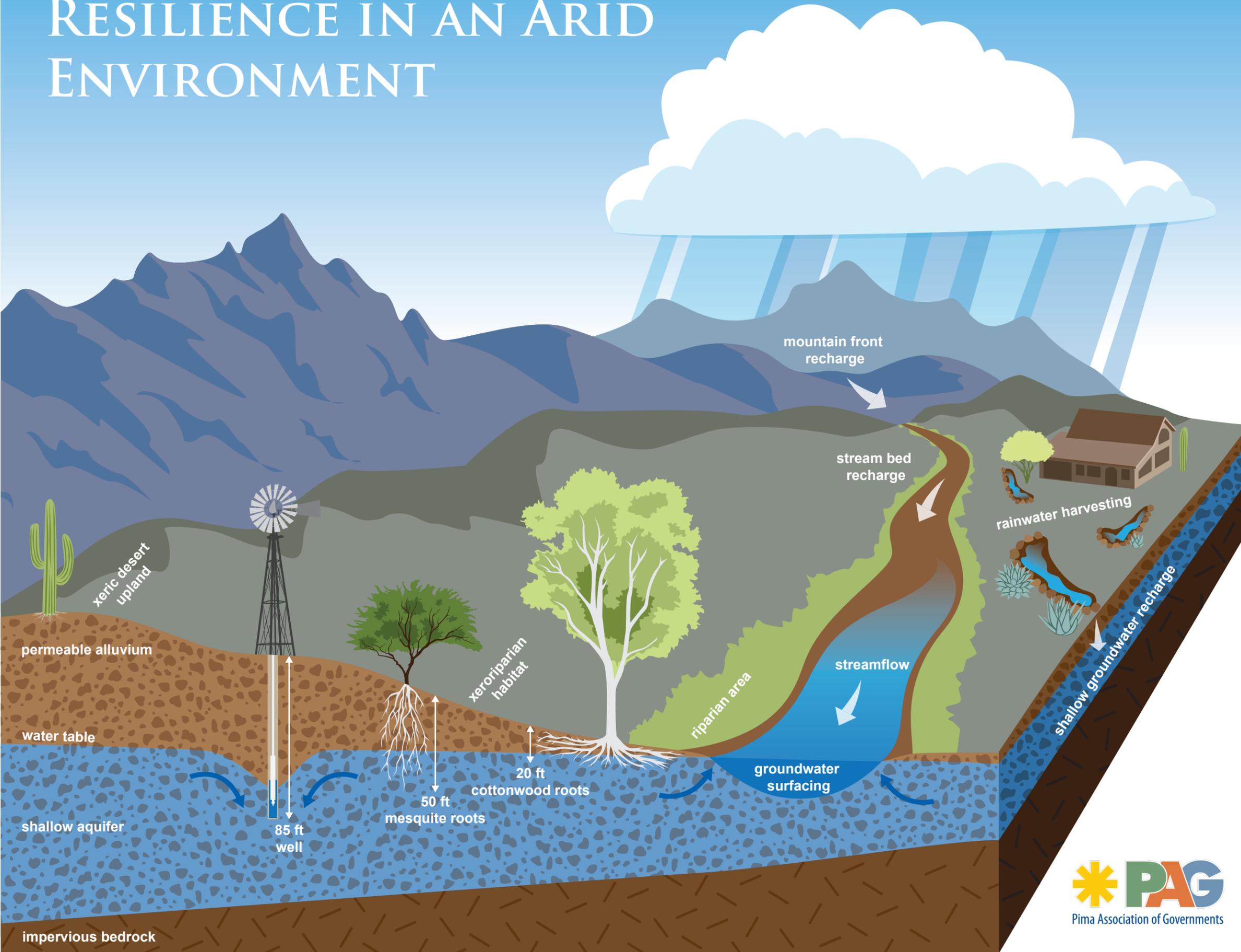


SHALLOW GROUNDWATER RESILIENCE IN AN ARID ENVIRONMENT



Low Impact Development (LID) to protect shallow groundwater dependent ecosystems and enhance private well security

A Rich Landscape

Shallow bedrock brings groundwater close to the surface, creating a shallow aquifer. Shallow groundwater sustains lush, rare riparian habitat and perennial creeks in the desert. Local well owners also rely on the groundwater, just as the rich habitat does that they enjoy living near.

Drought and Pumping Concerns

Local drought conditions are impacting the survival of aquatic species and causing well owners to truck in water or drill deeper. Pima Association of Governments studies are finding record level drought and data inventories show that the number of wells and amount pumped from shallow groundwater areas has increased each decade.

Rainwater Harvesting Makes the Difference!

Collecting rain in containers or contouring the land to capture runoff for beneficial use will reduce property owners' need to irrigate with pumped groundwater. Stormwater harvesting earthworks in the landscape also help to slow runoff and increase infiltration to replenish the shallow groundwater. Earthworks restore erosion features, which would otherwise continue to cut into the alluvium thereby dewatering shallow aquifers and reducing floodplain wetting.

Some residents have chosen to install large rainwater harvesting cisterns instead of drilling deeper wells or hauling in imported water. They have found it to be similar to the price of a new well and to still supply enough water for the household.