

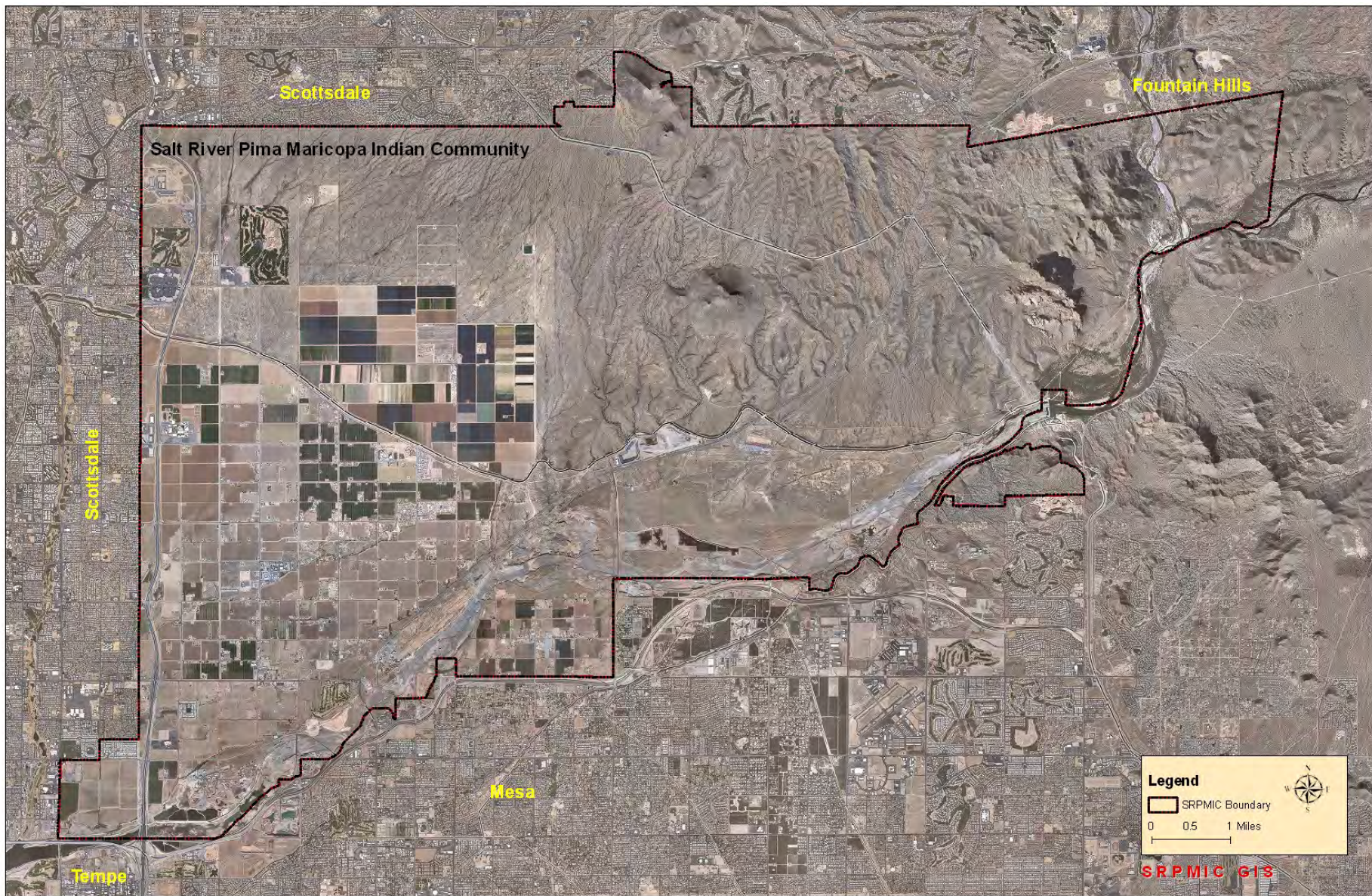


Development of the Wetland Program at the Salt River Pima-Maricopa Indian Community

Presented by Thomas Krebs
Water Quality Program
CDD-EPNR



SRPMIC Location



Legend

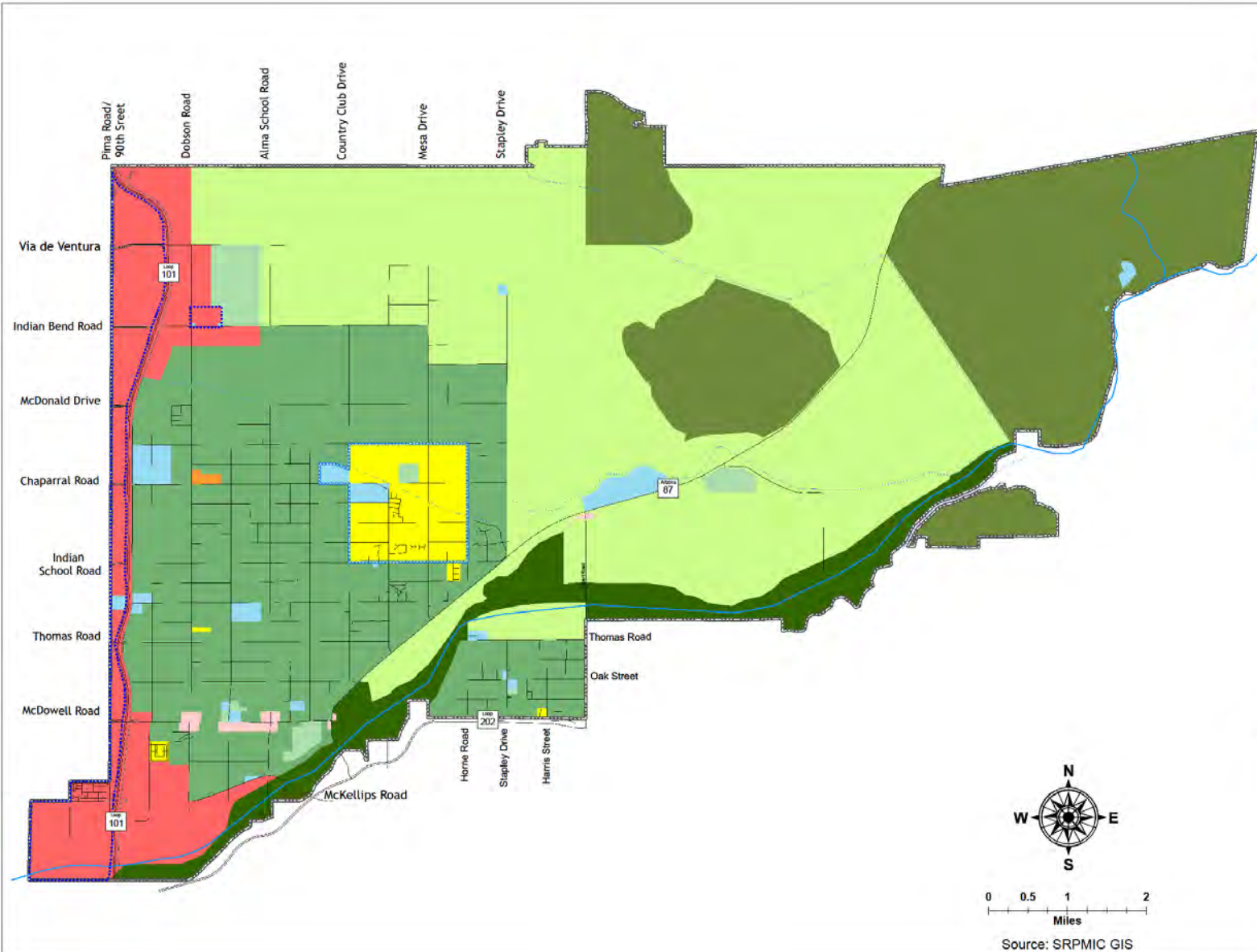
SRPMIC Boundary

0 0.5 1 Miles

SRPMIC GIS



SRPMIC Land Uses



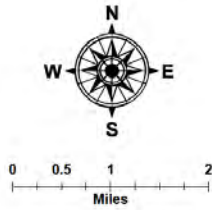
LAND USE MAP

Land Use Designations

- Agriculture / Low Density Res.
- Medium Density Residential
- High Density Residential
- Commercial Neighborhood
- Commercial Mixed Use
- Industrial
- Public
- Natural Resource
- Open Space
- Preserve
- Recreation

Special Area Designations

- Pima Corridor
- People's Village



Source: SRPMIC GIS

FIGURE 1-1
Salt River Pima-Maricopa Indian Community
2006 General Plan
 Adopted 12.13.06





Background History



Objective: To preserve, enhance, and restore the Community's wetland resources.

KEY MILESTONES

Awarded Grant: 2009

Planning Workshops: 2010

Hiring Wetland Professional: 2011

QAPP, FOM Approval: 2012

Monitoring Began: 2013

Report Completion: 2013



Types of Wetlands



What falls under the term “wetland?”

An area of land that receives and maintains enough moisture to support plants that require more water than usual.



Where do these wet conditions occur?



Types of Wetlands



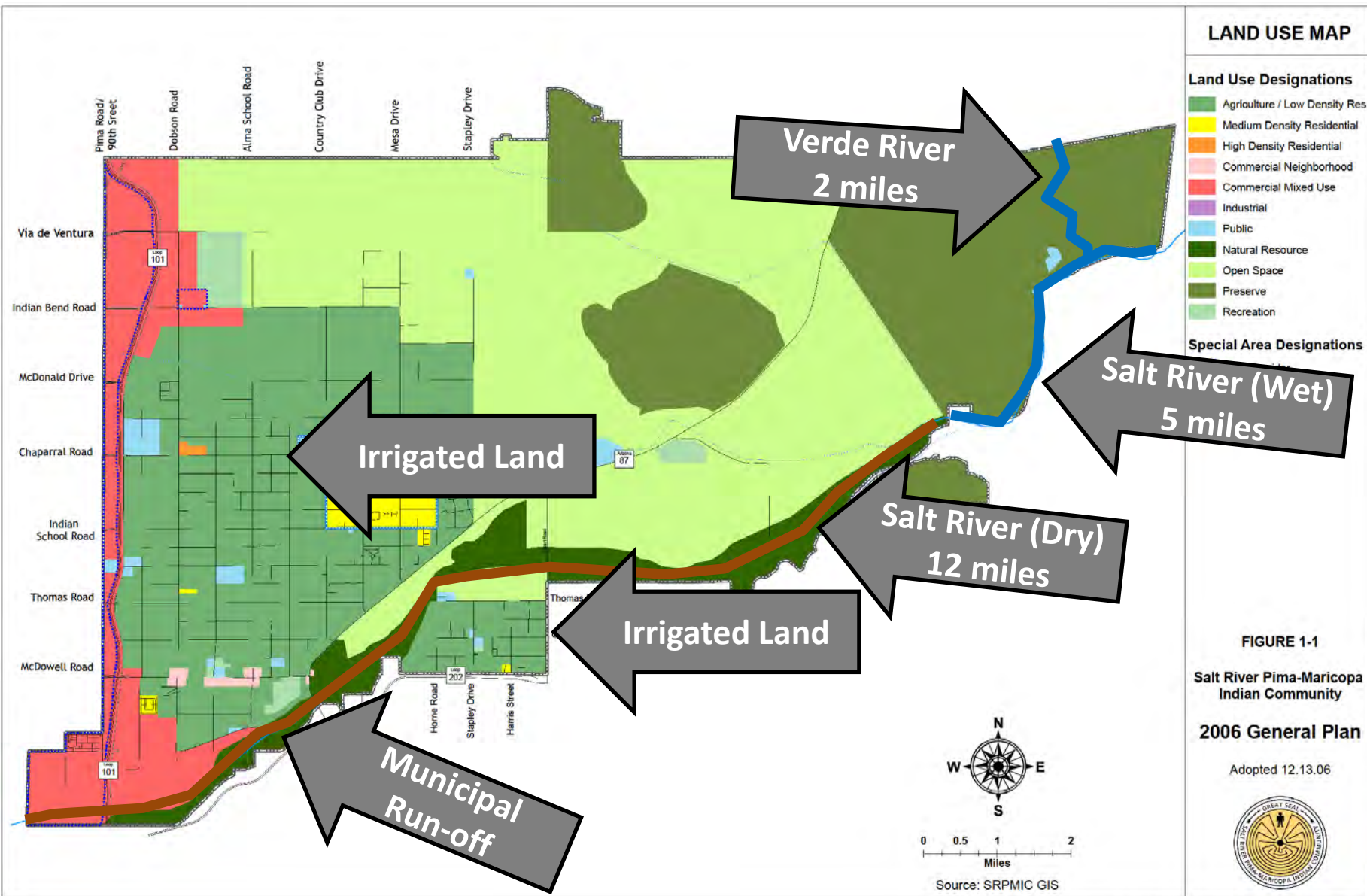
In places where water is abundant, slow moving and/or where water is captured like along irrigation ditches or...



...along the rivers' edges.



Hydrologic Sources



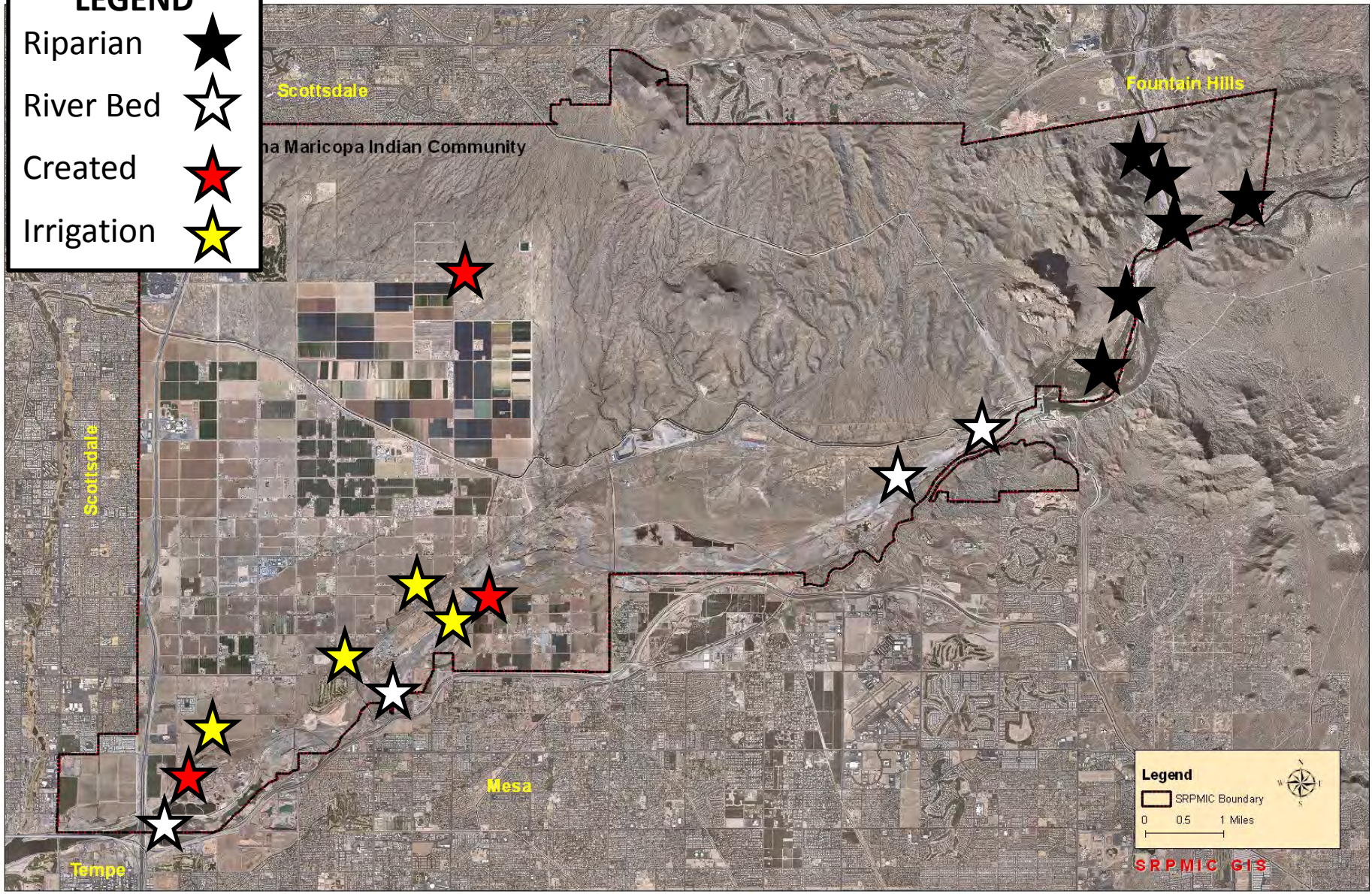


Wetland Locations



LEGEND

- Riparian ★
- River Bed ☆
- Created ★
- Irrigation ☆





Wetland Functions for Non-Point Source Pollution Treatment



WETLAND CREATION

- Cottonwood Wetland (2003, 2007)
- Lehi Wetland (2008)

Why were they created?

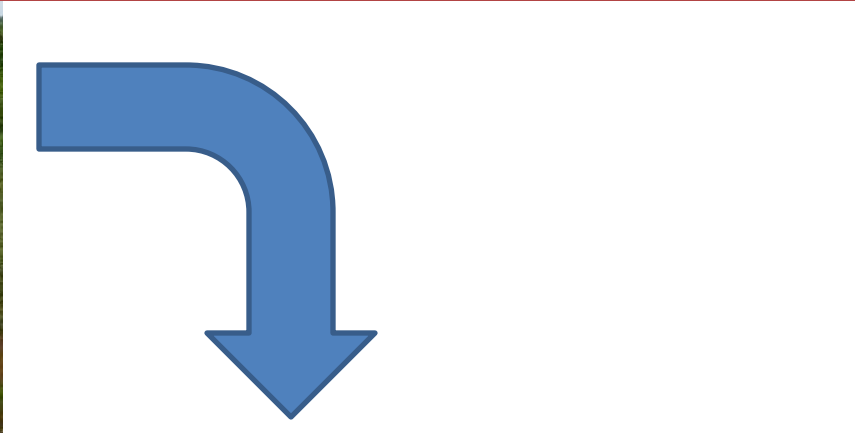
- To improve the **quality of the water** before it enters the river system.
- To provide **opportunities to teach** the Community about their water resources.
- To provide a source in the future for wetland **plants with traditional uses**

What funded the projects?

- CWA Section 319 Competitive Grant



Cottonwood Wetland Before and After





Wetland Monitoring



Address Two Questions:

- Are the Community's wetland resources as functional as they could be?
- Are the Community's wetland resources diminishing over time?

Objective = produce accurate and precise data
(Limit error)

Introduced by sampler, sampling device, and
natural variability





Wetland Monitoring



Monitoring Program for Constructed Wetlands

- Monthly measurements
- Laboratory Analysis
 - Quarterly for Lehi Wetland because its newer
 - Semiannually for Cottonwood Wetland

New Monitoring Program for All Wetland-like areas

- Yearly Inventories
 - Birds
 - Plants
 - Insects





Wetland Monitoring

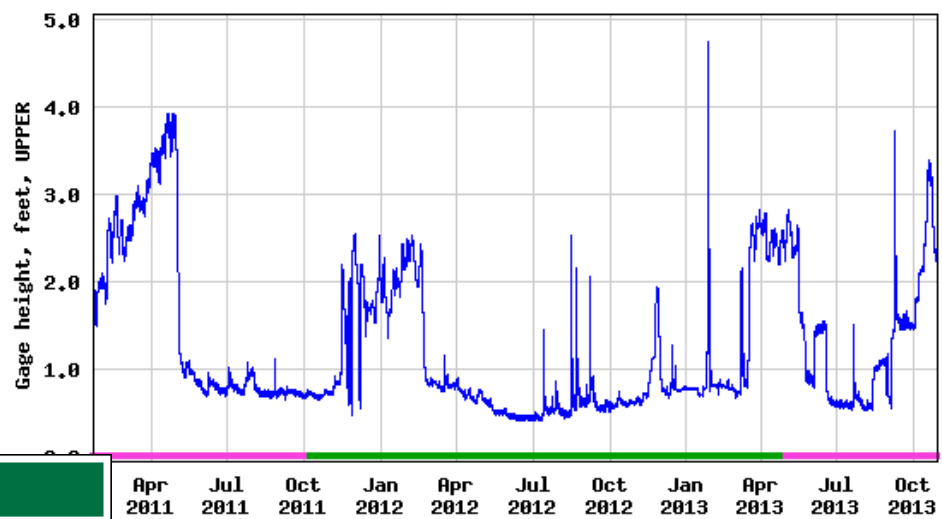


Challenges to Accuracy and Precision

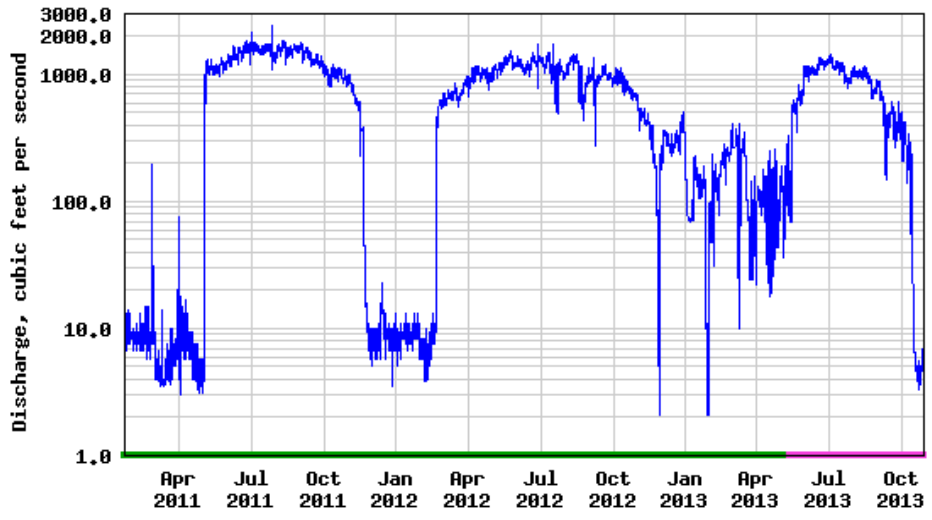
- Dynamic Hydrology
- Seasonality (Bimodal)
- Human Resources
 - Turnover
 - Limited Training



USGS 09511300 VERDE RIVER NEAR SCOTTSDALE, AZ.



USGS 09502000 SALT RIVER BLW STEWART MOUNTAIN DAM, AZ.



— Gage height
 — Period of provisional data
 — Period of approved data

Incredibly variable hydrology
From 2.5 ft to 0.5 ft
From 3,000 cfs to 3 cfs

— Discharge
 — Period of provisional data
 — Period of approved data



Monitoring the Wetlands





Monitoring the Wetlands



Wild Life at the Lehi Wetland



Sand Verbena



Yellow Warbler



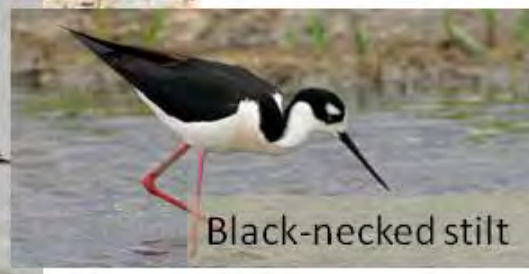
Sanddragon



Common Darners



Kildeer



Black-necked stilt



Desert Iguana



Velvet Ant



Outreach Activities





Outreach Activities



Types of outreach activities

- Earth Day service projects
 - Installing native plants
 - Traditional permaculture uses
 - Building benches
 - Building vatos
- Elementary School Parent night—Dragonfly craft
- High School presentations and Demonstrations
- Fall Festival Booth—Game and passed out activity booklet
- Wetland Tours for Elders from the Senior Center
- Field trips for various groups including Girl Scouts, Recreation Department and Salt River schools
- Articles in the Au-Authm Action News
- Production of activity booklets
 - Watersheds
 - Wetlands





What Have We Learned?



- Many wetlands exist in the SRPMIC.
- Many Community members love wetlands and their amenities.
- Wetland functions and services are not limited to “jurisdictional” wetlands.
 - Sediment deposition, water infiltration
 - Wildlife habitat
- Wetland ecosystems are each complex and unique. Wetland monitoring and the results are equally complex.
- Wetland condition may be outside your control.
 - Up-river fires, erosion, sedimentation
 - Dam-regulated rivers
 - Invasive species
 - Changes in land-use
- Allotted land makes monitoring difficult or impossible.
- Wetlands may not be jurisdictional.
- Wetlands and water conservation may not go hand-in-hand.
- The more the public is shown wetland areas the more we have to manage them for litter, graffiti, access, safety. Budget time and money appropriately.



What We Would Tell You?



Look (scroll) around and you will find wetlands that surprise you.

- Use Google Earth (not GoogleMaps). Use the Clock button to view the wetland and its recent history.

- Build
- Make
- Choose
- Find

area is

