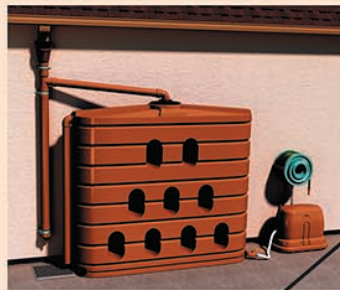


This landscape shares some simple ideas for creating healthy, attractive yards and gardens without using municipal water. It was donated by local landscaping professionals who share the Town of Chino Valley's commitment to a sustainable future. Look around, take a break and learn about water conservation ideas.



Rainwater Collection Tank

A 620 gal tank designed specifically for rainwater and made of food-grade, light-filtering polyethylene. Sized according to space and rainwater supply.

Supply Calculation

A = Catchment Area **R** = Rainfall (monthly avg.)
RO = Run-Off Coefficient **S** = Rainwater Supply
A x R x 0.623 x RO = S
0.623 is a conversion rate for inches to gallons.

1 Gutter and Downspout
 Water off the roof flows into gutters and downspouts. One goes to the collection tank, the other to a pipe under the sidewalk that flows to basins and plantings.

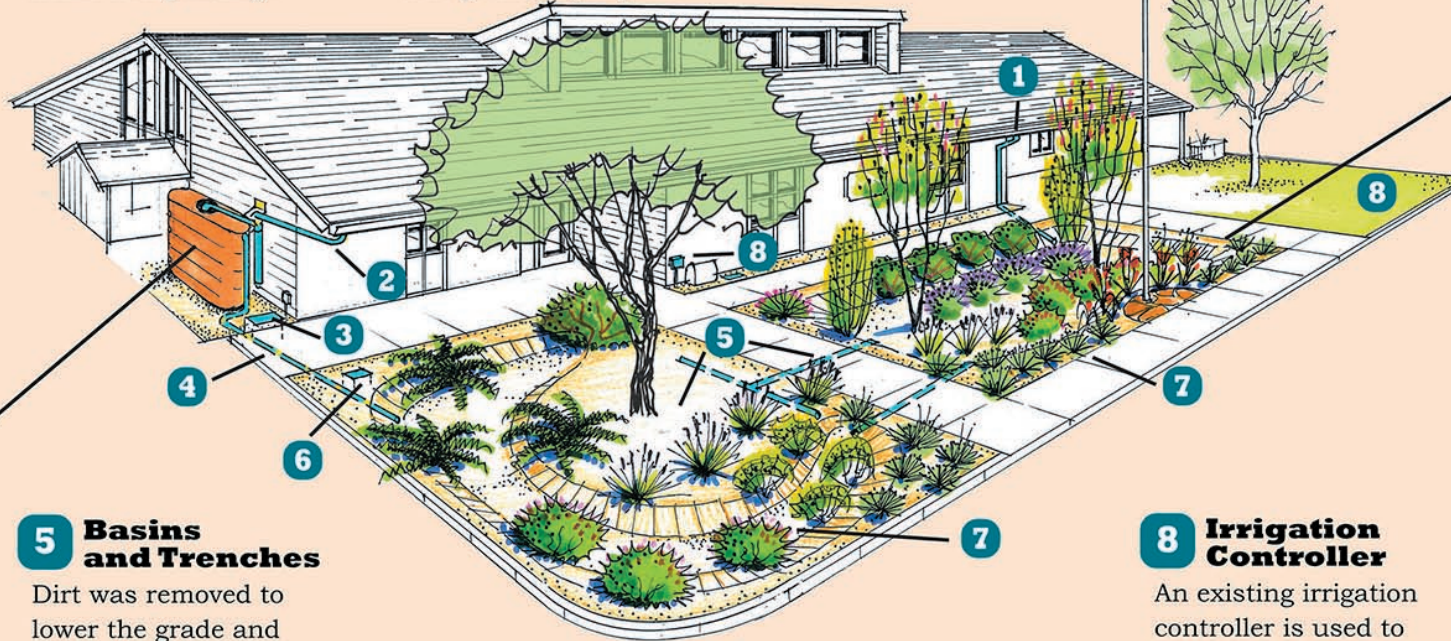
2 Filtration
 Water flows from gutter to downspout to First Flush separator, a filter that removes leaves. It then flows into a tank made of molded UV-stabilized, food-grade polyethylene.

3 Ground Vault
 Contains an irrigation pump controlled by a rainwater meter that draws water from the bottom of tank. Below grade to prevent freezing.

4 Tank Overflow Pipe
 When the tank is full, water overflows into pipe under the sidewalk and into the landscape basins, passively watering plants.



Mulch and Moisture
 Mulch improves the moisture-holding ability of soil, boosting plant health. We also added organic fertilizer, soil inoculants and 1,000 earthworms to ensure long-term fertility.



5 Basins and Trenches
 Dirt was removed to lower the grade and capture water. Leftover soil was amended with composted mulch. Water from the central basin overflows into the west basin or perforated pipe and leach rock trench to provide moisture to the plum tree's root zone.

6 Irrigation Valves
 Fed by a pressure pump to deliver rainwater through a drip irrigation system to new plants. After plants have become established, no irrigation will be needed.

7 Plant Selection
 Native and well-adapted plants with low water and maintenance requirements are used. In 2 to 5 years, plants will require no irrigation, except in case of drought.

8 Irrigation Controller
 An existing irrigation controller is used to control irrigation of new tree and shrub plantings. It also controls watering to the existing turf. Each planting zone is separately metered so the Town may collect accurate water-use data.

- Contributors**
- Owner
Town of Chino Valley
 - Designer and Project Manager
T. Barnabas Kane & Associates
Landscape Architecture
 - Landscape and Irrigation Contractor
Nature West Landscaping Services
 - Gutters
Willbuilt Seamless Gutters
 - Irrigation
Ewing Irrigation
 - Irrigation and Drainage
Pro-Water Irrigation & Drainage Supply
 - Rainwater Collection Tank & Pump
Skywater Arizona and Bushman USA
 - Plants
Prescott Valley Growers
 - Soil and Rock
Earthworks Landscape & Supply
 - Sign
Have Torch Will Travel



*Town Hall and Library Demonstration Garden
 Chino Valley, AZ*

STRATEGY
 In anticipation of a mandatory rainwater harvesting ordinance, The Town wanted a demonstration project to educate the public as well as research and gather data of the concept. Turf was removed, new drought tolerant landscaping planted, and active and passive rain systems were integrated and featured in the front yard of the town hall with this interpretive sign. Water budget basis: municipal water for establishment (2 yrs.) and rainwater for maintenance period (life of plant).

SPECIFICATIONS
 AVG. ANNUAL PRECIPITATION: 11"
 ACTIVE SYSTEM: 2000 s.f. portion of Asphalt shingle roof; Rain harvesting rainhead, 620 gal. Bushman slimline poly tank; 3/4 hp. Booster pump, in ground-vault metered and connected to irrigation system.
 PASSIVE SYSTEM: Adjacent parking lot and rain tank overflow and roof run-off flows into regraded rocked, planted sediment basins, Multiple infiltration systems were used to self irrigate the landscape: leach rock trenches, bio-swale, level graded landscape basin.



t barnabas kane & associates
ENVIRONMENTAL DESIGN
Designer: TBKA, Barnabas Kane
Installer: Skywater, Nature West