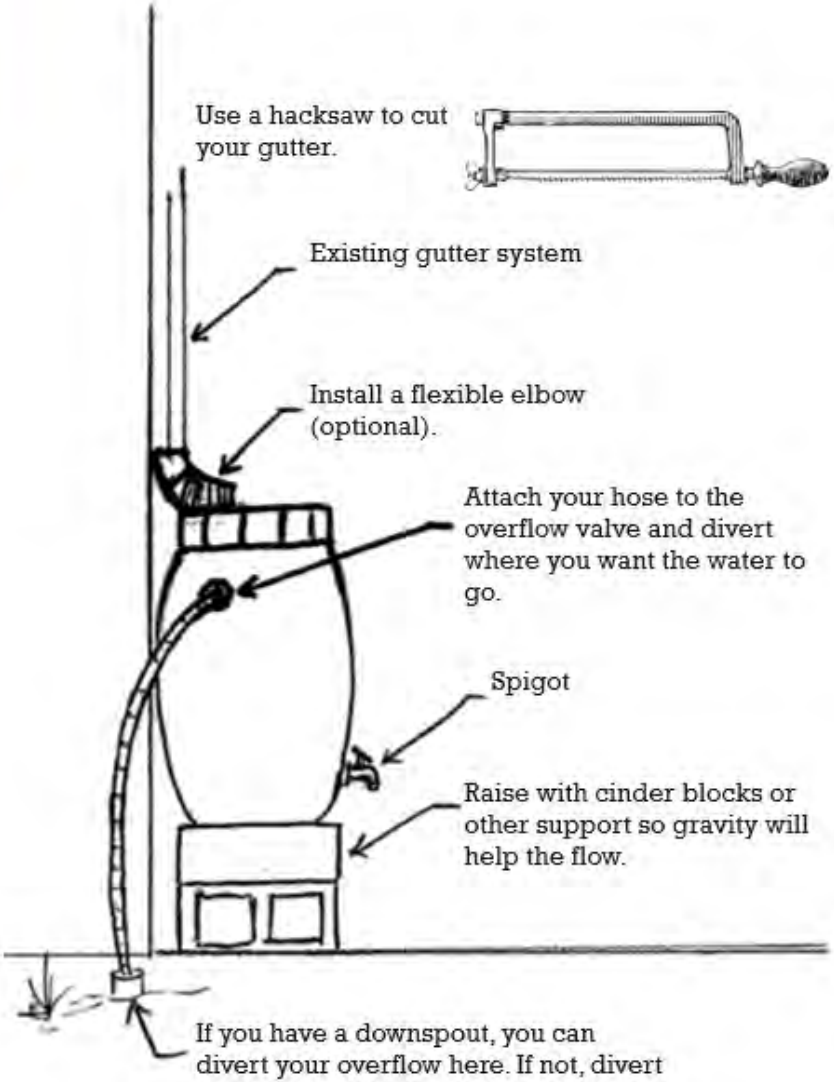
Congrats! You're now a proud rain barrel owner.

Your barrel is ready to be hooked up.

1. Place your barrel near the downspout you have selected, and plan out how you will direct the downspout.
2. Disconnect your downspout from the line leading to the storm drain or curb drain by sawing the downspout above where the top of the rain barrel will be, leaving room for the elbow to be attached.
3. Attach a downspout elbow to the end of your downspout so that water from your downspout is directed into the rain barrel through the plastic screen vent on top.
4. If you have an aluminum downspout, secure it to the elbow with screws.
5. If you have a PVC downspout, secure it to the elbow with PVC cement.
6. Place your rain barrel under the downspout elbow.
7. Attach a hose to the spigot, and/or to the overflow hole on the top-side of the barrel.

You'll likely soon realize that just one barrel isn't enough to catch and store all the rain we get here. You can make more rain-barrels easily at home by purchasing your own supplies and following the instructions (on reverse).

Or, order from us online:
www.surveymonkey.com/r/orderbarrel



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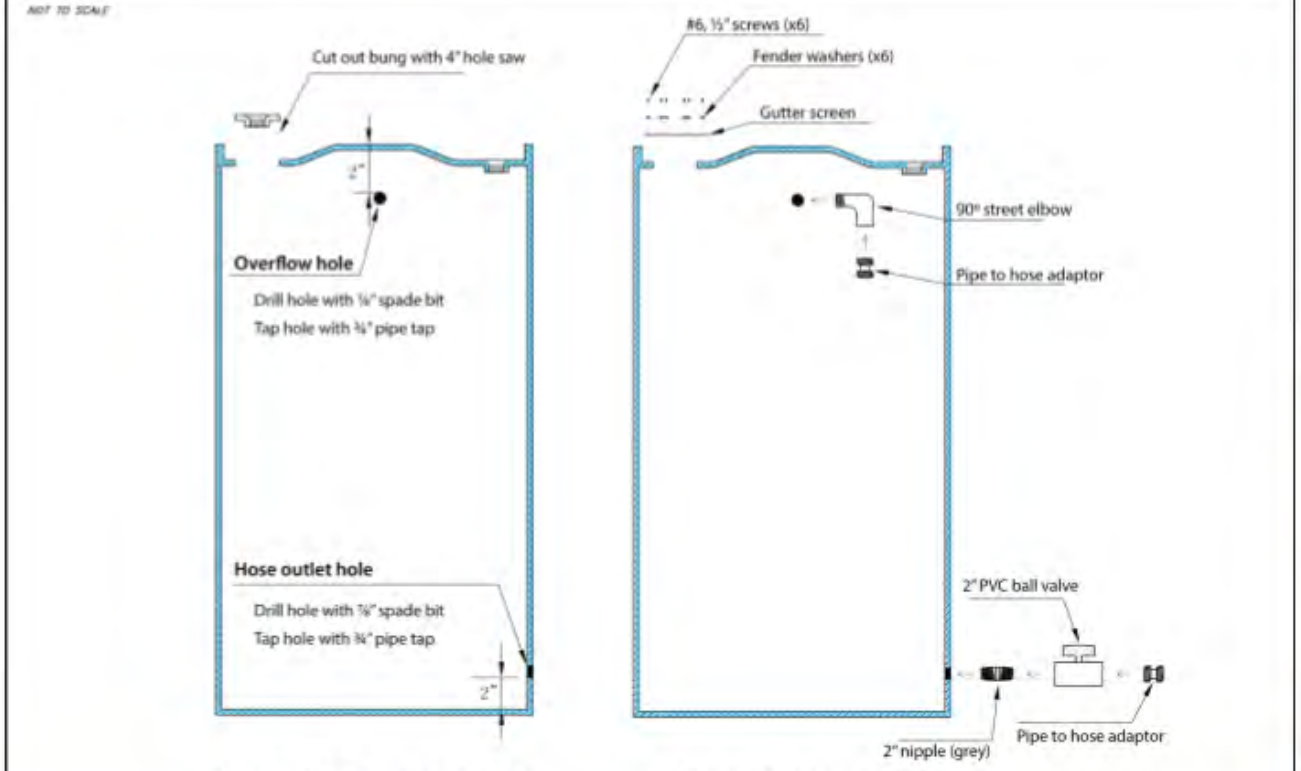
Questions?
(425) 335-5634 or
Email: rainbarrel@snohomishcd.org



Step 1: Drill and tap holes **Step 2: Part assembly**

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Visit *betterground.org/gallery/build-rain-barrel/* to watch a short video explaining how to assemble your rain barrel kit.

Tools you will need:

1. Drill
Corded drill is best for consistent torque
(if you do not own a drill, inquire about a pre-drilled barrel).

2. 4" Hole Saw
For cutting the inflow hole into the top of the barrel
(pilot drill in the center)

3. 7/8" Spade Bit
For cutting small holes in rain barrel

4. 3/4" 14 NPT Pipe Tap
Will cut threads into the holes for the pipe fittings to tie into
¾" is the hole size, 14 NPT refers to the thread spacing

5. Crescent wrench
For using the pipe tap

6. Tin Snips
Use to trim your screen to fit adapter (2 per barrel)
An adaptor is needed to go from pipe threads to hose threads

Parts included in your rain barrel kit:

1. 55 gallon food-grade barrel

2. Silicone glue
Applied to threads

3. Window Screen
To keep debri and mosquitos out

4. #6 - ½" Sheet Metal Screws – 6 Total
For screwing the screen onto the barrel

5. 1/8 x ¾ Fender Washers – 6 Total
1/8 is the size of the hole, 3/4 is the diameter of the outside of the washer

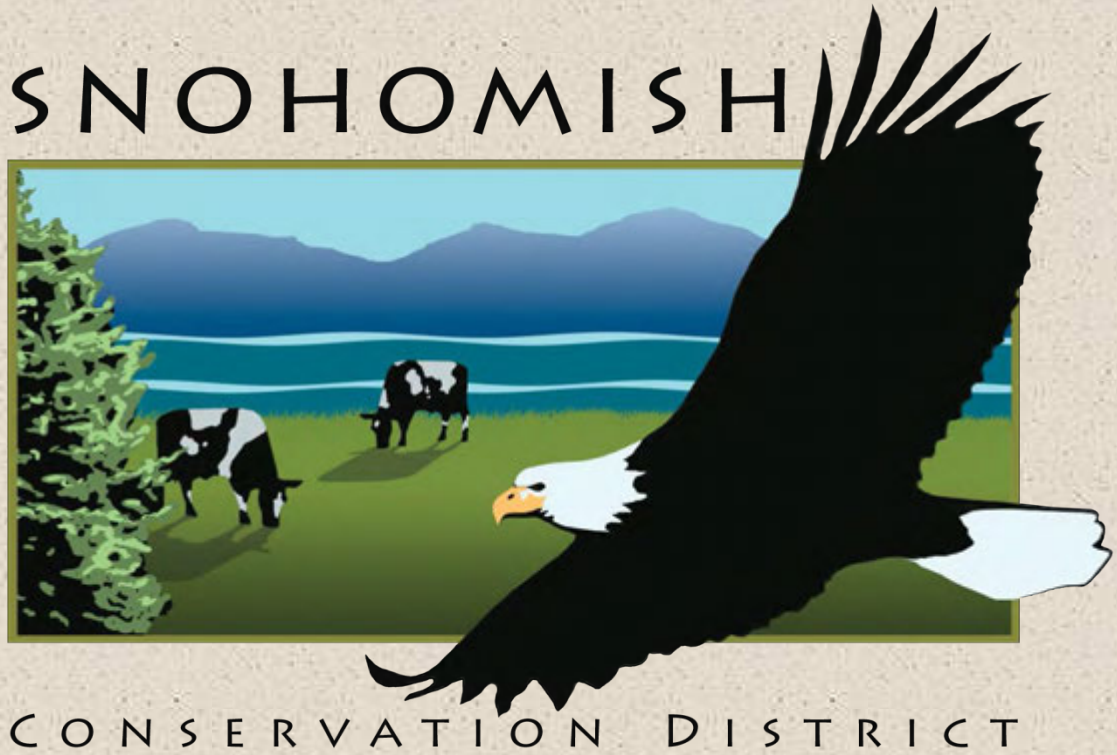
6. 3/4" x 2" Sch. 80 PVC nipple (can also use a close nipple)
For the hose outlet at the bottom of the barrel

7. Valve (double threaded)
For the hose outlet at the bottom of the barrel

8. 3/4" 90 deg PVC Sch. 40 Street Elbow (male x female threaded)
For the overflow at the top of barrel

9. 3/4" brass pipe thread garden hose adapter (2 per barrel)
You will use these adaptors to connect pipe threads to hose threads

Questions?



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