

# Arizona Low-Water Landscape Demo Project

The Town of Chino Valley demonstration landscape at Town Hall shares simple ideas for creating healthy, attractive yards and gardens without need for conventional irrigation. It was donated by local landscaping professionals who share the Town's commitment to water conservation and a sustainable future.



## 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

$$A \times R \times 0.623 \times RO = S$$

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

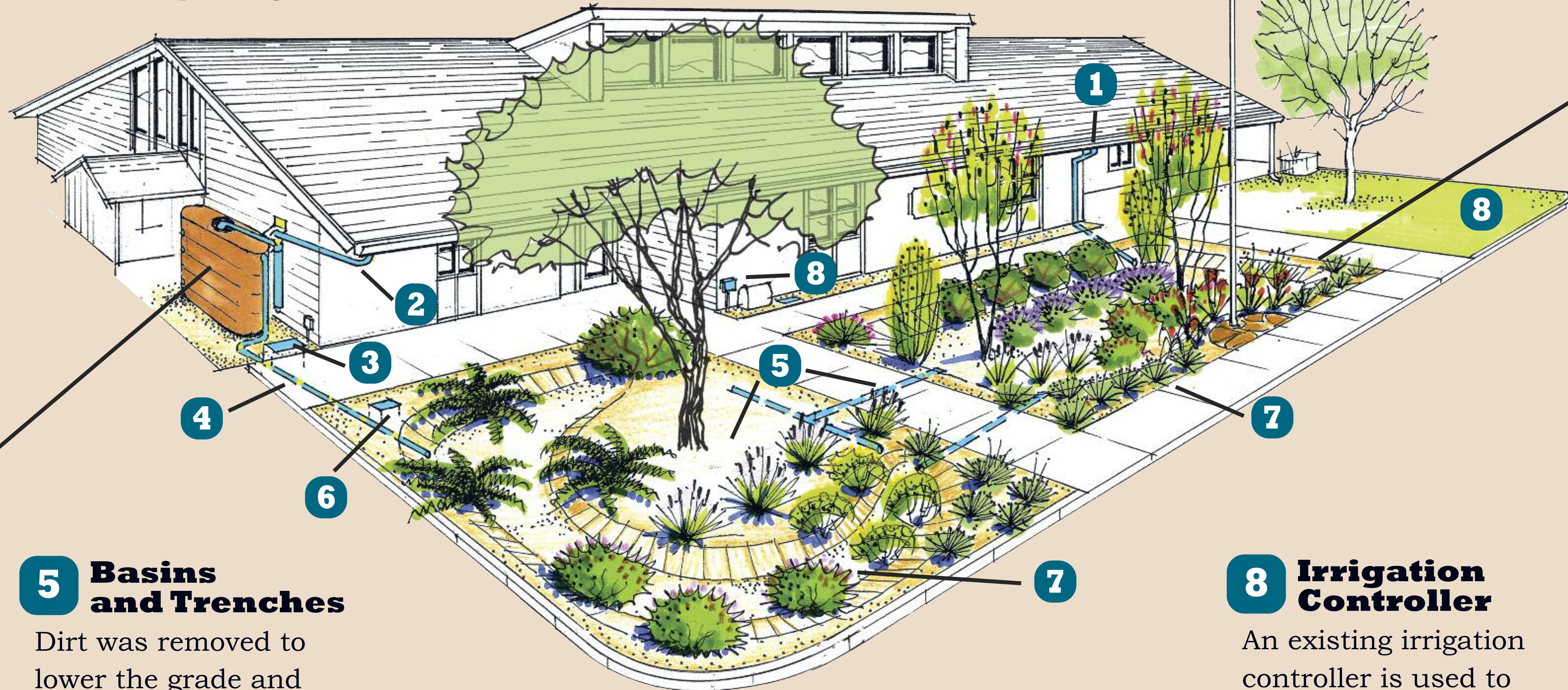
Water flows from gutter to downspout to First Flush separator, a filter that removes leaves. It then flows into a tank made of molded UV-stabilized, food-grade polyethylene.

## 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.



## 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.



## 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.

## Does this area get enough rain to collect?

Yes! A 2,500 s.f. rooftop in Chino Valley—a high desert area that receives 13 in. of annual precipitation—can collect 21,600 gal. of rainwater. That's more than enough to water the typical landscape for a home this size, especially if plants are selected for regional conditions.



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