

History of Riparian Area Protection in Arizona

**Presented at the
Annual Meeting of the
Arizona Riparian Council**

April 28, 2006

**Presented by Kris Randall
US Fish and Wildlife Service**

**“Those who do not
remember the past are
condemned to repeat it.”**

George Santayana 1863 - 1952

Riparian Protection in Arizona

- List actions and studies that have been taken to address protecting riparian areas in Arizona.
- Overview of 1992 legislation.
- Synopsis of strategies.

Actions for riparian protection – 20+ years ago

- 1985 Governor's Task Force On Recreation on Federal Lands
- 1988 Arizona Wetlands Priority Plan (addendum to 1983 SCORP)
- 1988 Commission on the Arizona Environment
- 1988 - Designation of San Pedro Riparian National Conservation Area
- 1989 Statewide Comprehensive Outdoor Recreation Plans (SCORP)

Additional actions - 20 years ago

- Governor Rose Mofford's Executive Order 89-16, *Streams and Riparian Resources* – June 10, 1989
- Governor's Riparian Habitat Task Force
 - Riparian Management – Implementation Tools Briefing Paper
 - Riparian Management Implementation Strategies: Recommendations of the Steering Committee

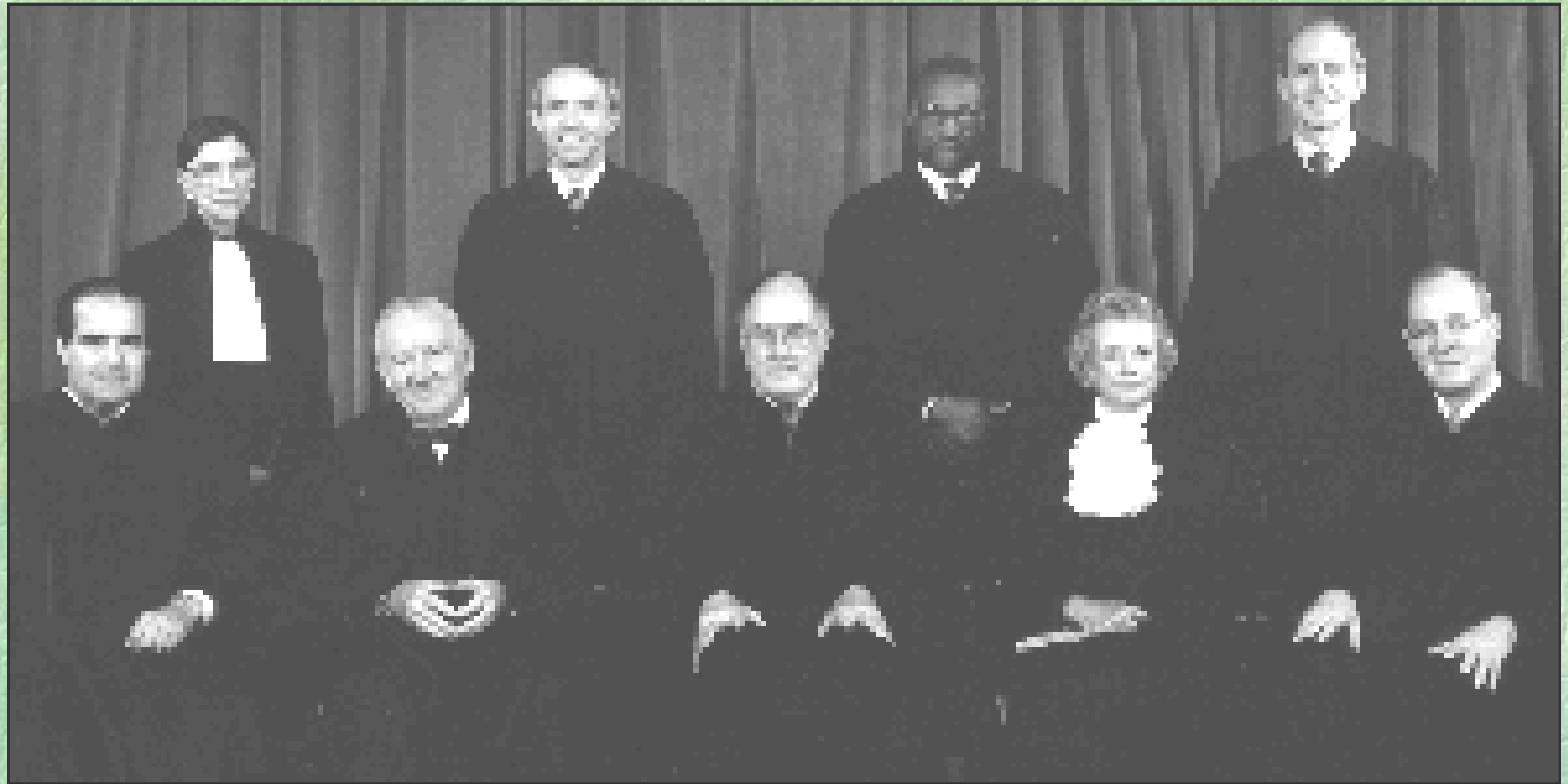
Actions taken in the 1990's

- Governor Rose Mofford's Executive Order 91-6, *Protection of Riparian Areas Resources* – February 14, 1991
- The Interrelationship Between Federal and State Wetlands and Riparian Protection Programs – ASU Planning Department
- Arizona Revised Statute §45-101 – passed in 1992
- Development of Arizona Water Protection Fund and Arizona Heritage Grants.

Actions called out in ARS 45-101

- Formation of Riparian Area Advisory Committee
- Three State agencies to collect scientific and economic data and prepare reports
- Interim report
- Final report

Riparian Area Advisory Committee



State Agency Reports

- Arizona Department of Water Resources
- Arizona Game and Fish Department
- Arizona Department of Environmental Quality

Arizona Dept of Water Resources

Objectives were to evaluate:

1. Hydrologic effect of groundwater pumping on riparian areas.
2. Effect of new surface water appropriations and changes in use or point of diversion on riparian areas.

Arizona Dept of Water Resources

Objectives were to evaluate:

3. Alternative regulatory programs designed to balance protection of riparian areas with:
 - Existing & future gw pumping
 - New surface water appropriations
 - Changes in use or POD of existing sw appropriations

Arizona Game & Fish Department

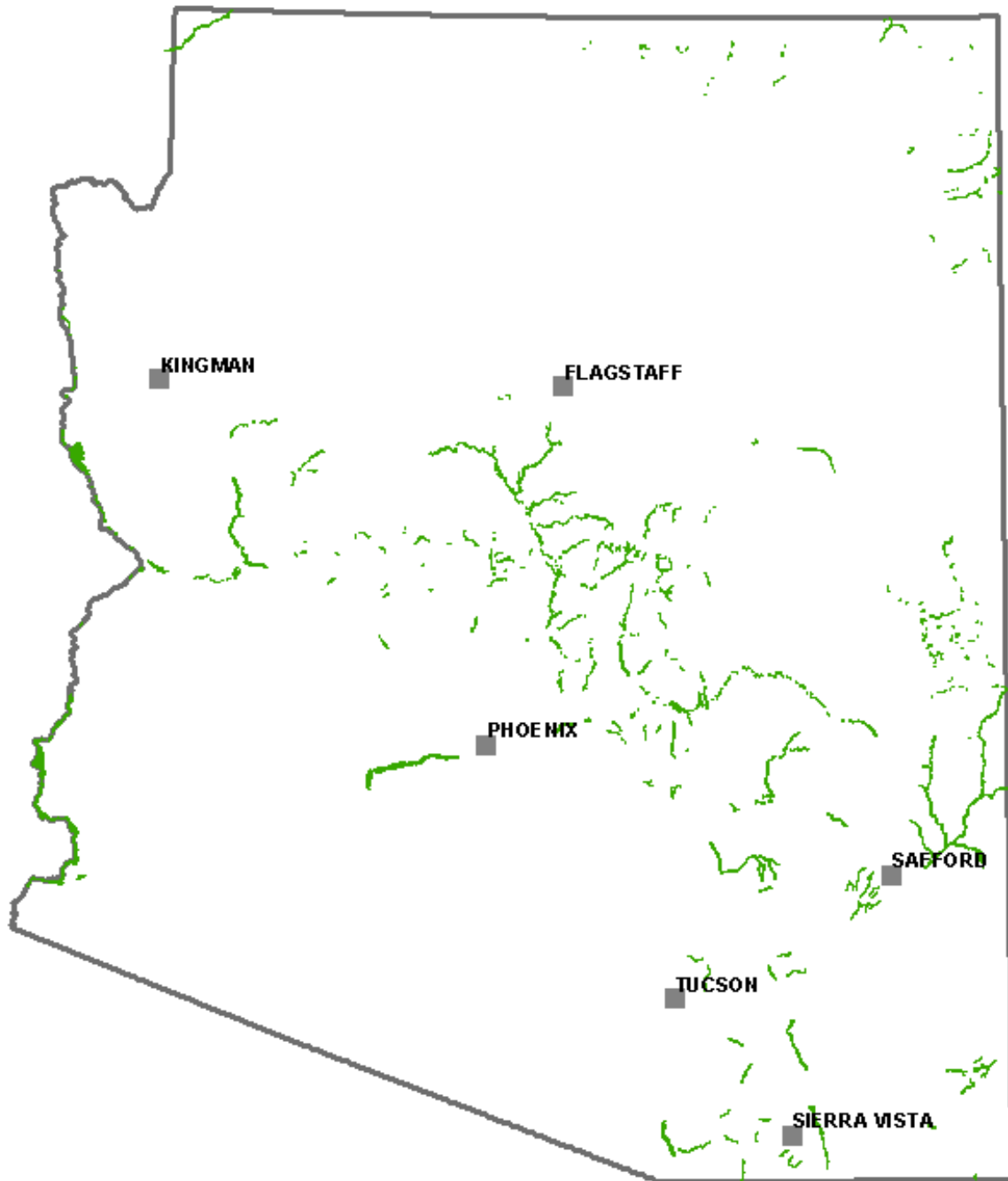
Objectives were to evaluate:

1. Development of a system for classifying riparian areas according to functions and values.
2. Identification, classification, and mapping of riparian areas – priority to perennial waters.

Arizona Game & Fish Department

Objectives were to evaluate:

3. Identification and mapping of land ownership and current land uses.
4. Identification of existing options for protecting riparian areas in each ownership category.



Arizona Department of Environmental Quality

Objectives:

1. Identify activities, operations, and uses that occur on land in riparian areas of federal, state, and private property that involve removing or depositing material, removing vegetation or otherwise obstructing, altering, or destroying riparian areas.
2. Evaluate at least 12 activities; e.g., commercial, industrial and residential development, grazing, and dams.

Interim Report of the Riparian Area Advisory Committee

- Summaries of three agency's reports.
- Overview and rating of regulatory and non-regulatory programs that exist in AZ and other states.
- Alternative regulatory and nonregulatory protection strategies that could be applied in AZ.
- Fiscal, environmental, and economic analysis of strategies.
- Input from open house meetings with the public.

Overview of Riparian Area Protection Programs

- Evaluated 29 Federal programs
- Programs rated highest:
 - Endangered Species Act
 - Wild & Scenic River Act
 - Clean Water Act, Section 404

Overview of Riparian Area Protection Programs

- Evaluated 22 State programs
- Programs rated highest:
 - Unique Waters Designation (ADEQ)
 - Clean Water Act, Section 401 (ADEQ)
 - State Water Quality Standards (ADEQ)

Overview of Riparian Area Protection Programs

- Evaluated 10 Local programs
- Programs rated highest:
 - Flood Plain Ordinances
 - Zoning ordinances & Planning Amendments
 - Tucson Ordinance

Water Availability Issues

- Groundwater pumping may deplete surface water flows or lower water table
- Changes in diversion points may reduce stream flows
- Reservoir release patterns may affect seasonal availability and disrupt flood cycles.

Large Scale Destruction or River Channel Alteration Issues

Riparian areas may be destroyed or damaged by:

- River channel alterations

- Sand & gravel operations,

- Dredging and filling,

- Road construction,

- Channelization and bank stabilization

Adjacent Land Uses Issues

Degradation of riparian areas can occur as the result of land uses, e.g.:

Grazing

Timber harvesting

Agriculture

Mining,

Road construction,

Recreation.

Effluent and Point Source Issues

Can cause changes in riparian areas:

Increase streamflow due to effluent discharges from municipal wastewater treatment plants (WWTP).

Effluent discharges can cause health problems to humans and stream biota.

Restoration/Enhancement Issues

Passive or Active management to enhance or restore riparian areas.

Development of alternative strategies



Non-
Regulatory

Mostly
Non-Regulatory

Mostly
Regulatory

Regulatory

Criteria for Four Alternative Strategies

- Address the 5 issues
- Stand alone
- Reflect information from 3 agency reports.
- Build upon strengths of existing programs and laws.
- Address what the state can do.

Strategy:

Non-regulatory

Amend Title 45 to include instream uses such as preserving riparian vegetation as a beneficial use.

Regulatory

Amend state statutes to allow conjunctive management of water resources – unification of groundwater and surface water statutes.

Strategy: Designated state agency to provide technical assistance to landowners interested in preserving and enhancing their habitat.

- Water Protection Fund - AWDR
- Landowner Incentive Program – AGFD
- Water Quality Improvement Program – ADEQ
- Livestock and Crop Conservation Grant Program – ADA
- Partners for Fish & Wildlife – USFWS
- Farm Bill Program - NRCS

Strategy: Landowners would be encouraged to attach conservation easements.

- 1,537 Land Trust Organizations.
- Nationally, over 9 million acres covered under conservation easements.
- 17 Land Trust Organizations in Arizona.
- 43,988 acres covered in conservation easements.

Strategy: Flood control districts encourage to use non-structural alternatives for flood control.

- Maricopa County Flood Control District.
- Pima County Flood Control District.



**Final Report
of the
Riparian Area
Advisory Committee**

Conservation Goal

To sustain and enhance Arizona's riparian areas by managing land, water, and resource uses to protect ecological integrity and functionality.

Approach to Riparian Planning

Development of local Riparian Planning Councils.

- ❖ Process that incorporates state and other interests to achieve the Conservation Goal.
- ❖ Locally initiated planning entity.

Riparian Planning Councils

- Establish instream flow water rights for specific perennial stream segments.
- Provide incentives for use of alternative water sources to reduce impact on baseflow or riparian vegetation.
- Develop a local riparian mitigation banking program.

[SDCP Home](#)

[Sonoran Desert Conservation Plan Introduction](#)

[Critical Habitat & Biological Corridors](#)

[Riparian Protection](#)

[Mountain Parks](#)

[Cultural Resources](#)

[Ranch Conservation](#)

[Meetings & Events](#)

[Species in Pima County](#)

[SDCP Maps](#)

[Reports](#)

[Archives](#)

[Sonoran Desert Kids](#)

[Education Center](#)

[Contributors to the SDCP](#)

[Related Links of Interest](#)

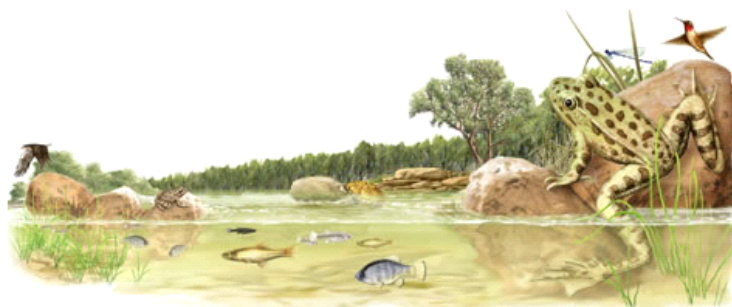


[Privacy Statement / Disclaimer](#)

Copyright © 2006,
All rights reserved

A Vision For Riparian Protection

Riparian areas in a desert environment are vital places. Although sixty to seventy-five percent of all species in Arizona rely on a riparian environment at some point during their life cycle, a number of streams and springs in and near Tucson have ceased to flow year round or are affected by a lower water table. Our streams and springs need protection as well as restoration.



Riparian Protection

Riparian resources and aquatic systems are the most vulnerable and least protected habitats in Pima County.

Two years of review and research during the Sonoran Desert Conservation Plan process have added greatly to Pima County, Arizona's understanding of its riparian resources. In addition, previously unknown perennial and intermittent streams and springs have been identified.

Threats to Riparian Systems

It is now known that there are more threats to riparian systems than the obvious ones. The impact is evident when a housing development destroys a creek or stream environment. However, the decline in groundwater from pumping or the spread of invasive non-native species may be less obvious, but may actually destroy as much or more riparian habitat.

Making Up for Lost Ground


While it is far too late to restore many of our riparian communities to their natural condition, the Sonoran Desert Conservation Plan proposes that other natural riparian systems be preserved, restored, and managed to compensate for decades of largely unintended destruction of these systems.

SONORAN DESERT CONSERVATION PLAN

RIPARIAN RESOURCES

Riparian areas in a desert environment are vital places. Although sixty to seventy-five percent of all species in Arizona rely on a riparian environment at some point during their life cycle, a number of streams and springs in and near Tucson have ceased to flow year round or are affected by a lower water table. Our streams and springs need protection as well as restoration.

LEGEND

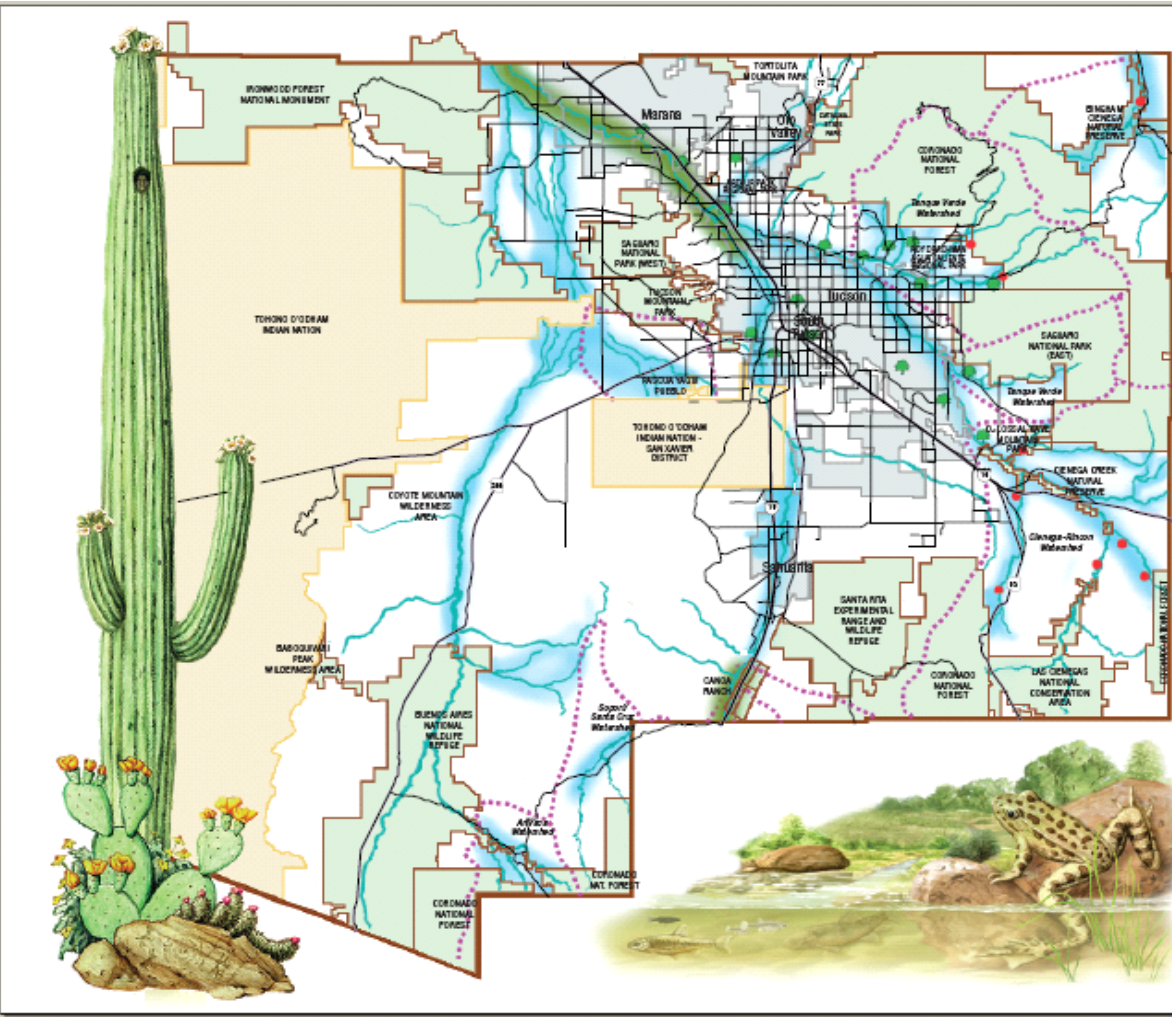
-  Riparian Restoration/Rehabilitation
-  Effluent-Based Riparian Projects
-  Springs
-  Other Projects or Studies
-  Watershed Boundary



PIMA COUNTY BOARD OF SUPERVISORS
 Sharon Bronson, Chair • District 3
 Ann Day • District 1
 Ramón Valadez • District 2
 Raymond J. Carroll • District 4
 Richard Elias • District 5
 Chuck Huckelberry • Pima County Administrator

Visit the Sonoran Desert Conservation Plan Web site
www.pima.gov/sdcp

Sonoran Desert Conservation Plan
 County Administrator's Office
 130 West Congress, 10th Floor
 Tucson, AZ 85701
 520-740-8162



Regulatory changes

- Add “riparian vegetation” as a beneficial use
- Allow conversion of water right to an instream flow right
- State Land Dept make available riparian areas for conservation uses

Arizona State Land Department awarded first grazing lease to a conservation lessee.

Efforts were made in 2004 and 2005 to develop a proposal to allow State Lands to be used for conservation purposes.

Upper San Pedro Partnership

Cochise county – Development of ordinances pertaining to population densities near the San Pedro River.







WATCH
FOR
ICE



