

Warm-Up

08JAN2016

- What are the dominant uses of water by humans?
- Why does it require so much more water to produce 1 kg of beef than 1 kg of grain?

Logistics

- 10 Vocabulary Due Today
- Bag of Rocks Due on Monday
- Read Klein Chapter 4 (Walter and Bernadette)

- Gather 6 Bottles per group by Friday next week

The Future of Water Availability

- Water ownership- people can have rights to water use, but they do not own the water.
- Water conservation- using techniques such as more efficient water fixtures, faucets and washing machines.



Figure 9.23
Environmental Science
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- Who owns water?

- Water ownership- people can have rights to water use, but they do not own the water.

People debate between different ways to share water.

- First Right, First Use
- Upstream
- Historical Use
- Trade on the “free market”

- Who owns water?



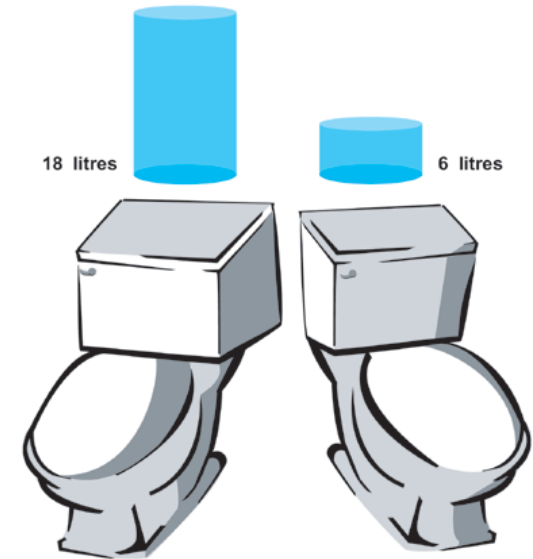
- Water is becoming increasingly rare
- How can we conserve what we have?

Water Conservation

- Reduce & Reuse



Water use per flush – conventional vs. ULV toilet



Xeroscaping

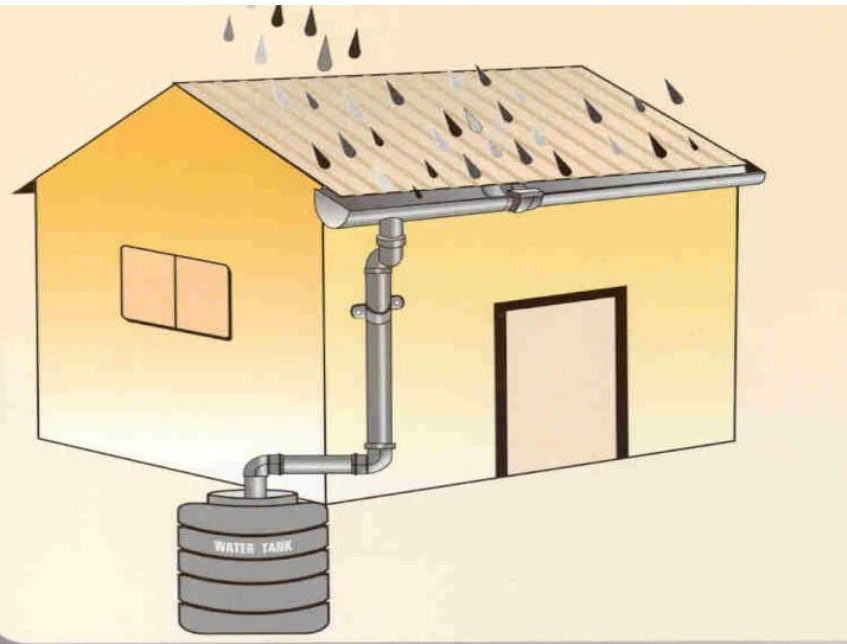


Water Conservation

- Gray water (re-use)



Water Conservation



Rain water collection

Rainwater harvesting with Aquascape's

RainXchange™

Rainwater Harvest Systems

shown with
Pondless™ Waterfall

Please note: The numbers represented in this drawing show the stages of rain water harvest.

1 IRRIGATION SYSTEM

RainXchange is loaded with microorganisms and compounds that will make plants thrive longer. A healthy garden composed from greenhouse gases and properly angled will allow for greater water retention and better overall soil profiles.

2 AQUATIC PLANTS

Providing food and shelter for a great number of birds, insects and amphibians and the convenience for maintaining your landscape.

3 BIOLOGICAL FILTER

Special carbon, iron and oxygen and a variety of bacteria and plants to use low nutrients that can be absorbed by plants, thereby creating a perfect cycle of nutrient to use.

4 CONNECTING PIPE

Carries the water via gravity to the main storage chamber, built separately.

5 RAIN FILTER

- 1 Captures and removes pollutants flushed into the system during a rain event.
- 2 Coarse filter screen removes leaves, twigs, and weeds.
- 3 Smaller suspended particles are captured in a fine mesh which can easily be removed for cleaning.

6 MODULAR STORAGE BASIN

- 1 Modular design can be configured to fit a wide variety of applications and settings.
- 2 The storage basin consists of modular plastic tanks that are assembled on-site.
- 3 EPDM rubber membrane creates a water-tight basin.

7 FLEXIBLE PVC

Easy installation with minimal head pressure, which equates to overall efficiency.

8 SNORKEL™ VAULT & CENTIPEDE™ MODULE

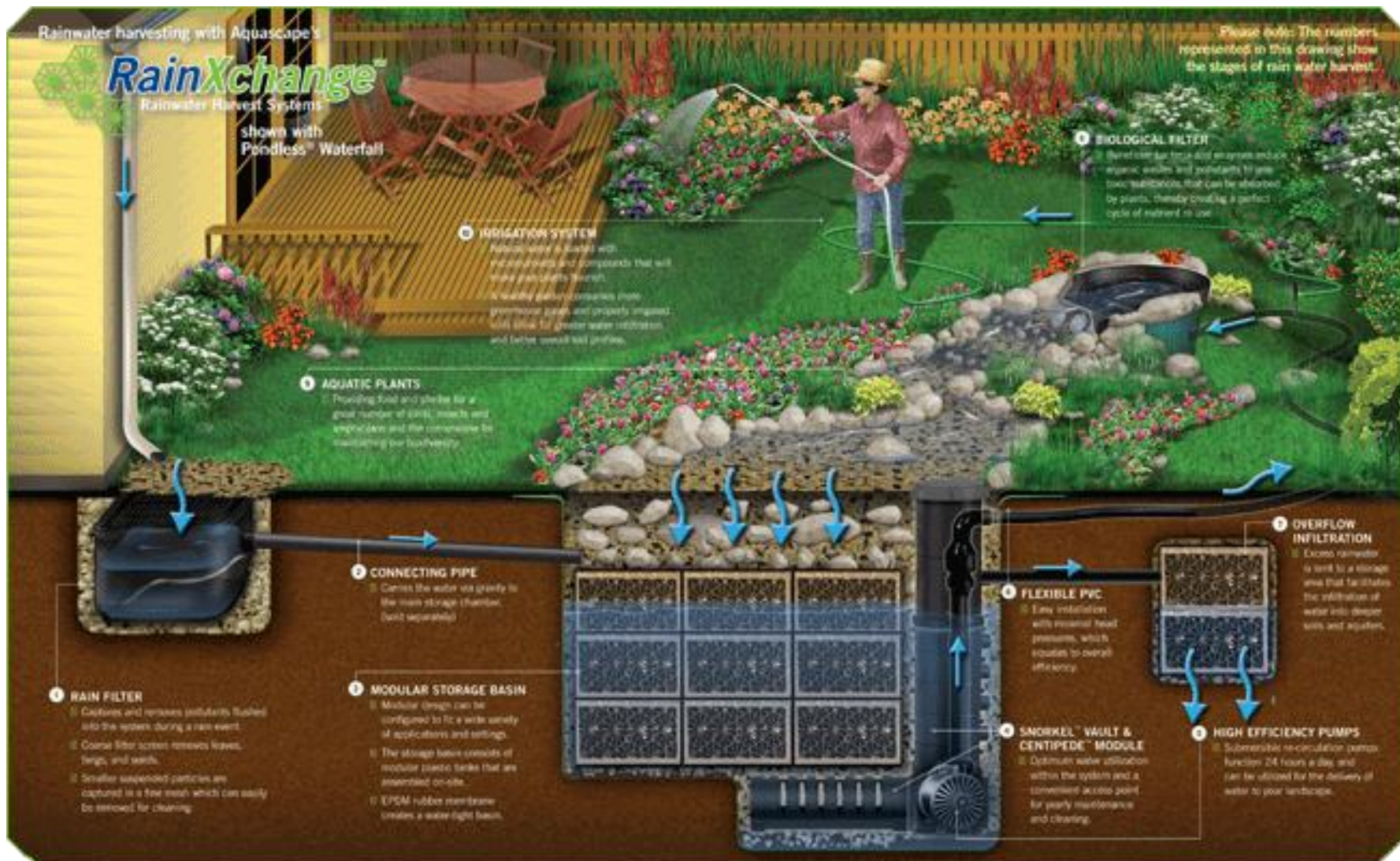
Optimum water utilization within the system and a convenient access point for yearly maintenance and cleaning.

9 OVERFLOW INFILTRATION

Excess rainwater is sent to a storage area that facilitates the infiltration of water into deeper soils and aquifers.

10 HIGH EFFICIENCY PUMPS

Submersible recirculation pumps function 24 hours a day and can be utilized for the delivery of water to your landscape.



- We will watch a documentary about Global water shortages: “Last Call for the Oasis”

Warm-Up

08JAN2015

- What was the most interesting piece of information you learned from “Last Call at the Oasis”?
 - Turn in the Warm-Ups next week!
 - Turn in 10 Vocab today!

