

YOUR EFFORTS to help prevent stormwater pollution in our region make a difference.

Thank you!

Remember to:

- Harvest rainwater
- De-pollute your commute
- Be wise when you fertilize
- Scoop the poop

Brought to you by Pima Association of Governments' Sustainable Environment Program in coordination with PAG's Stormwater Management Working Group, which includes PAG member jurisdictions.



A Day in the Life of a Rain Drop

- 1 Once a raindrop hits the ground, it becomes stormwater. As stormwater flows, it picks up pollutants left on yards, sidewalks and driveways.
- 2 Pollutants include motor oil, brake and tire residue, yard chemicals, litter, paint, pet feces and chemicals washed from cars, including soap.
- 3 Our streets transport stormwater and additional pollutants through our neighborhoods.
- 4 Stormwater flows from streets to stormdrains, which lead to underground pipes that empty directly into our desert waterways.
- 5 A common misconception is that stormwater gets cleaned at a treatment plant. This is not true in Pima County.
- 6 As the water flows away or evaporates, pollutants and trash accumulate in our fragile desert washes.
- 7 Plants and animals depend on clean water as much as people do. Even when they are not flowing, critters rely on healthy washes for food, shelter and passage.

Solutions to Pollution

- Fix leaky vehicles. Use a drip pan and clean up spills with absorbent materials. Recycle used fluids at auto shops.
- Instead of driving your car, help prevent pollution by riding the bus, bike, carpool or walk.
- Use commercial car washes, where water is recycled. Or at home, use biodegradable soap and wash your car where the water can soak into the ground.
- Don't be a litterbug. Kudos to those who adopt a wash to help clean up.
- Don't forget to scoop the poop. Clean up after your pet.
- Properly dispose of chemicals at a Household Hazardous Waste facility. Never dump anything on the ground or into stormdrains.
- If you must use toxic products, such as herbicides, pesticides or fertilizers, store them safely and don't apply them outside if a storm is expected within three days.
- Welcome the desert rains into your landscape. When stormwater is harvested in your yard, it is purified within the soil, thus protecting our washes and nourishing vegetation.

Green our Neighborhoods

- A** Enhance your habitat by digging a sunken rain garden filled with mulch and native vegetation to help capture stormwater.
- B** Add raised earthen berms to help slow yard runoff and to keep yard chemical choices on site.
- C** Install cisterns or rain barrels on your property to collect water from your roof.
- D** Use gutter downspouts to direct water to your plants.
- E** Use porous materials that allow water to sink in, or direct runoff from hard surfaces to benefit your yard.
- F** Use curb cuts to pull stormwater off the street and filter it in small basins.
- G** Street bump-outs and roundabouts can direct stormwater to landscaped areas, while also calming neighborhood traffic for biking, walking and children at play.
- H** Vegetation thrives with this additional water resource. This green stormwater infrastructure additionally enhances our community livability because it shades pathways, cleans the air, saves potable water, and improves soils!

Clean water starts with me!





This pocket guide can help you enjoy our region's water treasures. It shows you how to access destinations with flowing water, world-class watchable wildlife habitat and urban rainwater harvesting features that green our neighborhoods.

The 3-D perspective on this map helps you view this as a bird would, flying in from the southeast. Imagine you are glancing down on the Tucson region from above and you see the mountains standing out, hiding some of the less elevated features that lay behind them. Naturally, the more distant features appear smaller.

Thank you for treading lightly as you visit these treasured water sites. Remember: take only photos, leave only footprints. Also, never release pets into the wild. Invasive species, such as bullfrogs and mosquito fish, spread through storm drainage the same way that household chemicals do. Eventually they end up in natural wetlands, impacting or eliminating the native fauna. To learn tips you can use in your daily life to help prevent stormwater pollution, see the diagram on the flipside of this guide. The diagram also teaches you the next step: restoring your landscape by capturing the rain. Visit the rainwater harvesting sites on this map to see these practices in action.

To view this map online and see additional resources, visit Clean Water Starts With Me! at PAGstorm.com. A product of Pima Association of Governments.



Cienega Creek with perennial flow. Limited visitation permitted. Cottonwood relies on shallow groundwater. Vermilion Flycatchers thrive in riparian corridors. Storm clouds rolling over the Tucson Basin at sunset during monsoon season. Mesquite trees flourish along washes. Coati dwell in woodlands along streams. Stormwater filled earthworks at UA. Agua Caliente Springs.

Tucson Regional Watershed Map

Pima County, Arizona

Get to Know our Desert Watershed

Our watershed is bound by the Santa Catalina, Rincon, Santa Rita and Tucson Mountains and it drains ultimately to a common waterway, the Santa Cruz River. The birds-eye-view of this watershed map looks northwest, toward the direction of the water flow.

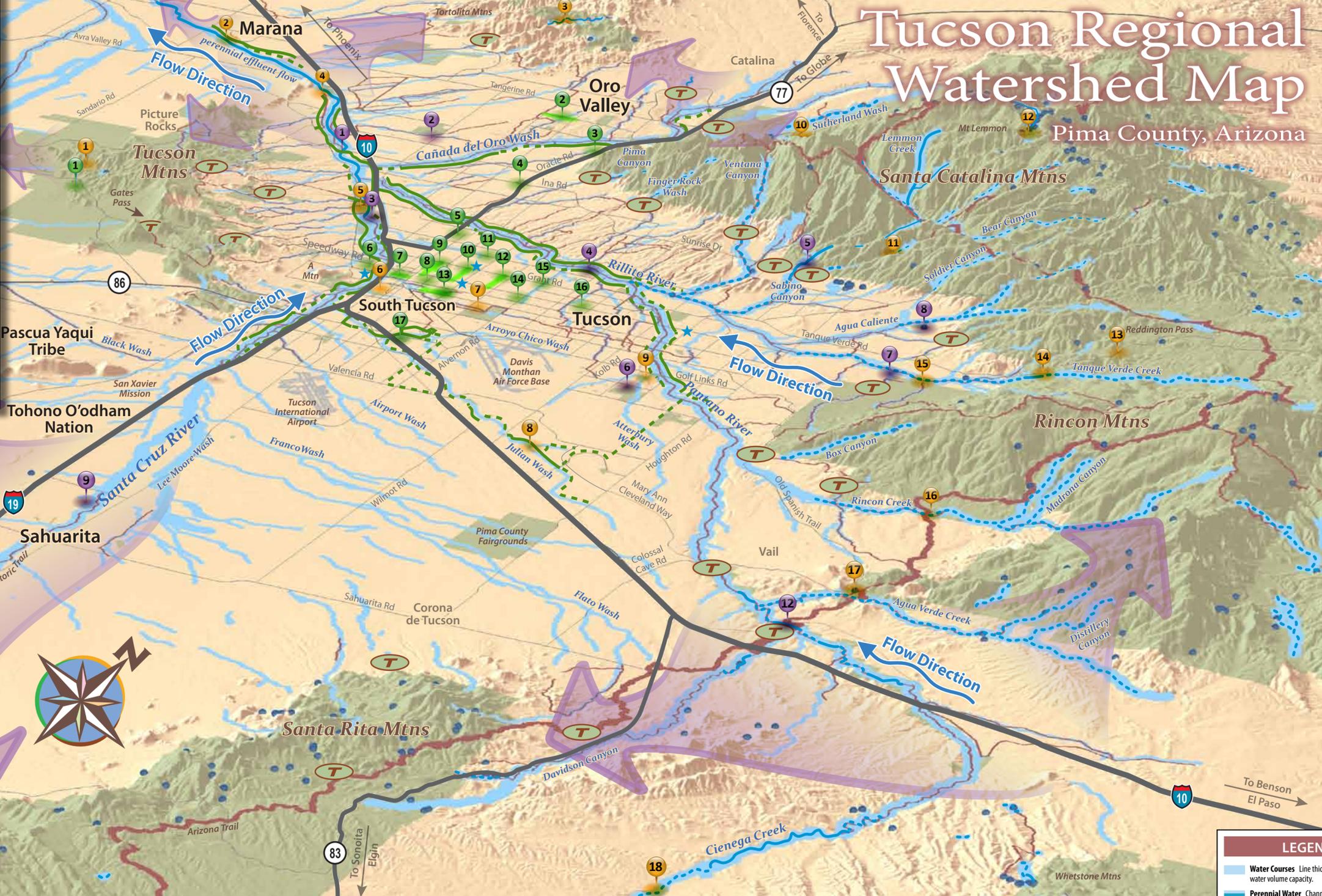
As you visit our treasured water sites, notice the characteristics of desert waterways. As water flows across your property, follow it downhill to where the sound of cicadas becomes livelier. See where water runs after a storm in mesquite-lined arroyos. Follow your neighborhood wash to where it flows into larger riverbeds. Look for water dependent tree stands, such as cottonwood, that hint at the presence of shallow groundwater: water located just below the surface that waters the trees even when the riverbed appears dry. Listen for the spirited singing of our signature riparian birds, such as the vermilion flycatcher.

Preserving our Natural Heritage

For thousands of years, our precious desert waters supported large agrarian cultures and a renowned wildlife diversity. Over time, urbanization changed how our watershed functions. Paved areas decrease the ability of the land to absorb water, leading to increased flooding and stress on our remaining waterways. Today, water flows more quickly out of our watershed and carries urban pollutants to our fragile wildlife corridors, where they can accumulate.

Riparian areas, the unique habitat surrounding waterways, are disproportionately important because they support the majority of wildlife in our region. Unfortunately, most of these areas have been lost over time. This is due in part to groundwater pumping and drought, which have led to lower groundwater tables today. Without shallow groundwater to feed them, many of our once perennial creeks now depend on seasonal rains and treated effluent to flow and support riparian habitat.

Stewardship efforts and awareness of our desert waters help us restore our washes and green our neighborhoods. By harvesting stormwater in our landscape to grow an urban forest, we mimic how stormwater flows in a natural environment, and we also reap the benefits of cooler temperatures, rich soils, diverse habitats and retained rainfall. Local efforts in water conservation, water recycling, low impact design for arid regions and rainwater harvesting are placing our community on the map as leaders in sustainability and preserving our rich heritage for future generations.



LEGEND AND DEFINITIONS

- Water Courses** Line thickness represents water volume capacity.
- Perennial Water** Channel segments that reliably flow year-round, creating rich aquatic and riparian habitat.
- Ephemeral Water** Channel segments that flow seasonally, but provide unique habitat for plants and animals year-round.
- Washes** Channel segments, also called arroyos and gulches, that briefly collect and carry water after a storm, providing moisture to support life along the way.
- Springs** Delicate sites where groundwater reaches the surface providing refugia for desert wildlife. Please do not disturb.
- Wildlife Linkages** Wildlife often follows water corridors to find critical passage between Sky Island mountains.
- Trails** Trails along washes or trails that lead to water destinations.
- The Arizona Trail** A recreation trail traversing from Mexico to Utah.
- The Loop** A multi-use path along major river parks, providing enjoyable routes for non-motorized travel. Dashes denote paths to be completed.
- Green Streets** Stormwater is harvested along the streets to grow the tree canopy and enhance biking and walkability.

- Watchable Riparian Wildlife**
- Santa Cruz bat and bird viewing area**
Ina Rd. Bridge, East of Silverbell, Perennial flow
 - Tucson Audubon Society Mason Center**
3835 W. Hardy Rd.
 - Sweetwater Wetlands**
2551 W. Sweetwater Dr.
 - Swan Wetlands**
North end of Columbus Blvd. at Rillito River
 - Sabino Canyon Recreation Area**
5700 N. Sabino Canyon Rd., Perennial flow
 - Atterbury-Lyman Bird and Animal Sanctuary**
8280 E. Escalante Rd.

- Tanque Verde Creek**
North of Speedway on Wentworth
- Agua Caliente Park**
Roger Rd. / Soldier Trail
- Sahuarita Water Reclamation Facility**
Rancho Sahuarita Blvd., S. of Pima Mine Rd.
- Green Valley Wastewater Treatment Facility**
2201 S. Old Nogales Hwy. North of Quail Crossing Blvd.
- Madera Canyon, Madera Canyon Rd.**
- Cienega Creek Natural Preserve**
Permit required, Perennial flow

- Rainwater Harvesting Demonstration**
- Arizona-Sonora Desert Museum**
2021 N. Kinney Rd.
 - Naranja Rd. right-of-way harvesting**
North side of Naranja Rd. between La Cholla & La Cañada
 - Villa Balboa subdivision**
Linda Vista & Valle Del Oro
 - Tohono Chul Park**
7366 N. Paseo del Norte
 - Super Target**, 4400 N. Oracle Rd.
 - Manzo Elementary**
855 N. Melrose Ave.

- Dunbar-Spring GREEN STREETS**
University Blvd. / 10th Ave.
- UA Visitors Center**
N.W. Corner University Blvd. & Euclid Ave.
- 4th Ave. & Elm St. GREEN STREETS**
- Vine Ave. GREEN STREETS**
Between Grant & Speedway
- The Nature Conservancy of Arizona**
1510 E. Fort Lowell Rd.
- Treat Ave. GREEN STREETS**
Treat Ave. from Grant Rd. to Speedway Blvd.

- Rincon Heights GREEN STREETS**
9th & 10th Streets/ Tucson Blvd.
- Watershed Management Group**
1137 N. Dodge Blvd.
- Tucson Botanical Gardens**
2150 N. Alvernon Way
- Quik Trip**
5151 E Speedway Blvd.
- Kino Environmental Restoration Project**
Kino Sports Complex, 2500 E Ajo Way
- Tucson Ward Offices**
Ward 1, Ward 2, Ward 3, Ward 6

- Waterways**
- King Canyon Trail**
Saguaro National Park (West), N. Kinney Rd.
 - Marana Heritage River Park**
11375 N. Heritage Park Drive
 - Wild Burro Trail**
North End of Dove Mountain Blvd.
 - El Rio Neighborhood Park**
10160 N Blue Crossing Way
 - Silverbell Lake, Christopher Columbus Park**
4600 N Silverbell Rd.

- El Ojito Historic Spring**, by La Palita Museum
420 S. Main St.
- Arroyo Chico Wash**
3100 - 3400 E. Arroyo Chico
- Julian Wash Greenway**
South of Valencia on Kolb Rd.
- Atterbury Wash, Lakeside Park**
Golf Links Rd. / Samoff Drive
- Romero Pools at Catalina State Park**
Southeast of Montrose Pools

- Seven Falls on Bear Canyon Trail**
Sabino Canyon Recreation Area or Bear Canyon Rd. Trail, N. of Snyder Rd.
- Marshall Gulch Trailhead**
End of Mt Lemmon Hwy.
- Chiva Falls**
Off Reddington Rd.
GPS: -110.633175, 32.281561
- Tanque Verde Falls**
S. of Reddington Rd., Perennial flow
GPS: -110.656, 32.254

- Douglas Spring-Bridal Wreath Falls**
End of E. Speedway Blvd., Overnight permit required in Saguaro National Park
- Rincon Creek**
Arizona Trail passage #8 via Hope Camp Trail
- Posta Quemada Wash Trail, Colossal Cave Mountain Park**
GPS: -110.634788, 32.053565
- Las Cienegas National Conservation Area**
Hwy 83 & Empire Ranch Rd.

Treated effluent flows in the Santa Cruz River. Sonoran Mud Turtle, a native stream-dweller. Looking southwest at the Tucson basin. Ward 1 rainwater harvesting basin and cistern. Lowland Leopard Frogs need aquatic habitat. Santa Cruz River flowing with monsoon stormwater runoff. Tanque Verde Falls. Sweetwater Wetlands, urban bird habitat. Gila Topminnow, a native resident of perennial desert waters.

