

## Green Valley Drainageways

There are over 20 individual publicly maintained drainage channels throughout the Green Valley community. These drainage channels convey flows east to the Santa Cruz River. A majority of the channels were unimproved until District staff inspections in 2006 noted scour and erosion destabilizing the drainageway banks. Since then, the District has worked to improve these channels by installing erosion protection such as bank protection, rock mattresses, grade control structures, and maintenance ramps. These drainage channel improvements have reduced the flood drainage risk to adjacent properties.

### Project Cost

\$5,000 to \$200,000/Project: District Tax Levy

## Curley School Detention Basin (Ajo)

The community of Ajo experienced a severe flood on July 29, 2003 that inundated homes and businesses. The detention basin was developed and constructed on the largest tributary to the Gibson Arroyo and reduced the 100-year peak flow on that tributary from 760 cfs to 67 cfs, reducing the flood risk for the surrounding area. Construction started in February 2008, and was completed in May 2008.

### Project Cost

\$875,000: District Tax Levy

## Park Avenue Basins

In partnership with the U.S. Army Corps of Engineers (USACE), three in-line detention basins collecting upstream flows from Arroyo Chico and Railroad Wash, and associated storm drainage were constructed. The basins are defined and hydraulically controlled by the size and dimensions of concrete arch culvert outlets. During a 100-year flood event, storage within the basins reduces the flood peak to a level that can almost be contained within existing underground concrete box culverts and open channel segments. The project also provides environmental restoration of desert and riparian habitat. The project reduced the FEMA 100-year floodplain, benefitting the downstream/4th Avenue area. These basins are part of a four-increment project associated with the Arroyo Chico Multi-Use Project. Construction of this phase started in June 2010, and was completed in December 2012.

### Project Cost

\$11.1M: District Tax Levy, USACE Funding



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# Capital Improvements

The Pima County Regional Flood Control District Engineering Division designs and constructs infrastructure improvements to protect lives and property and reduce flooding and erosion hazards.



## Paseo de las Iglesias

Authorized in the 2004 General Obligation Bond Election, Paseo de las Iglesias on the Santa Cruz River between Silverlake Road and Ajo Way is widely recognized as a unique example of what sustainable urban infrastructure can look like. The project is designed to balance erosion control elements with river park and ecosystem restoration elements. Paseo also provides key connections to the Chuck Huckelberry Loop, both north and south to existing river park segments, and east under I-10 to the Julian Wash/Tucson Diversion Channel path.

**Ecosystem Restoration:** Over 10,300 new native plants were added and the existing ephemeral pond, known as Mesquite Circle Pond, was enhanced. The pond provides essential summer breeding habitat to six native frog and toad species.

**River Park:** 2.7 miles of paved pathway, 2.2 miles of decomposed granite pathway, parking areas, a restroom, ramadas, and an equestrian staging area.

**Erosion Protection:** 1.4 miles of new soil cement bank protection, 0.4 miles of gabion bank protection, and rock mulching with seeding and terracing.

### Project Cost

\$14M: 2004 General Obligation Bond and District Tax Levy

### Project Partners

District, Psomas, McGann and Associates, Recon, and Ashton.

### Awards

APWA Southern Arizona Branch Public Works Project of the Year Environmental Project 2016 (SAAPWA), APWA Arizona Public Works Project of the Year Structural Project 2016, Arizona Forward Award of Merit, MPA Common Ground Award of Merit 2016, ACEC Arizona Grand Award 2016 and ACEC National Honors Award 2017



## Christina-Taylor Green Park

In memoriam of their daughter, the Green family approached the County and requested the construction of a park at a site that they frequented together. The District provided a landscape architect to design and manage the construction of the park with a focus on the plant species to attract butterflies - one of Christina-Taylor's many loves in life. Images of her butterfly drawings are replicated in many parts of the park: perched on the top of the vertical monument, on pavers commemorating donations, in the sidewalk and on a corner sign for the park. This park is an official Monarch Way Station, as well as a Tucson Audubon Society Habitat at Home. This site had existing natural stormwater swales supporting huge mesquites, and a number of additional swales were created along the slope to The Loop river park, in order to enhance stormwater conveyance. This public-private partnership has benefited the community and has served as a model for other minor park projects.

### Project Cost

\$85,000: Private Donations  
\$50,000: District Tax Levy

## Pantano Wash Bank Protection

On July 30, 2006, a major storm event (15,900 cfs) destroyed a 300 linear foot section of gabion rock basket, and rock-and-rail bank protection within the Pantano Wash. Adjacent townhomes, business parks, and power transmission poles were put at-risk of flood and erosion hazards. District and FEMA personnel inspected the damages and noted that in addition to this, portions of a grade control structure and soil cement bank protection had become compromised, impacting an adjacent landfill. Through a three-phase project, 1.3 miles of new soil cement was constructed to prevent further erosion along both banks, a grade control structure was designed to limit erosion within the channel, the landfill was protected, and the final piece of The Loop river park system was connected. These improvements also allowed for the planning of the Sabino Canyon Bridge to cross the Pantano Wash. Construction started in December 2006, and was completed in February 2018.

### Phase 3 Project Cost

\$14M: FEMA Federal Funds, District Tax Levy

### Project Partners

District, Psomas, NAC Construction, Ashton, and Borderland

### Awards

SAAPWA Project of the Year 2018