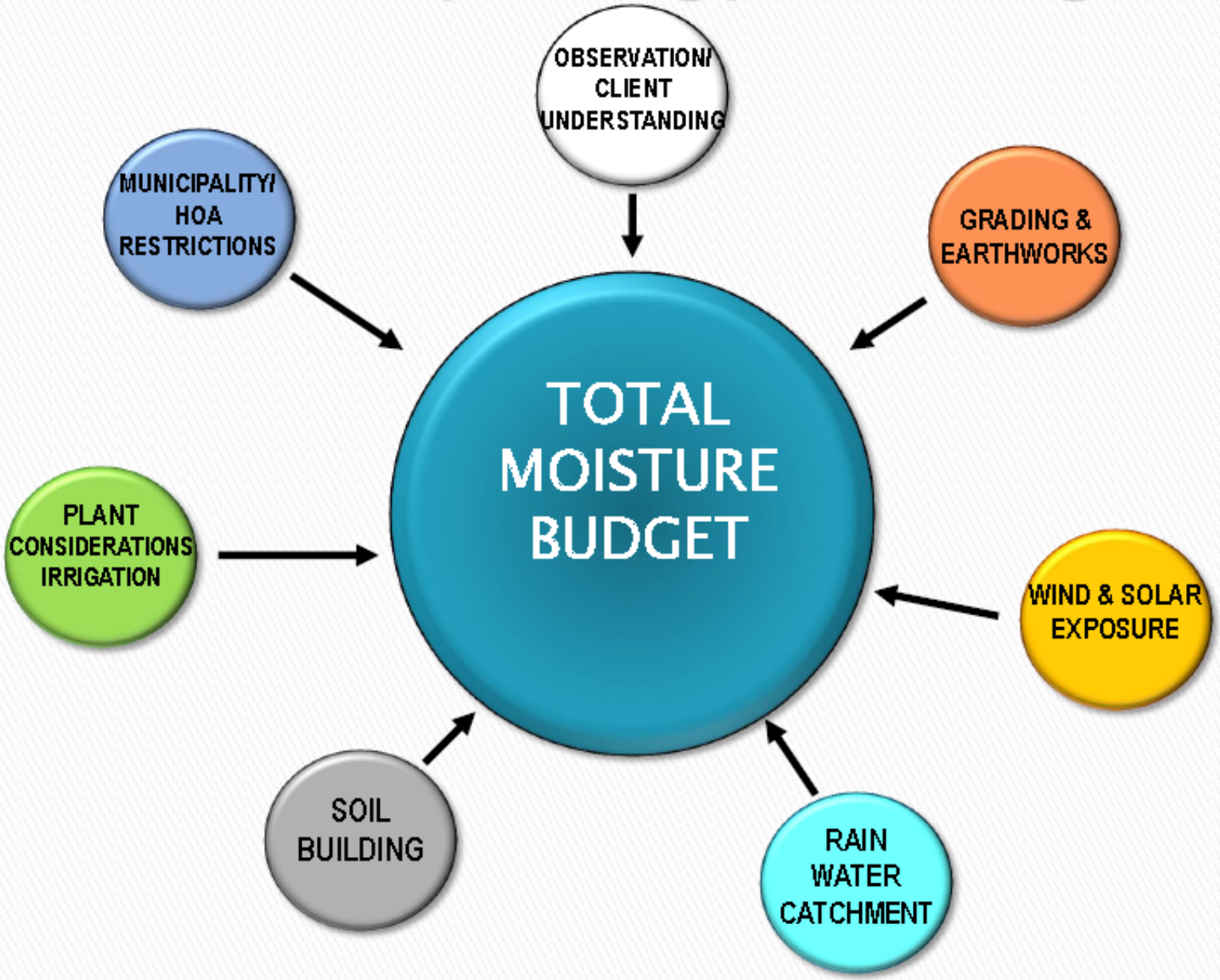
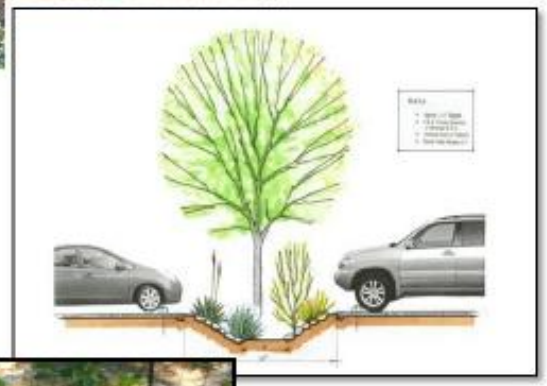
Rainwater Harvesting for Grow Green Professionals

Dick Peterson
www.DickPeterson.com

Total Hydrology Planning



Rainwater Harvesting Methods



Passive Catchment

Use finish grading and earthworks to manipulate water for the following reasons:

- Absorb catchment overflow
- Slow, Spread & Sink stormwater into soil
- Reduce offsite runoff & erosion
- Reduce grey infrastructure, LID
- Make available to plants & habitat
- Self irrigating landscape

* The cheapest way to get water back into the landscape. Not a significant ground water recharge strategy.

limited time latitude,
- more planning required

Rainwater Harvesting Methods

Active Catchment

Capture rain off roof or other surface.

Basic organic / partiulate filtering

Store in tanks above or underground.

Filter options

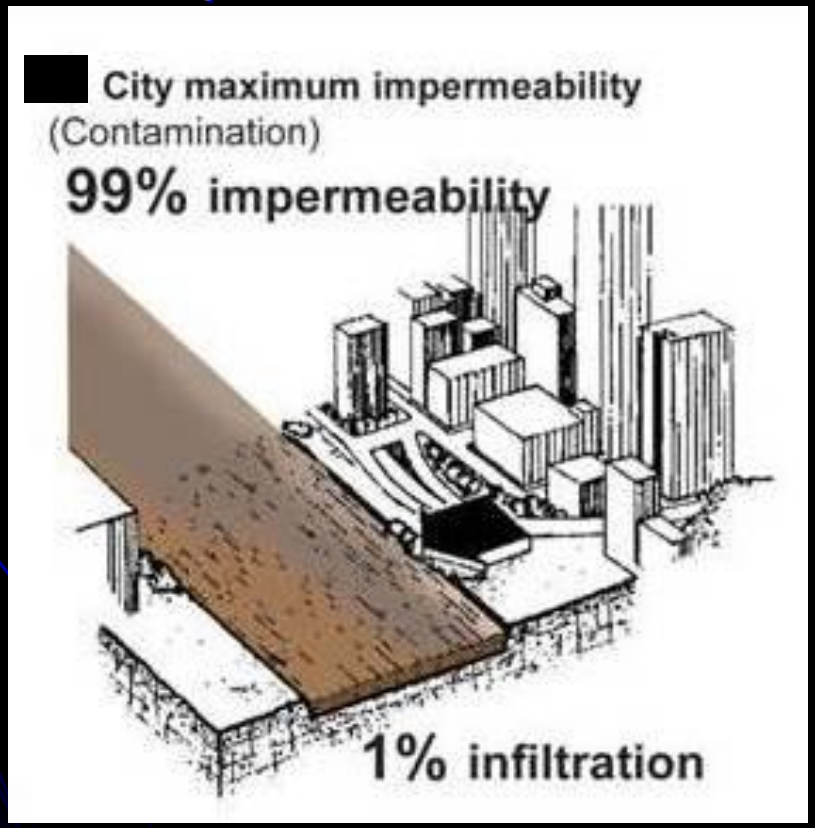
(Pressurize?)
Delivery system

Maximum time latitude
-less planning

Storm water Run-off
Just how much?

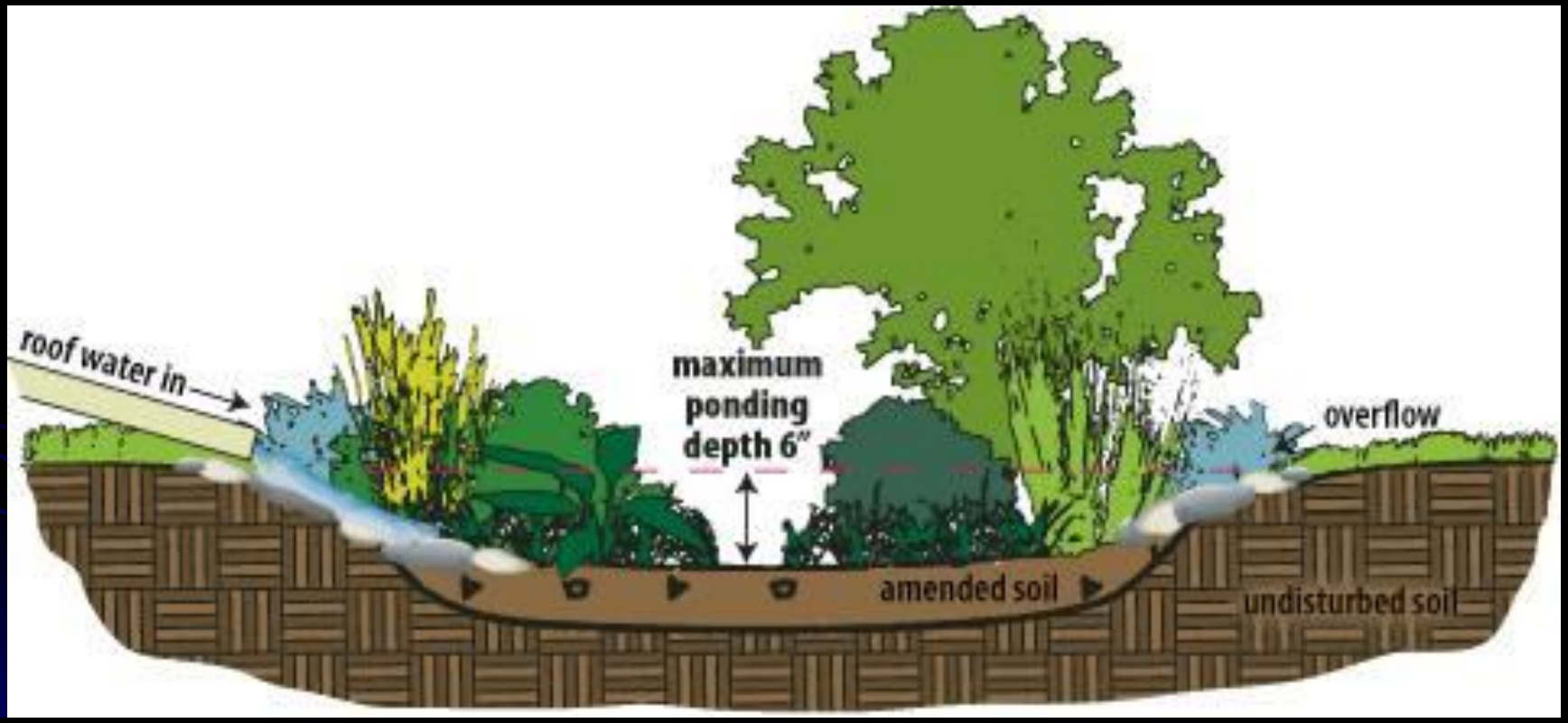
- 1” of rain on 1 acre generates 27,000 gal. of water
- 1” of rain on a 20 x 50 mile heavily urbanized city will generate 17.4 billion gal. of water!
- 1” of rain on a 1,000 sq. ft. roof can STORE 600 gal. of water!

This…



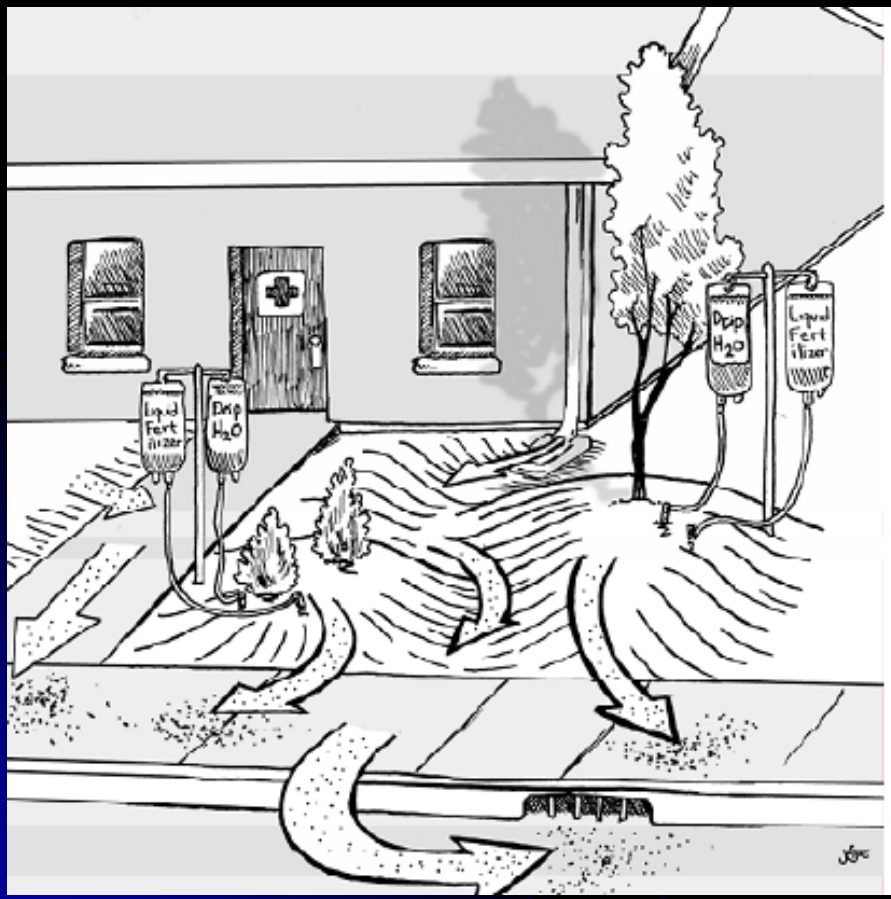
or This?

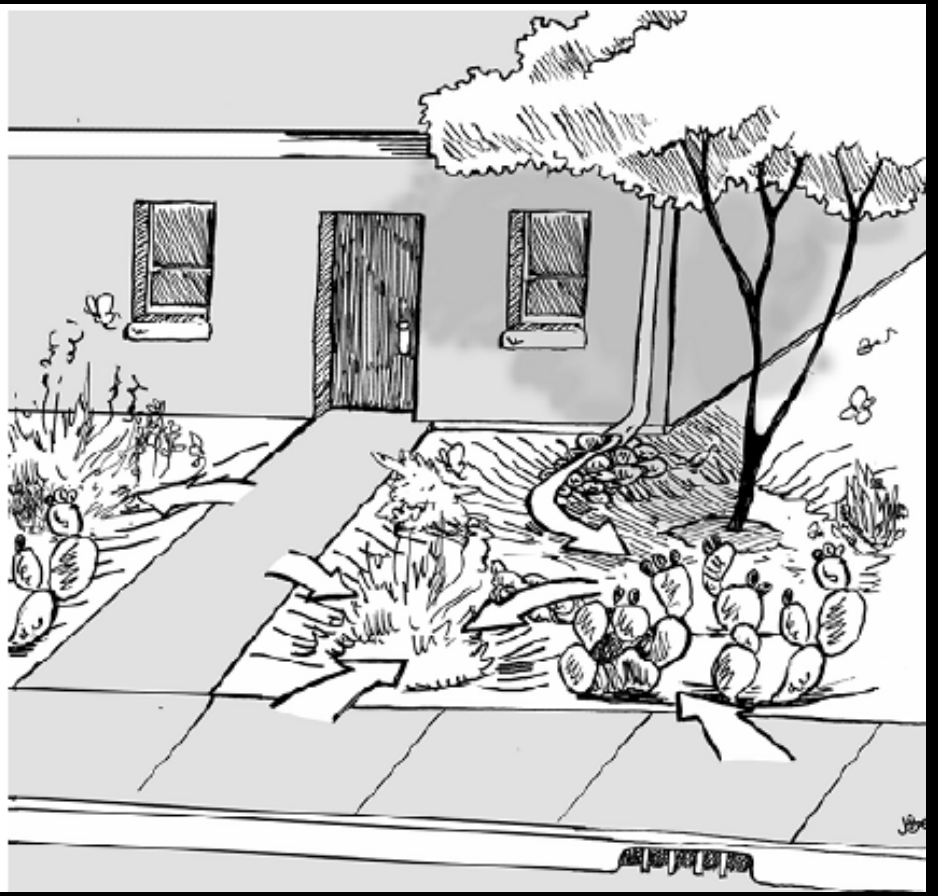
Green Solutions for Stormwater Runoff



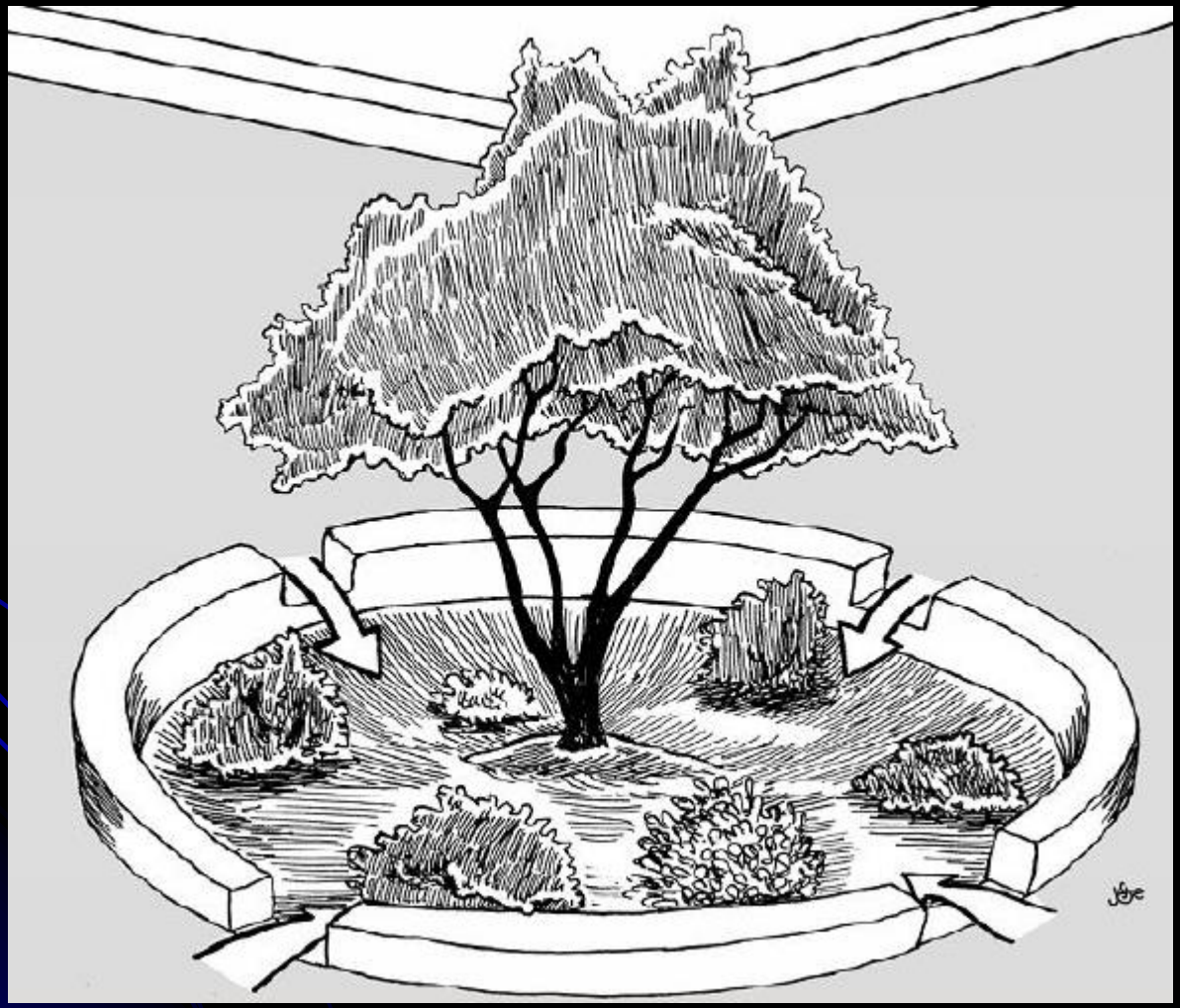
Green Solutions for Stormwater Runoff

Make runoff water take the LONG way to the river!
From Brad Lancaster's books, www.harvestingrainwater.com





Green Solutions for Stormwater Runoff



The Perfect Marriage of Two Effective Strategies

Rain Cisterns + Rain Gardens

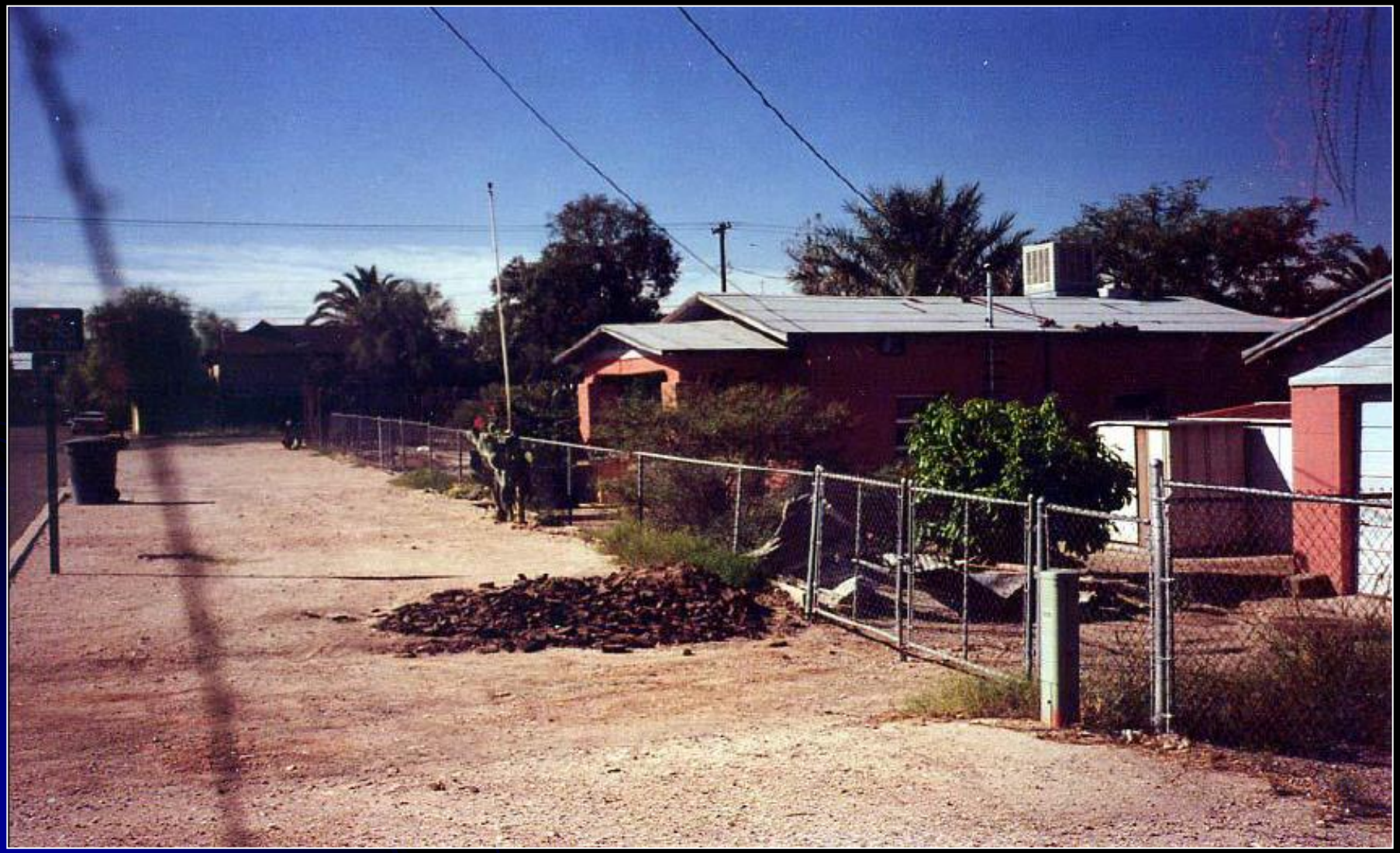
The Perfect Marriage of Two Effective Strategies

Rain Cisterns + Rain Gardens

Green Solutions for Stormwater Runoff

Green Solutions for Stormwater Runoff

Tucson as you expect to see….



Tucson, 10 years later!

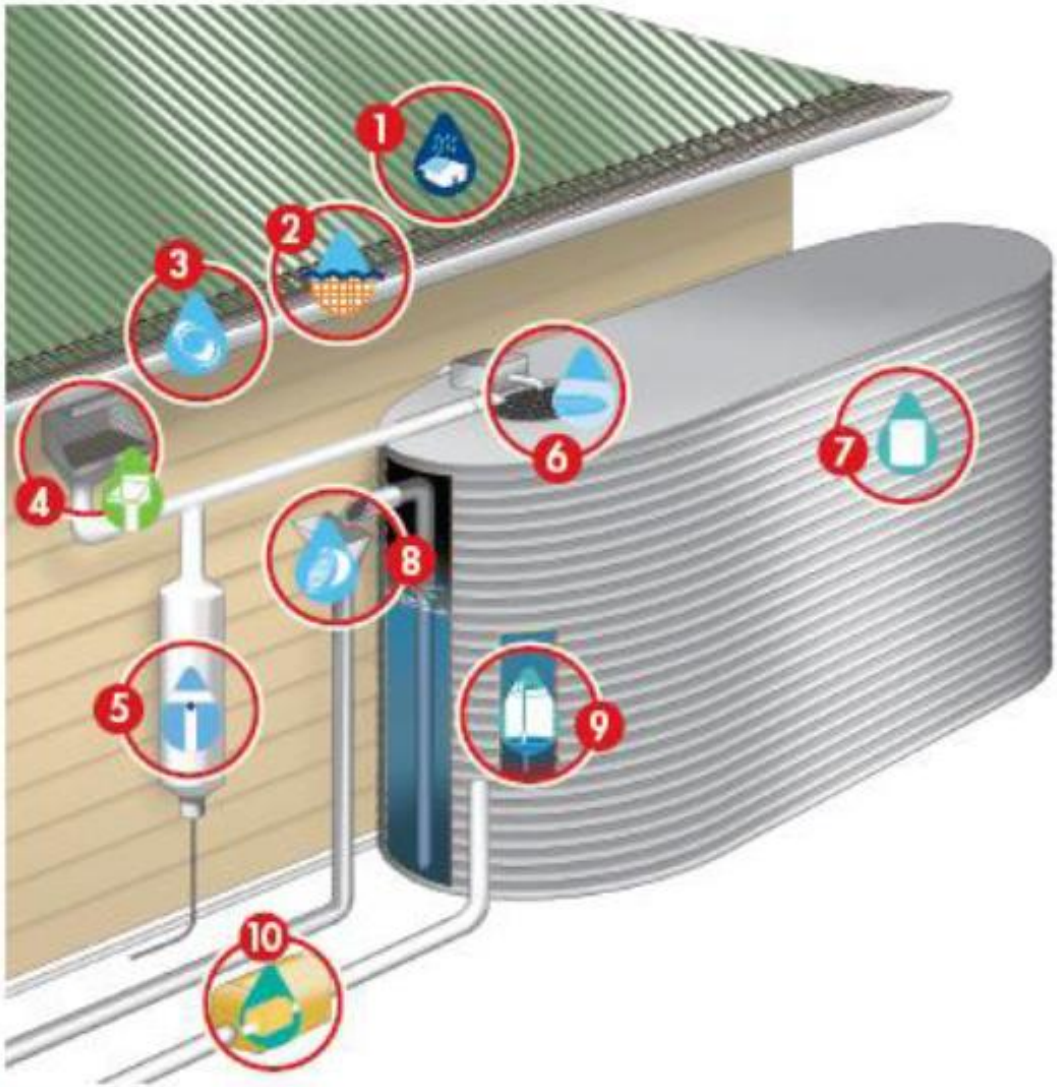
The Perfect Marriage of Two Effective Strategies

Rain Barrels + Ponds

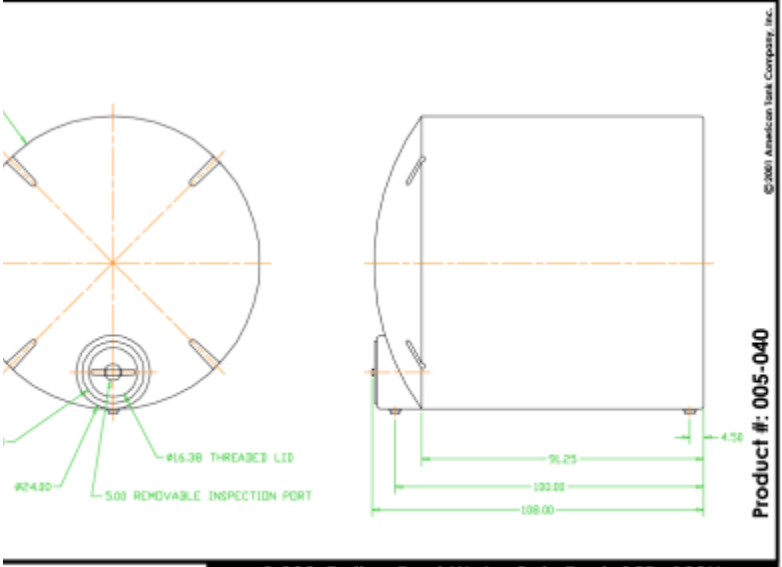
A 10’ x 10’ garden shed can collect 60 gallons in just a 1” rain

Typical System

1. Rain
2. Mesh filter
3. Gutter
4. Leaf filter
5. Diverter
6. Filter
7. Storage tank
8. Output
9. Monitor
10. Pump



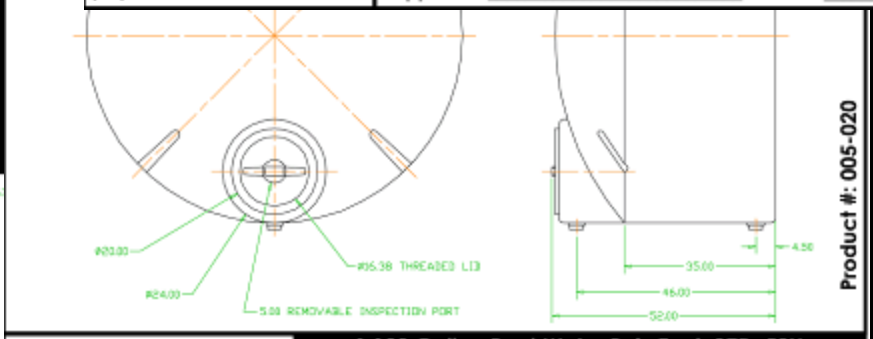
Tanks are available in many sizes and configurations



AMERICAN TANK COMPANY INC
(800) 655-9100 www.americantank.com

3,000 Gallon FreshWater Poly Tank 95Dx108H

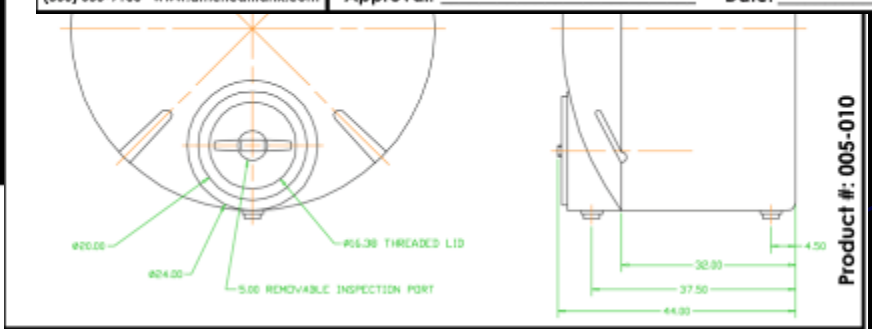
Customer: _____ Order #: _____
Approval: _____ Date: _____



AMERICAN TANK COMPANY INC
(800) 655-9100 www.americantank.com

1,100 Gallon FreshWater Poly Tank 87Dx52H

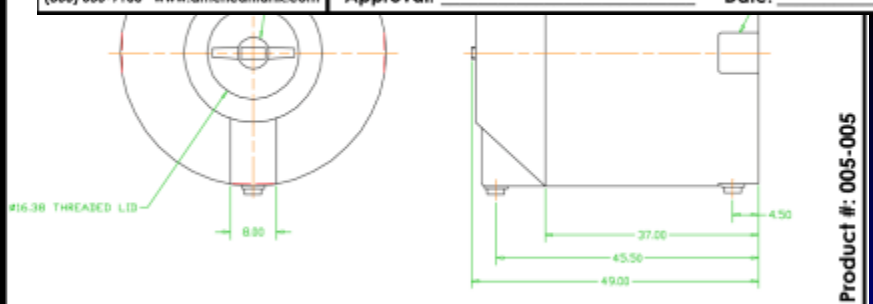
Customer: _____ Order #: _____
Approval: _____ Date: _____



AMERICAN TANK COMPANY INC
(800) 655-9100 www.americantank.com

550 Gallon FreshWater Poly Tank 67Dx44H

Customer: _____ Order #: _____
Approval: _____ Date: _____



AMERICAN TANK COMPANY INC
(800) 655-9100 www.americantank.com

305 Gallon FreshWater Poly Tank 46Dx49H

Customer: _____ Order #: _____
Approval: _____ Date: _____

Components

House+Earth

Components

Components

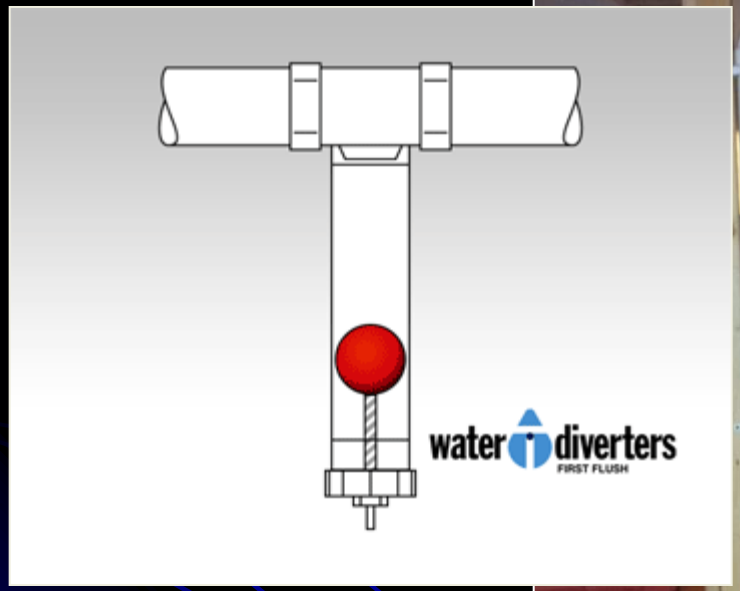

WAYNE
1 HP Portable
Sprinkler/Utility
• Stainless Steel Construction
• Continuous Duty

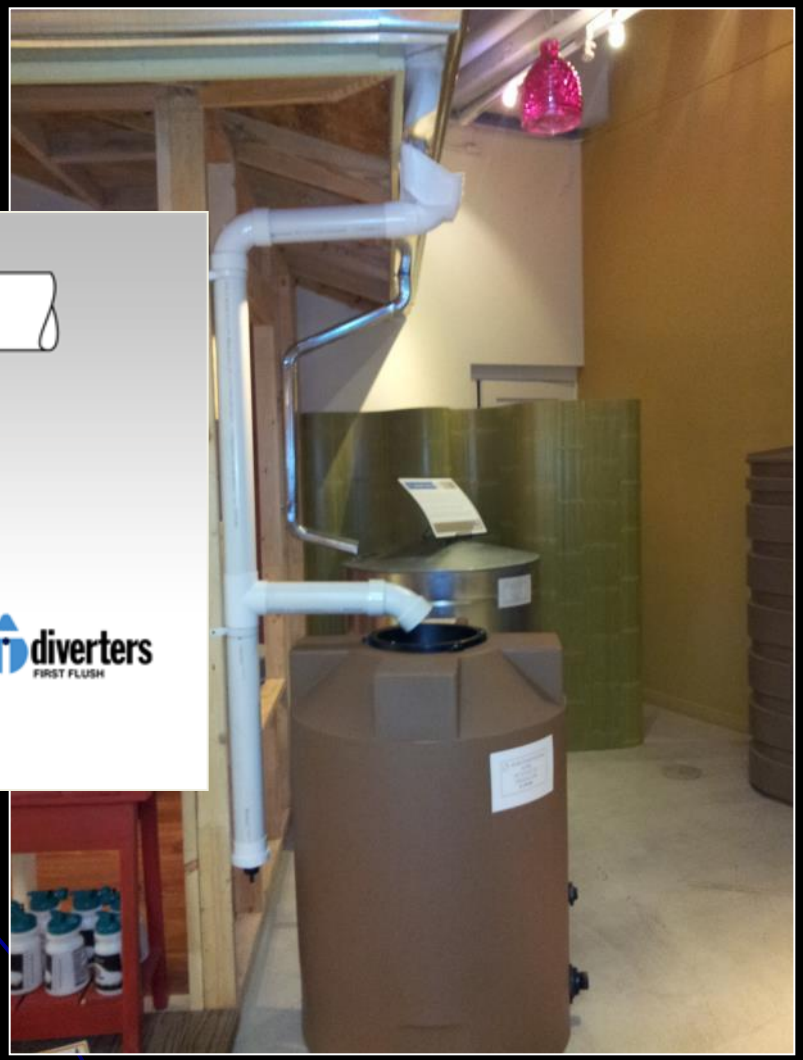

LEADER

Components

Components

Components





House+Earth

DRY System

Components

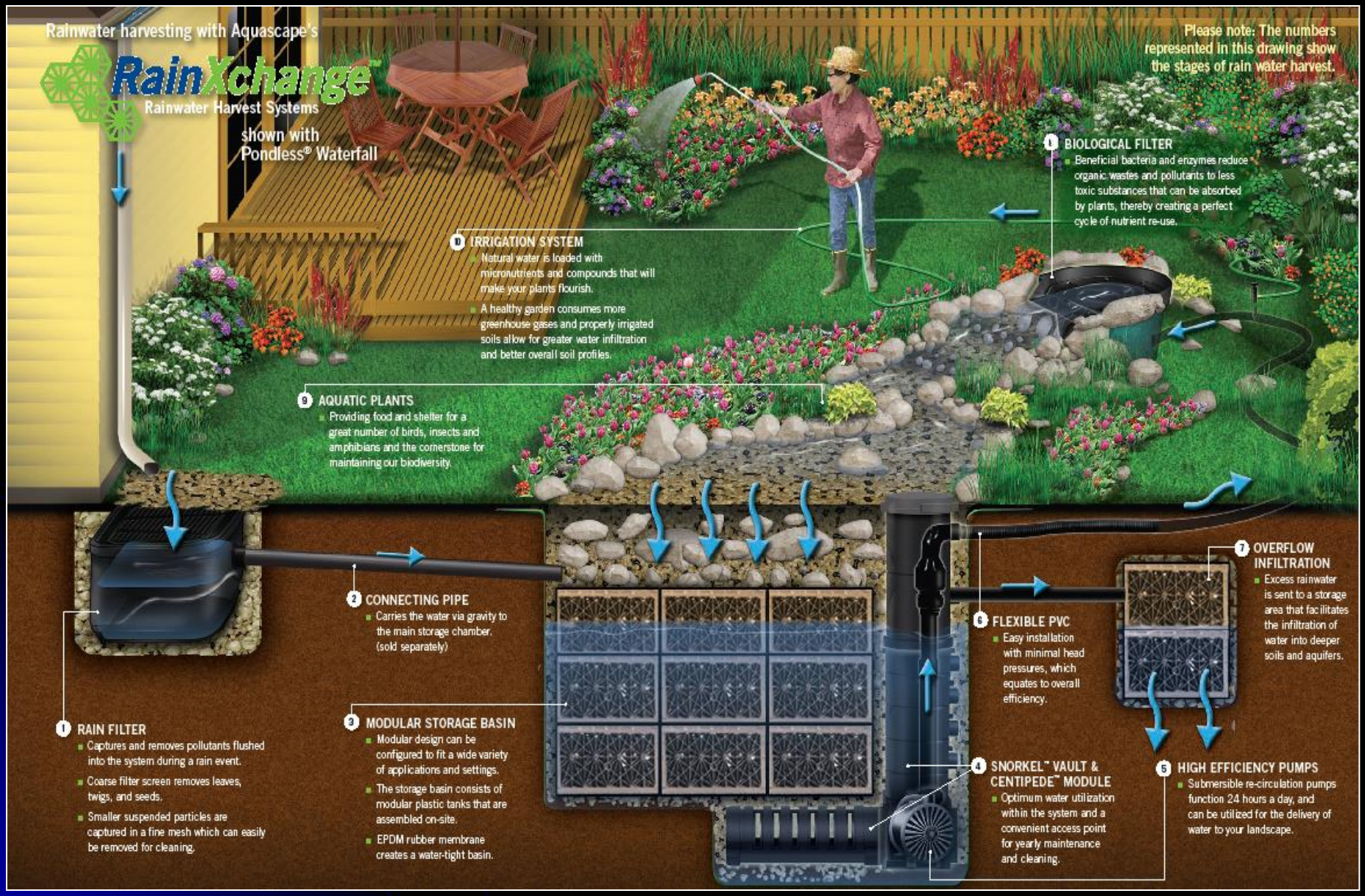
Vortex Filters

complements Joe Wheeler

Components

Potable water system with filtration and UV light on a 365 day count-down timer

New Underground Systems



Design Options

Joe Wheeler

Design Options

Joe Wheeler

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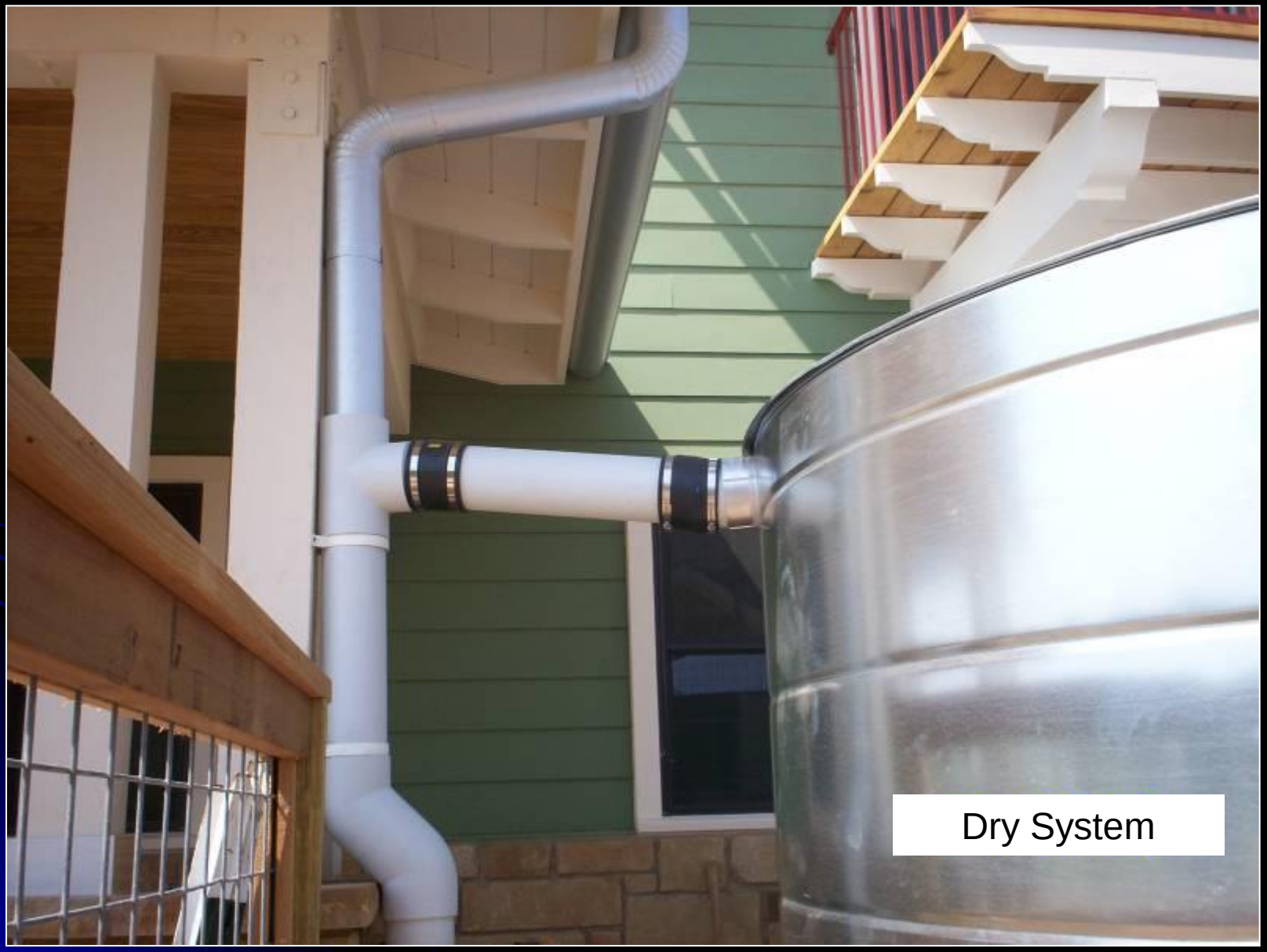


Design Options
Casis Elementary School
Garden Classroom

Design Options

Design Options

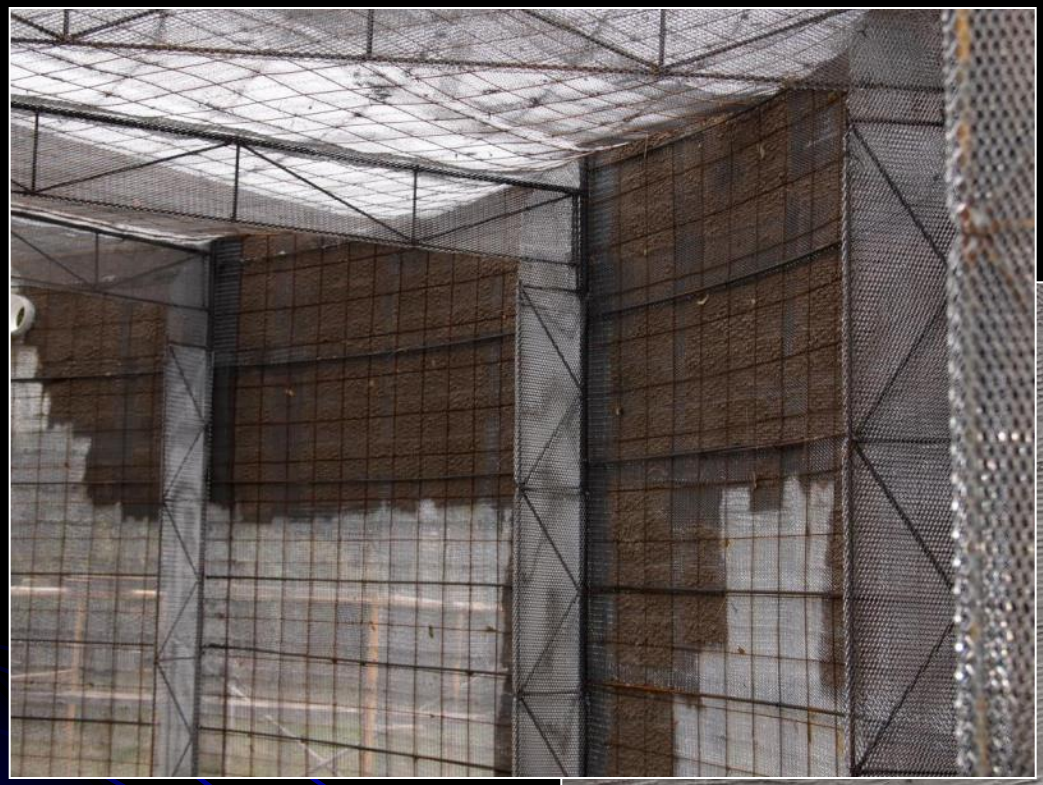
Design Options

First Flush System is Custom

Design Options

***Ferrocement*,**
a mixture of Portland cement and sand applied over layers of woven or expanded steel mesh and closely spaced small-diameter steel rods rebar.

Design Options



Design Options

Wet System w/FFF

Wet System w/FFF

Design Options

Design Options

Design Options

Rotational Molding in Austin!

10,000 Gallon Available Soon

Wet System w/FFF

Non-potable System in CoA

Purple Pipe Now Required for Rainwater Systems

Rainwater Rebate

Rebates of $0.50 per gallon (non-pressurized) and $1.00 per gallon (pressurized) are available to customers of Austin Water or a qualifying water provider for installing rainwater harvesting systems. The maximum lifetime rebate amount is $5,000, not to exceed 50 percent of the project cost. Participation is limited to once every 12 months until the maximum rebate amount is reached. Systems of 500 gallons or more require approval prior to purchase and installation. For tax purposes, commercial and multi-family properties must submit a completed IRS Form W-9.

Rainwater Rebate

Additional Program Requirements

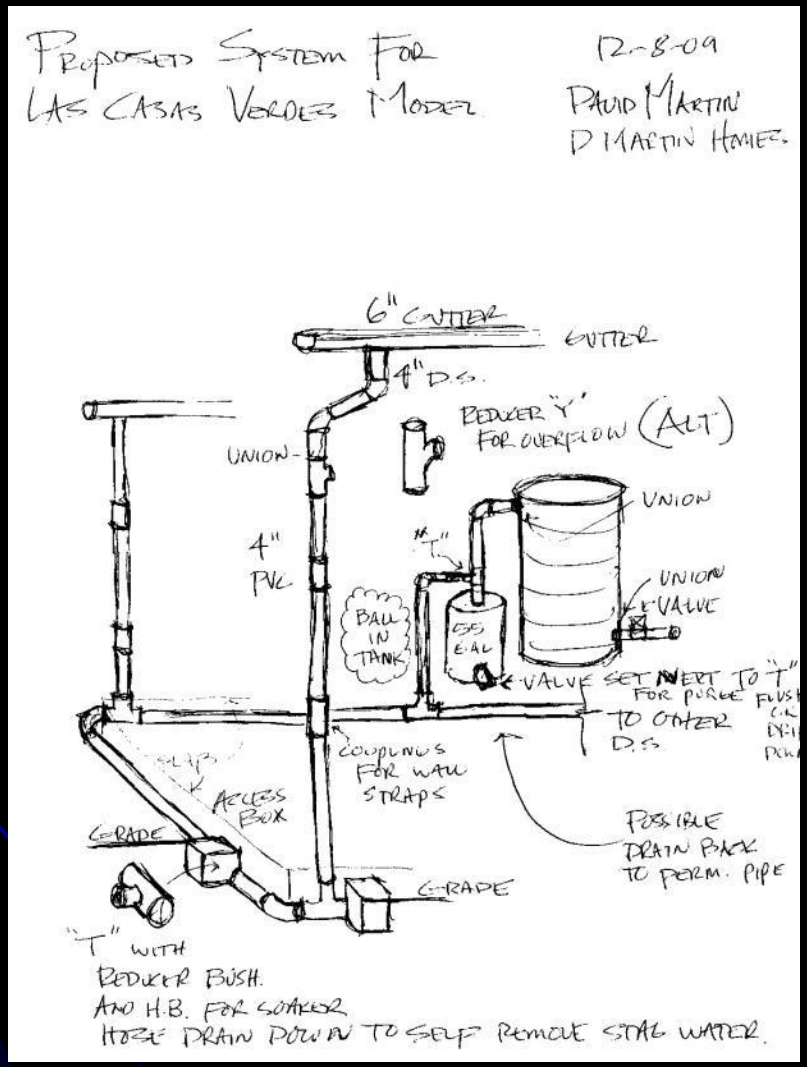
For systems with 500 gallons or more of capacity:

- Include site and system drawings with rebate application. View examples.
- Submit a completed rebate calculation worksheet with final receipts. Download the rebate calculation worksheet.

Rainwater Rebate

5811 Sinclair Ave.

Rainwater Rebate



Rainwater Rebate

For pressurized rainwater harvesting systems:

- Install a Reduced Pressure Principle Backflow Preventer (RPZ) immediately downstream of City of Austin water meters.
- Install an RPZ supplying the make-up water for the irrigation system, or permanently disconnect the irrigation system from the potable water system. Alternatively, an approved air gap may be installed immediately upstream of the connection to the irrigation system.
- An operational test of each RPZ must be conducted by a state licensed Backflow Prevention Assembly Tester registered with the City of Austin.
- Install an expansion tank or similar device to allow for the dissipation of excessive pressure.
- Retain the services of a qualified person to perform a Customer Service Inspection.
- Visit the Special Services Division website or contact them at 972-1060 for additional requirements and questions.

Rainwater Rebate

No Purple Pipe Here!

Why?

Bt-Biological Mosquito Control

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