



# Gardening for Wildlife

# Brandon Merchant

- Owner of Southwest Victory Gardens
- Pima County Certified Master Gardener
- SmartScape Certified
- Former President of Tucson Organic Gardeners





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# Our Philosophy

- Healthy soil encourages healthy plants
- Healthy plants require fewer pesticides and fertilizers (inputs)
- Limit external inputs
- Reduce water usage
- Garden with our climate not against it
- Encourage a natural ecosystem





# Resources List:

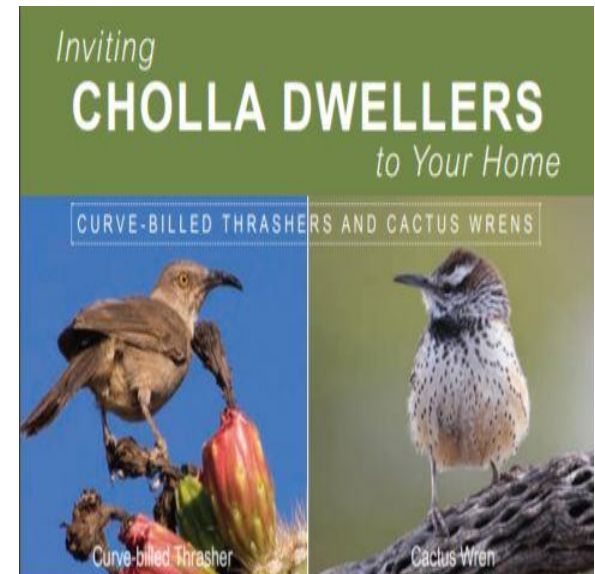
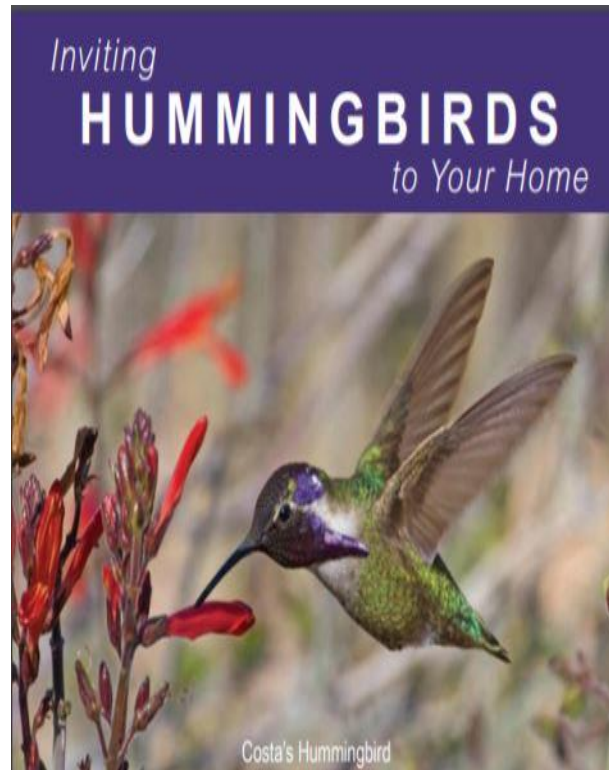
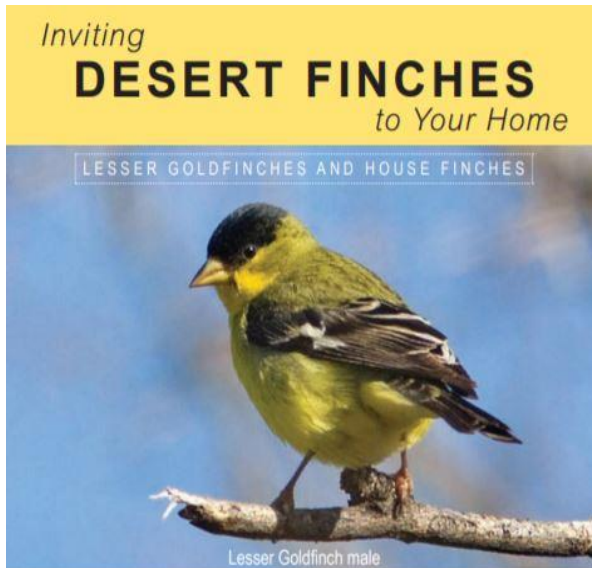
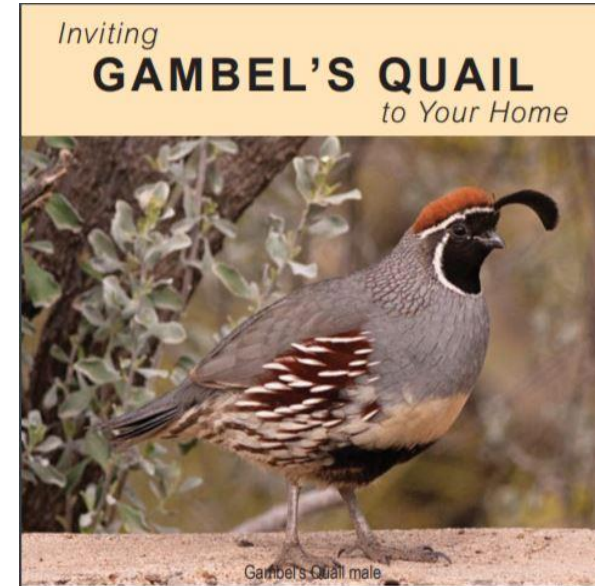
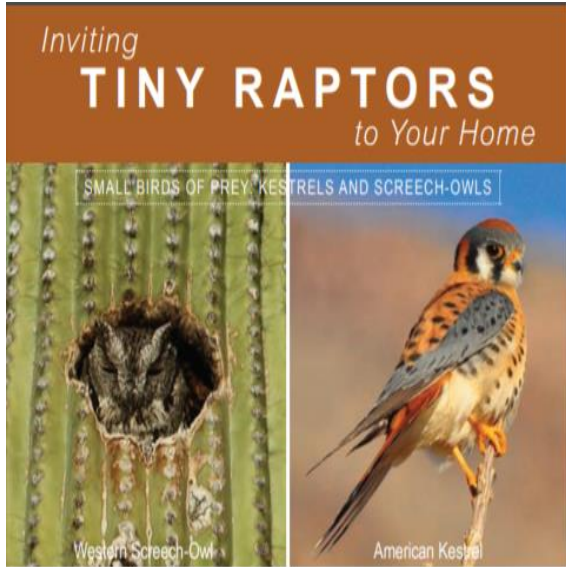
## Guide to **FOOD-RICH LANDSCAPES**

**FOR BIRDS AND PEOPLE**

Tucson Audubon Society

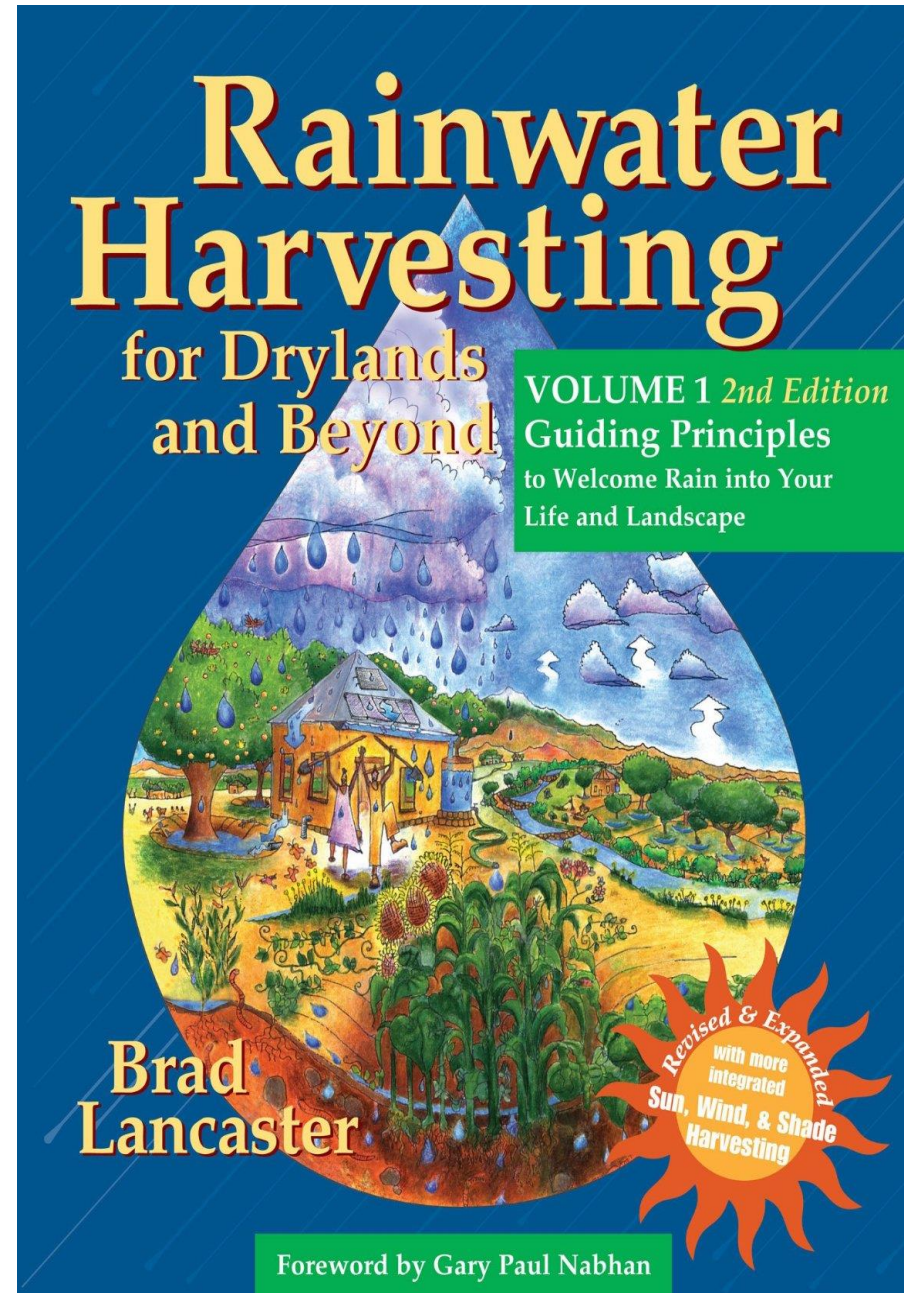
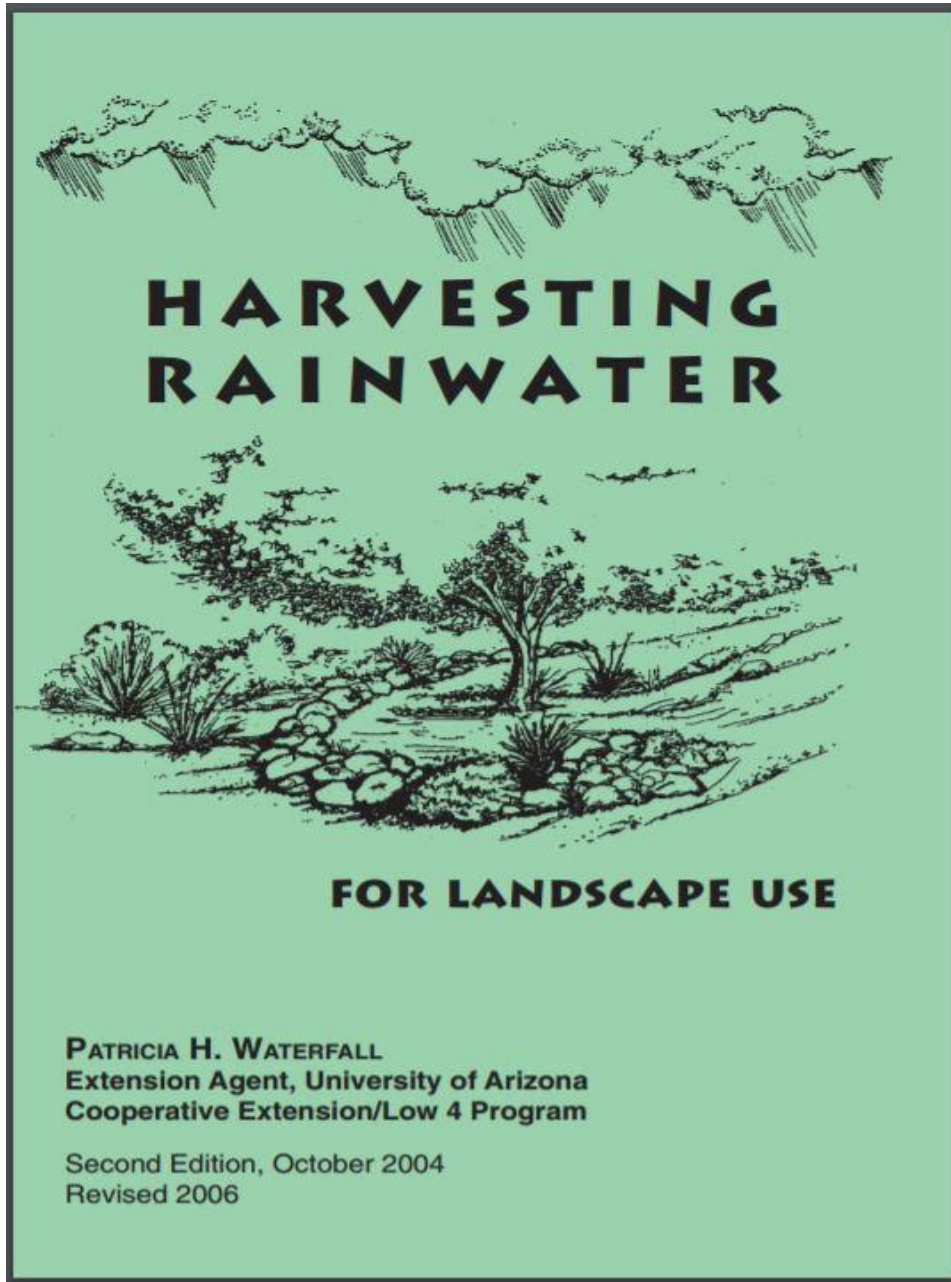


# Resources List:





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COLLEGE OF AGRICULTURE  
AND LIFE SCIENCES

## Watering Trees and Shrubs

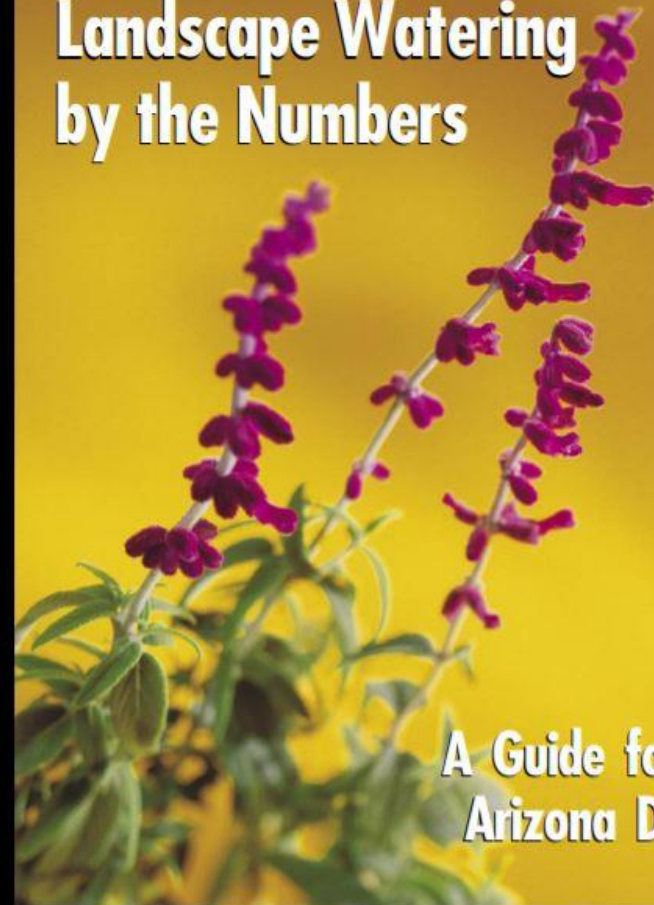
Simple Techniques for Efficient  
Landscape Watering



AZ1298

February 2014

## Landscape Watering by the Numbers



A Guide for the  
Arizona Desert

There are a number of ways to save water, and they all start with you.



# Why Attract Wildlife?

- Enjoy Nature
- Habitat Loss
- Garden Helpers
- Soil Food Web





# What is Habitat?

NATIONAL WILDLIFE FEDERATION®

## Certified **WILDLIFE Habitat**™

This property provides the four basic habitat elements needed for wildlife to thrive: food, water, cover, and places to raise young.



[nwf.org](http://nwf.org)

- Food
- Water
- Shelter
- Nesting Sites

# How to Attract Wildlife

- Build the Soil
- Harvest Rainwater
- Grow Native



# How to Attract Wildlife



- Species Diversity
- Structural Diversity
- Create Shade



# How to Attract Wildlife

- Feeders and Nest Boxes
- Bird Baths
- Keep Cats Indoors
- Grow Food!



# Characteristics of Soil

## Desert Soil

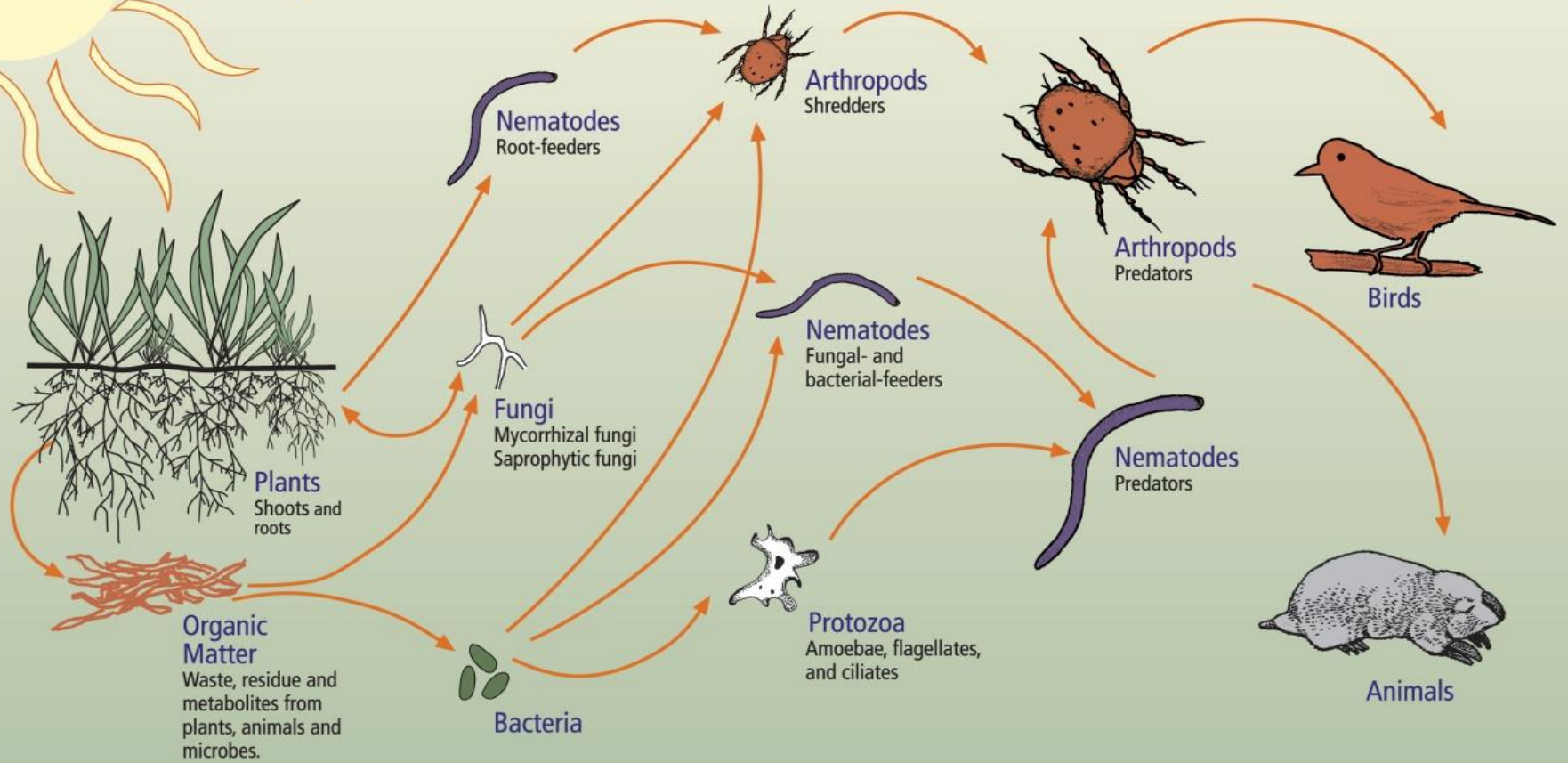
- Low Populations of Micro-Organisms
- Low in Organic Matter
- Lacks Nutrients
- Compacted
- High Ph

## Healthy Soil

- High Population of Micro-Organisms
- High in Organic Matter
- No Toxins/Pesticides
- Balanced Nutrients/Ph
- Porous
- Good Tilth/Texture



# The Soil Food Web



First trophic level:  
Photosynthesizers

Second trophic level:  
Decomposers  
Mutualists  
Pathogens, Parasites  
Root-feeders

Third trophic level:  
Shredders  
Predators  
Grazers

Fourth trophic level:  
Higher level predators

Fifth and higher trophic levels:  
Higher level predators



# How to Build Healthy Soils

- Eliminate Synthetic Pesticides/Fertilizers
- Encourage the Soil Food Web
- Use Compost and Compost Teas
- No Till or Low Till
- Use Supplements if Needed
- Grow Roots Not Plants



# Build the Soil – Compost

- Adds Soil Life
- Improves Tilth and Water Holding Capacity
- Balances Ph
- Eliminates Food Waste
- For New Gardens, Replace 50% of Native Soil with Compost.





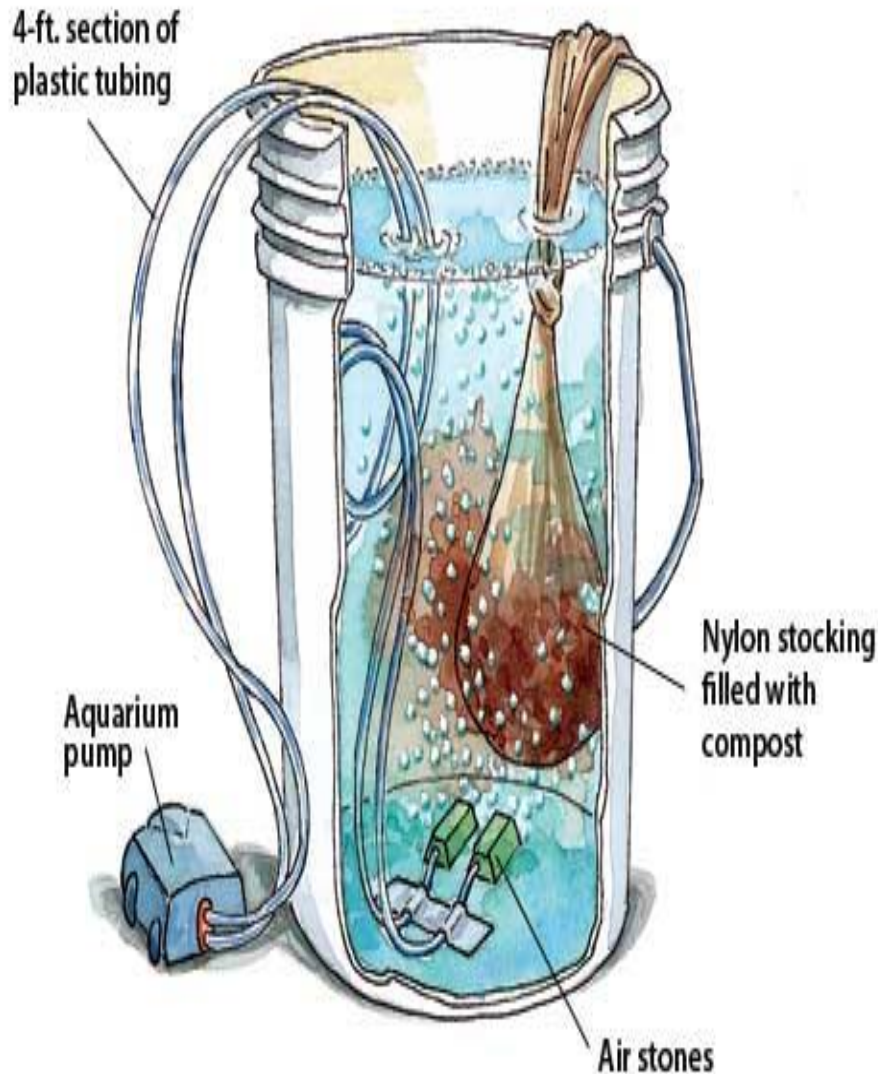
# Build the Soil – Compost



## Be A “Microbe” Manager

- Traditional Composting
- Worm Composting
- Fermentation Methods

# Build the Soil – Compost Teas



## Active Aerated Compost Teas (AACT)

- Soak Compost in water and use as soil amendment
- Adding Aeration and Sugars Increases effectiveness
- Add Supplemental Ingredients to Boost Micro-Biology Diversity



# Build the Soil – Mulch and Cover Crop



- Mulch, Mulch, Mulch
- Wood Chips for Trees and Shrubs
- Alfalfa Hay for Vegetable Gardens
- Avoid Straw
- Biologic not Geologic











# Permaculture



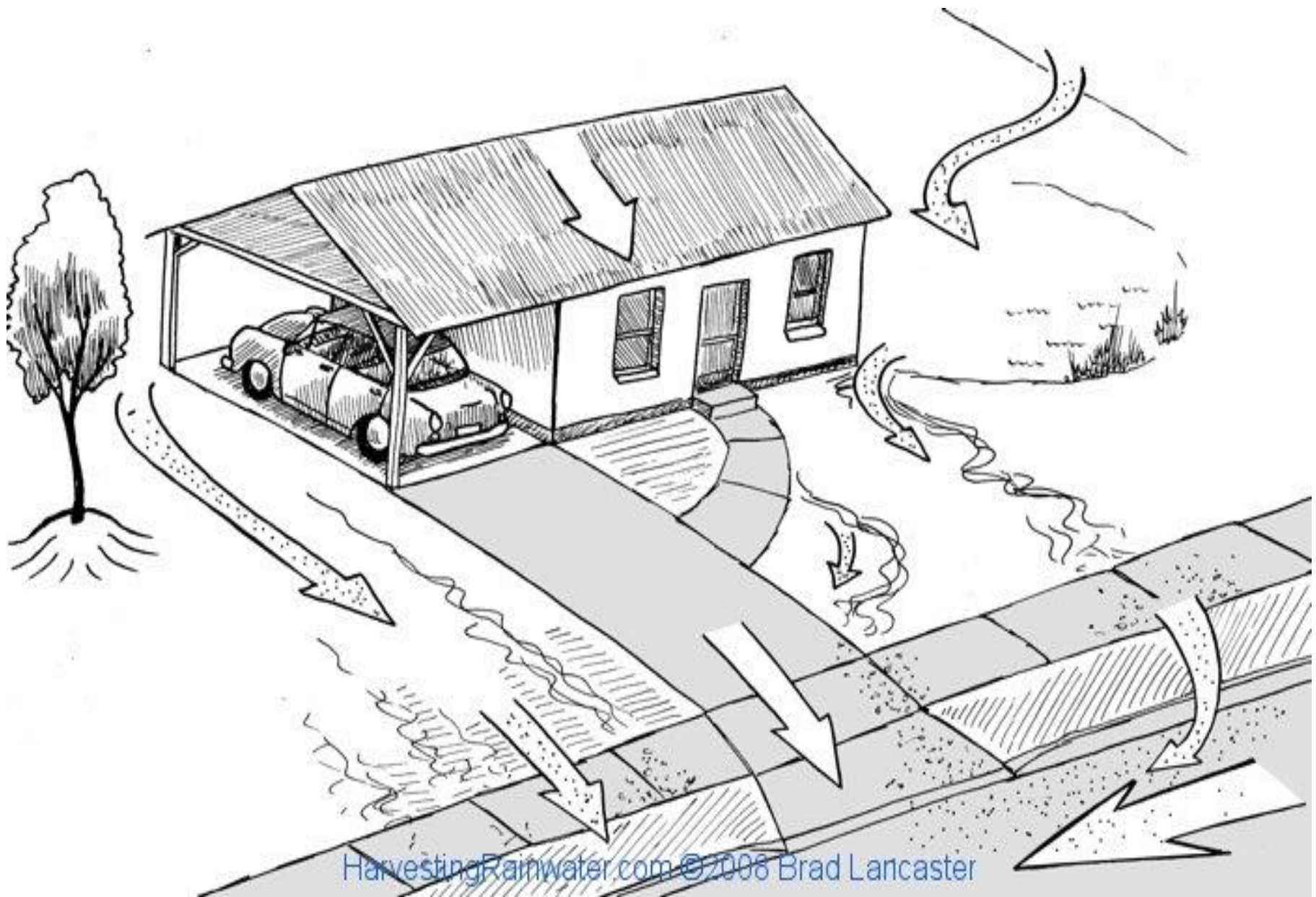




[www.HarvestingRainwater.com](http://www.HarvestingRainwater.com)



# Rain Treated as Waste



# Rain Treated as a Resource















www.HarvestingRainwater.com



# Grow Native

- Native is Best
- Adapted is OK!
- Native Insects
- Native Wildlife





# What Wildlife Needs



- Food
- Shelter
- Nesting
- Water



# Species Diversity

- Fruit
- Seeds
- Sap
- Nectar
- Flowers
- Vegetation
- Insects



# Structural Diversity

- Wildflowers
- Ground Cover
- Small-Med Shrubs
- Large Shrubs
- Trees









# Desert Globemallow – *Sphaeralcea ambigua*



- Seeds
  - Insects
  - Nectar/Pollen
  - Tortoise
- 
- Short Lived
  - 3 x 3
  - Many Colors



# Native Grasses

- Seeds
- Insects
- Nesting
- Tortoise





# Prickly Pear - *Opuntia* sp.



- Fruit
- Seeds
- Insects
- Tortoise
- Sprawling

# Native Fairy Duster – *Calliandra eriophylla*

- Seeds
- Insects
- Nectar/Pollen
  
- Tough
- Pink Flower
- 3 x 3





# Cholla – *Cylindropuntia* sp.



- Nectar/Pollen
- Insects
- Shelter
  
- Jointed Cactus
- 5 - 6ft.
- Wrens/Thrashers



# Desert Hackberry – *Celtis pallida*

- Fruit
- Insects
- Shelter
  
- Very Large
- Dense Cover
- Edible Fruit





# Wolfberry – *Lycium sp.*



- Nectar/Pollen
  - Fruit
  - Insects
  - Shelter
- 
- Good Cover
  - Edible Fruit
  - Up to 8'



# Graythorn – *Ziziphus obtusifolia*

- Fruit
- Insects
- Shelter





# Whitethorn Acacia – *Vachellia constricta*

- Nectar
- Seeds
- Insects
- Shelter
  
- Small Tree
- Butterflies
- Birds





# Mesquite – *Prosopis velutina*



- Nectar/Pollen
  - Seeds
  - Insects
  - Shelter
- 
- Keystone Plant
  - Edible
  - Avoid Hybrids



# Saguaro – *Carnegieia gigantea*

- Fruit
- Seeds
- Nectar/Pollen
- Insects
- Shelter
  
- Keystone Species
- Slow Growing





# Pomegranate – *Punica granatum*



- Fruit
  - Seeds
  - Insects
  - Nectar/Pollen
  - Shelter
- 
- Non-Native
  - Adapted
  - Grey Water



# Bird Baths and Feeders

- Habitat is Best
- Supplement
- Clean Frequently
- Place in the Open
- Use Good Seed





# Nest Boxes



- Specialized
- Long Lasting
- Build or Buy



# Keep Cats Indoors

- Yearly Cats Kill:
  - 1.4-3.7 Billion Birds
  - 6.9-20.7 Billion Mammals
- Life Expectancy 2-3 yrs.







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# RESOURCES

- Tanks Green Stuff
- Tucson Audubon
- Resource List
- Plant Lists
- Local Businesses
- Friends and Family







Thank you!

[www.southwestvictorygardens.com/Documents](http://www.southwestvictorygardens.com/Documents)

(520) 576-7085