

# Urban Watershed Management

# Pueblo San Marcos

Prototype  
Started in 1987

















































**ARROYO SAIZ**

**189 Acre Watershed**

**Creating Semi-Riparian Habitat**

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# **Kachina Hills**

**13 Acre Watershed**

**Existing Conditions: 1995**



























# **Detention Ponds**

**Stormwater from Roads  
Makes a Lush Landscape**































# **Watershed Restoration**























































# A Gully Garden



























# Another Gully Garden























# Arroyo Saiz Main Channel

Headwaters of the Eastside  
A Sewer Runs Through It



















July 2008

Environmental Emergency























# Remediation

## Improvisation



























# Next Summer

## Silting and Sedimentation



























































# Semi-Riparian

Occasional Surface Water  
Supports Lush Vegetation















































# Arroyo Saiz

## Main Channel

## September 2012































































# Between the Road Dams

Water from Above Estancia Primera  
Still Degrades Habitat























# Upper Saiz

Stone Checkdams build by the CCC in the  
1930's have worked for 80 years

but

A lot of uncontrolled water and sediment still  
degrade downstream habit



















# Kachina Heights

FEMA, City Labrynth,  
Endless Consultants,  
And it Works Anyway



# Culvert Construction

624 cfs, 1240 cfs,  
829 cfs

How to size the flow



























# Finishing











































































# What Makes Semi-Riparian

The Same Water, More Soil  
More Time With Both







































# Straw Wattles

The Best Deal in Town















































Estancia Primera

Planter Island

Five Times the Water



























































# Thank You's

- Watershed West, Engineers
- Walbridge Associates, Engineers
- Plants of the Southwest
- The Savvy Workers