

PROJECT OVERVIEW

Sonoran Desert Conservation and Comprehensive Plan

Purpose:

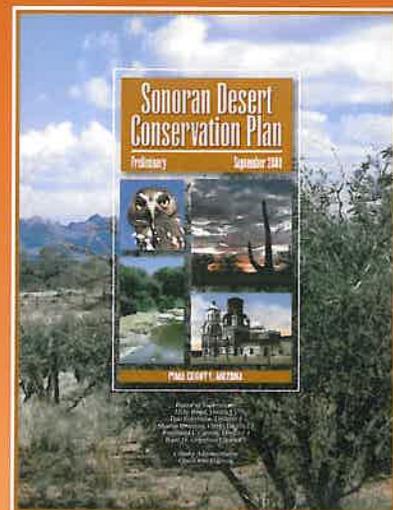
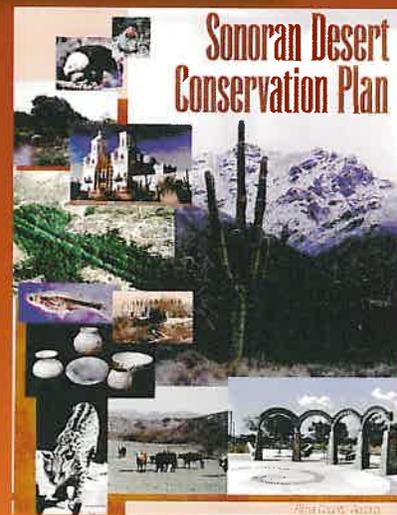
The Sonoran Desert Conservation Plan is a long term vision for protecting the heritage and natural resources of the west in Pima County.

Plan area:

The plan area covers 5.9 million acres which includes 2 major eco-regions known as the Sky Islands and the Sonoran Desert, the second largest Native American Nation, and 850,000 residents from diverse ethnic and cultural backgrounds in one of the fastest growing Counties in the United States. The conservation planning effort addresses the problems of declining natural resources and the loss of cultural identity. The conserved natural environment serves as the form maker for the County's human environment. The recently adopted Comprehensive Plan Update, addresses problems of land consumption, declining tax base, circulation, water availability, equity, accessibility, and affordability.

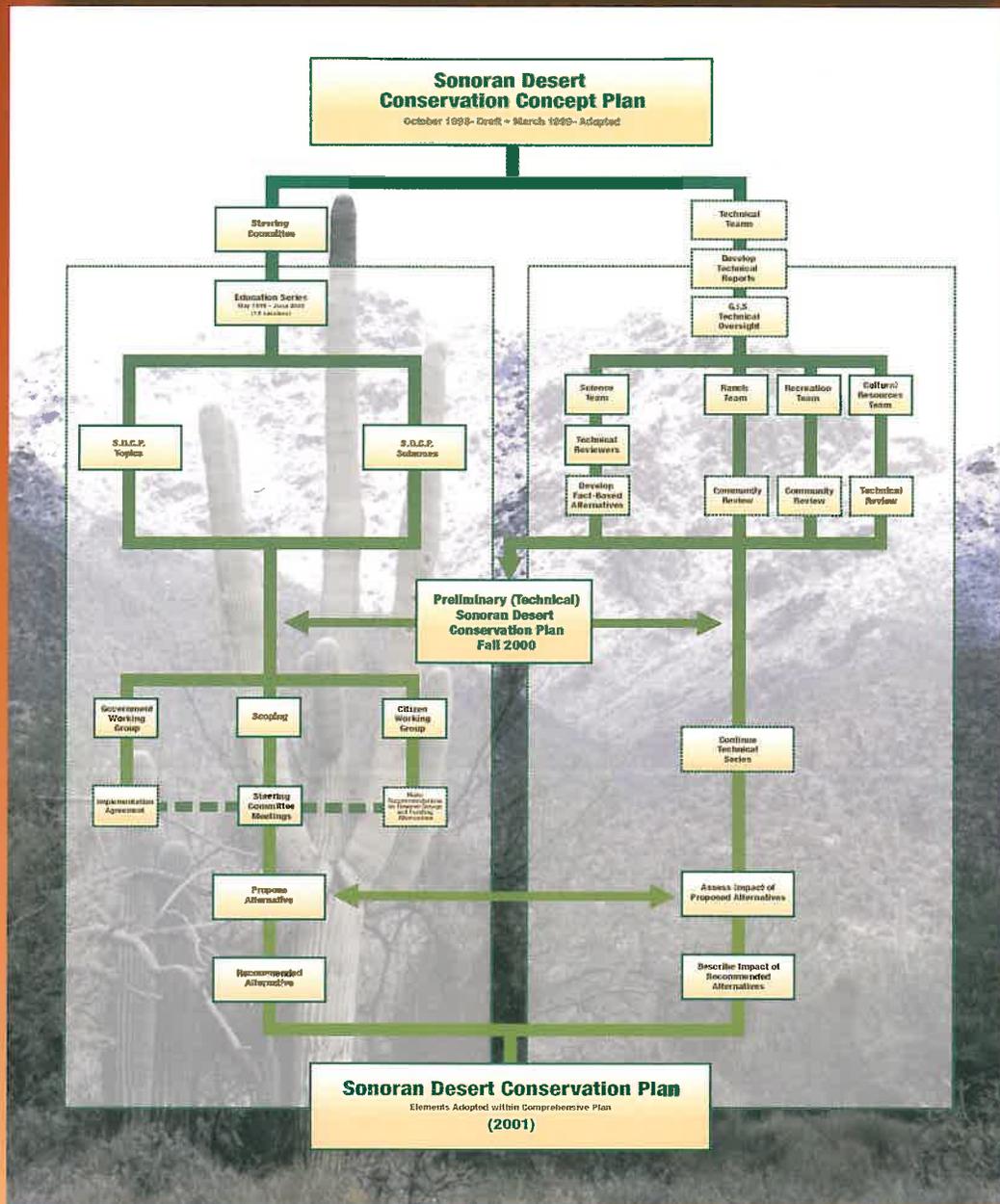
Since plan initiation in 1998, the process has involved:

- The creation and publication of over 205 studies and planning documents
- A partnership between the 12 major government land managers and regulators who have land use authority over 97 percent of the 5.9 million acre regional planning area.
- A regular working relationship with 40 community groups representing the range of interests and neighborhoods, through the public participation process.
- A partnership with 35 schools and non-profit organizations in the youth participation component.
- Over 5,250 participants, including 84 members of the conservation plan steering committee, 350 members of subregion land panels, 40 members of technical teams, 400 individuals from the academic and expert community, and 4,375 kids age 5 to 16.
- Policies, plans, ordinances, and conservation achievements resulting from the planning process include:
 - Establishment of the Ironwood Forest National Monument by the President
 - Establishment the Las Cienegas National Conservation Area by Congress, Acquisition and protection of substantial ranch and park land by the County, Acquisition and protection of substantial riparian areas by the County
 - Adoption or enhancement of ordinances regulating buffer overlay zones around preserves, hillside development, riparian mitigation, native plant protection, conservation subdivisions, big box limitations, and inclusive home design to implement the American National Standard Accessible and Usable Buildings Code applicable to new construction of detached one, two and three family dwelling units.
 - Adoption of policies to introduce and institutionalize standards in the built environment for growth areas, mixed use development, inclusionary and mixed income programs, transit oriented development to promote the neighborhood unit, concurrency based on level of service standards, infrastructure service area boundaries, and water conservation.
- The Conservation Lands System policy provides guidelines for unincorporated areas across the full spectrum of the region from the most protected natural and cultural resource preserves, to ranching and multiple use reserves, to large lot development and urban buffers, to the urbanizing areas themselves. This Conservation Lands System, adopted in the local land use plan in December of 2001, incorporates the biological reserve recommended by more than 200 members of the science community after 3 years of study. The biological reserve will allow the community to stop the decline of 55 native species and protect the overall biodiversity of the region. A federal endangered species permit will also be issued to resolve multi-species regulatory compliance issues and balance conservation and economic interests for the region.



SONORAN DESERT CONSERVATION PLAN

Public and Expert Participation Process

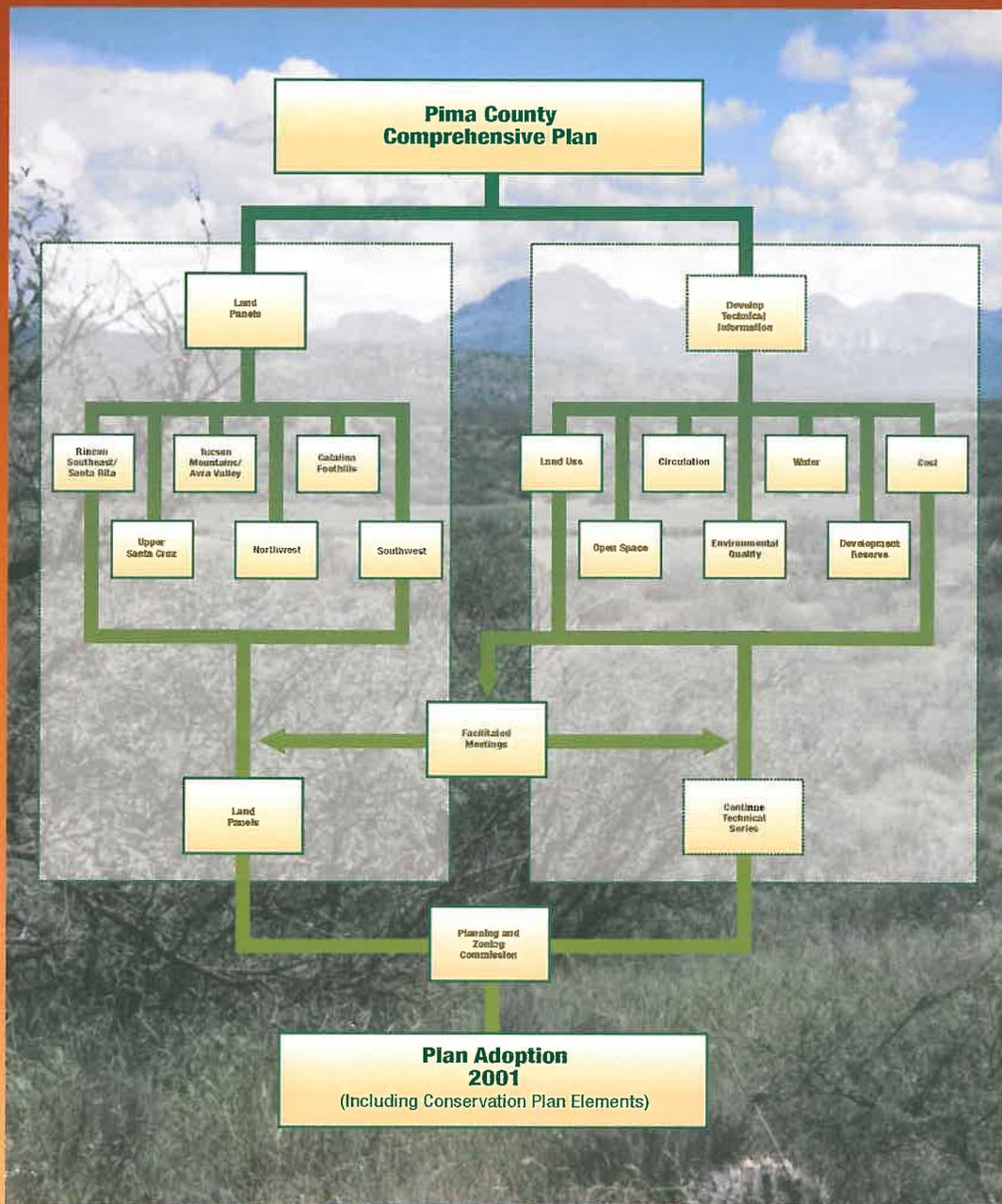


SUMMARY OF CONSERVATION PLAN PROCESS

- 6 Elements: Habitat, Corridors, Cultural, Mountain Park, Ranch, and Riparian
- 165 studies and planning documents
- 620 meetings and presentations
- 84 members of steering committee
- 4 technical teams, 440 contributing experts, peer review
- 12 government partners and 40 community groups

COMPREHENSIVE PLAN UPDATE

Public and Expert Participation Process

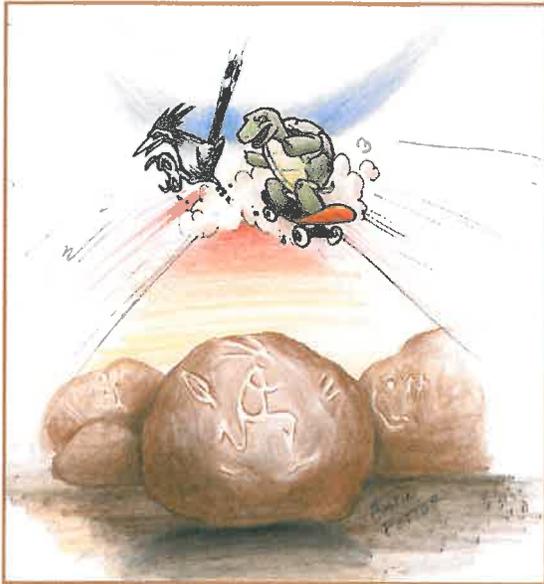


SUMMARY OF COMPREHENSIVE PLAN

- 7 Elements
- 40 studies and planning documents
- 50 meetings and presentations
- 350 land panel members and participants

SONORAN DESERT CONSERVATION PLAN

Participation Process for Youth



How to Get Involved
 To join the Kids Sonoran Desert Conservation Plan, call 520-740-6661 or send your name and address to:
 Sonoran Desert Conservation Plan for Kids
 130 West Congress 10th Floor
 Tucson, AZ 85701
<http://www.SDCPforKids.org>

SONORAN DESERT CONSERVATION PLAN FOR KIDS

Pinna County, Arizona
 Board of Supervisors
 Ailsa G. Garcia, 1
 Don Davidson, District 2
 Sharon Hunsinger, District 3
 Raymond J. Clark, District 4
 Rod M. Gray, District 5
 County Administrator
 Chuck Jackelberry

Sonoran Desert Conservation Plan For Kids

The Kids Sonoran Desert Conservation Plan is a comprehensive approach to involving children and to provide a means for the conservation of ideas and perspectives on the Sonoran Desert Conservation Plan. There are four aspects to the Kids Sonoran Desert Conservation Plan outreach strategy: Education, Recreation, Communication, and Action.

Education

Education is a primary tool for conservation. Through hands-on experiences, children learn about the Sonoran Desert and the importance of conservation. The Kids Sonoran Desert Conservation Plan provides a means for children to learn about the desert and its resources. The Kids Sonoran Desert Conservation Plan provides a means for children to learn about the desert and its resources. The Kids Sonoran Desert Conservation Plan provides a means for children to learn about the desert and its resources.



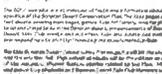
Recreation

Recreation is an important part of the Kids Sonoran Desert Conservation Plan. Through outdoor activities, children learn about the desert and its resources. The Kids Sonoran Desert Conservation Plan provides a means for children to learn about the desert and its resources. The Kids Sonoran Desert Conservation Plan provides a means for children to learn about the desert and its resources.



Communication

Communication is an important part of the Kids Sonoran Desert Conservation Plan. Through various media, children learn about the desert and its resources. The Kids Sonoran Desert Conservation Plan provides a means for children to learn about the desert and its resources. The Kids Sonoran Desert Conservation Plan provides a means for children to learn about the desert and its resources.



Action

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Planning and implementation of the Kids Sonoran Desert Conservation Plan is a continuous process. Through various activities, children learn about the desert and its resources. The Kids Sonoran Desert Conservation Plan provides a means for children to learn about the desert and its resources. The Kids Sonoran Desert Conservation Plan provides a means for children to learn about the desert and its resources.

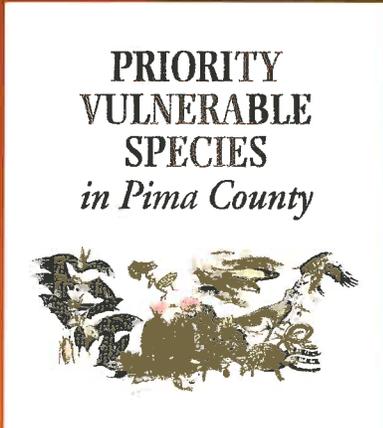


SUMMARY OF KIDS SDCP PROCESS

- 125 programs involving 4375 kids (age 5-16)
- 35 school and youth group partners
- youth summit for area high schools

ADDRESSING THE PROBLEM

of the declining natural system – habitat, corridor, and riparian elements



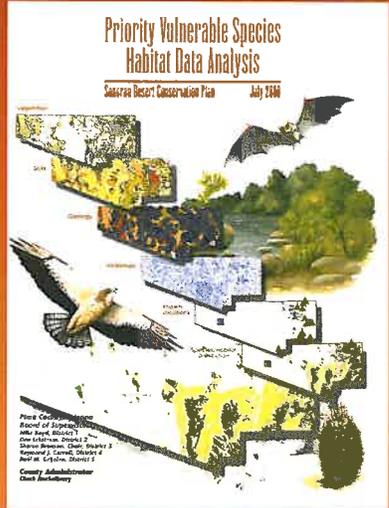
Conceptual Approach to Organizing Information

The biological goals informed the principles used to establish the reserve design. The Science Technical Advisory Team directed the workshop and study series carried out by biological consultants and a team of species experts. A wealth of additional research was conducted across the spectrum of natural, cultural, and fiscal resource subjects areas. This combined effort, which has so far yielded nearly two hundred documents, directly informed and had a synergistic effect on the creation of the knowledge base that underpins the Sonoran Desert Conservation Plan. The Science Team, like all four technical teams affiliated with the Sonoran Desert Conservation Plan, carried out a completely open process. Ideas were discussed in public in regularly held meetings, workshops and seminars. Following discussions and deliberations, the strongest path was chosen to move forward as a result of the consensus reached by groups of experts. A general way to describe how information is organized in presentations of the elements of the Sonoran Desert Conservation Plan is depicted below. Analysis includes a description of (1) the status of the resource base; (2) threats to the resource base; and (3) current management and existing gaps in protecting resources.

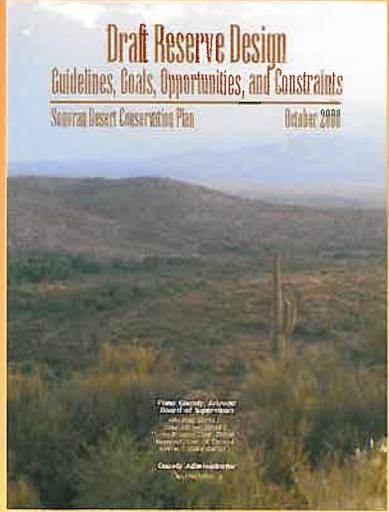
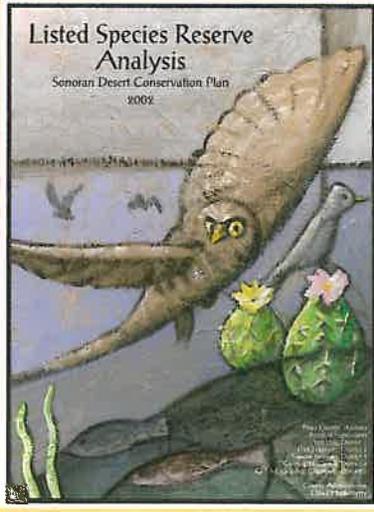
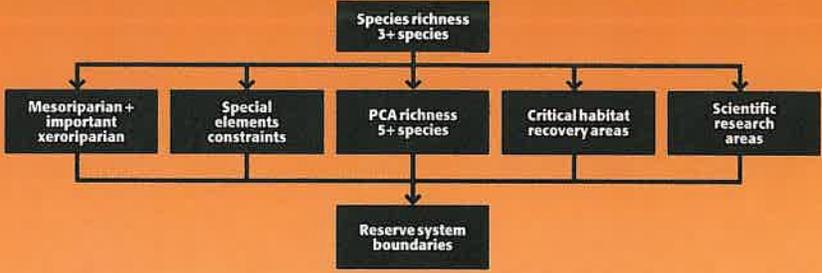
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    graph TD
      RD[Resource Distribution] --> TA[Threats Analysis]
      PT[Potential Threats and Stressors] --> TA
      TA --> LT[Level of Threat]
      TA --> EM[Existing Management]
      LT --> GA[Gap Analysis]
      EM --> GA
      GA --> GCM[Gaps in Conservation Management]
      GA --> ACM[Additional Conservation Measures]
      GCM --> RD
      ACM --> RD
      RD --> RDL[Reserve Design]
      RDL --> PGL[Protected Sites and Landscape]
  
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This method of organizing information leads to the identification of the highest value resources, and those resources that are under the greatest threat. Conservation strategies can be prioritized around this knowledge and implemented through the adopted Plan.



Building Exterior Reserve Boundaries



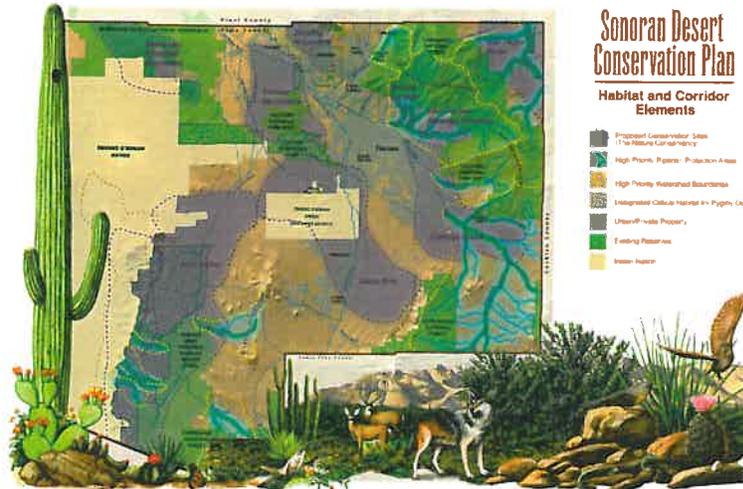
HABITAT, CORRIDOR AND RIPARIAN ELEMENTS

Critical Habitat and Biological Corridors

Two of the elements that express the biological basis of the plan most directly are the Critical and Sensitive Habitats Element and Biological Corridors Element. In 1998, the Science Community did not have a list of priority vulnerable species of concern, a set of biological standards, or even a vegetation map that could serve as the starting point for determining the locations in need of protection for the species that are in decline. After an intensive research effort involving dozens of members of the science community, from both the local and national level, a working list of potentially covered species has been identified; the best available vegetation maps are being assembled; and the science community is working to identify the patches of habitat and connecting corridors that will establish an effective and lasting biological reserve.

For the 9 mammals, 8 birds, 7 reptiles, 7 plants, 6 fish, 2 amphibians, and invertebrates that have been identified thus far as being in need of protection, the biological goals of the plan will be of great assistance in promoting recovery and improving the status of these species. This is true not only because a statement of biological goals and objectives has been articulated, but because we are now able to gather information in a comprehensive fashion, take actions to improve the status of the species in the short term, and craft an adaptive management plan that continues to improve the information base and the conservation program over the long term. Substantial contributions from the expert community have also built the Habitat and Corridors Elements.

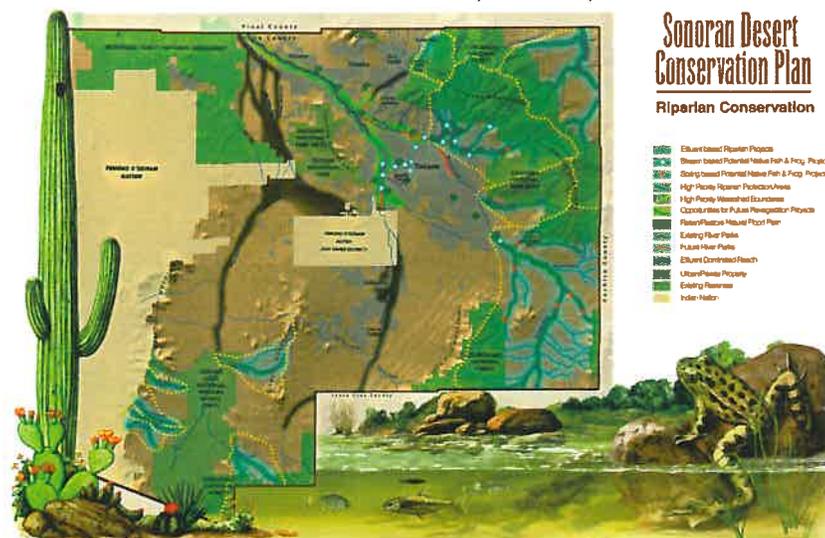
Habitat Map



Riparian Restoration

Two years of review and research led to the conclusion that riparian resources and aquatic areas are the most vulnerable and least protected habitats. While it is far too late to restore many of our riparian communities to their natural condition, the SDCP proposes that some natural riparian systems be preserved, restored and managed to compensate for the decades of largely unintended destruction of these systems. We also have the opportunity to recreate some riparian systems, using renewable sources of water, to provide urban revitalization, recreation, and park development. This experience can best be delivered to the urban area by repairing degraded riparian environments of our major drainage systems - the Santa Cruz, Rillito, and Pantano rivers and washes - and by enhancing protection of the remaining fragments along their tributaries.

Riparian Map



ADDRESSING THE PROBLEM

of declining sense of place and cultural identity through cultural resource, ranch, and mountain park conservation

Sonoran Desert Conservation Plan Cultural Resources Fact Sheet No. 4



The Classic Period (A.D. 1150 – A.D. 1450)

Platform Mound Communities



There is a platform for each of a Classic Hohokam village.

The term "Classic" which means "those who came later" or "followed up" to the Pima requires reference to the prehistoric population patterns in what is called the Sonoran Desert. It refers to the Classic Period (A.D. 1150 to 1450) in the beginning of the Classic Period around A.D. 1150 to 1450. Hohokam villages became more compact, and some of the Classic Period features were many of them, platform mounds, and the most basic of them, all of them. The Classic Period Hohokam people lived in compact, walled villages. They had large, rectangular platform mounds. The Classic Period Hohokam people lived in compact, walled villages. They had large, rectangular platform mounds. The Classic Period Hohokam people lived in compact, walled villages. They had large, rectangular platform mounds.

ward politically powerful, as well as people with a residence that was physically above their counterparts in neighboring houses. Many platform mounds are so large that some archaeologists have argued that it would have been necessary to gather community support and labor to design and build these structures. This suggests that either the person(s) who wanted a mound had some authority over the community as a whole or that every member of the community had something to gain from the presence of a platform mound in their village.

Classic Period Hohokam people lived in compact, walled villages. They had large, rectangular platform mounds. The Classic Period Hohokam people lived in compact, walled villages. They had large, rectangular platform mounds.

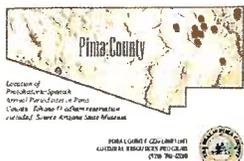


An aerial view of a Classic Period platform mound. Reprinted from Archaeology in Pima County, No. 7, a quarterly journal of the Pima County Historical Society, Vol. 10, No. 1, 1987.



Native American petroglyphs (writing of symbols on hard rock) at the San Pedro River. Photo by [unreadable].

So far, we've only seen the first half of the story. Many historians believe that early explorations used the San Pedro River as a route to the south. Spanish contact with, and knowledge of, southern Arizona Native Americans was not necessary until 1530, when Father Juan de la Cruz, a Spanish missionary, traveled down the San Pedro River from the north. This first Spanish settlement was at the mouth of the river, near the mouth of the San Pedro River. Spanish contact with, and knowledge of, southern Arizona Native Americans was not necessary until 1530, when Father Juan de la Cruz, a Spanish missionary, traveled down the San Pedro River from the north. This first Spanish settlement was at the mouth of the river, near the mouth of the San Pedro River.



Location of Pima County, Arizona. Reprinted from Archaeology in Pima County, No. 7, a quarterly journal of the Pima County Historical Society, Vol. 10, No. 1, 1987.

The Protohistoric/ Spanish Arrival Period at a Glance

Environmental Conditions

- Temperature and rainfall levels fluctuated over time, as they do today.

Settlement Pattern

- While a considerable population of group first settlement encampments, some by highly mobile people (Hohokam) in the western desert in permanent year-round villages (Ancestral Puebloans) along the region's major rivers (Gila River).

Subsistence Techniques

- Dry, hard water and canal farming
- Game, grain, beans, squash, melons and cotton
- Hunted game and fish in the region's major rivers (Gila River).

Technology

- Plain pottery
- Some and some with distinctive motifs
- Hunting traps and snares (both structures covered by nets or dirt and organized in other villages or dispersed encampments)

Important Sites/Settlements in the Area

- San Juan del Rio
- San Agustín de Chiriquí

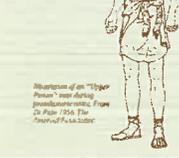


Illustration of an "Older Pima" man during the Spanish arrival period. Photo by [unreadable].

Historic and Cultural Preservation

Preliminary Historic and Cultural Map

Pima County is rich in history, culture, regional character, and diversity, all of which contribute greatly to our collective cultural heritage and community identity. Based on research conducted for the conservation plan, it is now possible to quantify the richness of Pima County's archaeological, historical and traditional resources in a way that has not been possible before. For instance, only 12% of the land area of eastern Pima County has been formally investigated for archaeological sites, and yet 3541 sites have been recorded. More than 4000 historic buildings are known, and 121 sites, buildings, and districts are listed on the National Register of Historic Places. Pima County has ten historic communities, thirteen ghost towns, and three historically significant trails. In addition, a number of traditional cultural places have been identified, many of which are important to the Tohono O'odham Nation and some that are important to the Mexican American community in Tucson. These places demonstrate a remarkable wealth of cultural and historical resources in Pima County, and yet urban expansion threatens these known resources and those that have yet to be discovered. Historic settlement patterns indicate that the greatest impacts to our cultural and historic resources have occurred along the principal riparian and/or drainage basins of the County.



Sonoran Desert Conservation Plan Cultural Resources

- High National Antiquities Site
- National Historic Landmark
- National Register of Historic Places
- National Historic Landmark

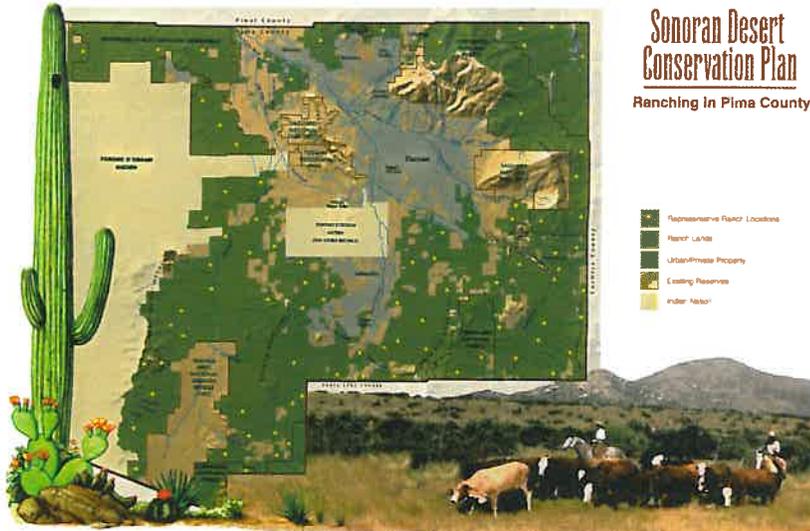


RANCH CONSERVATION AND MOUNTAIN PARK EXPANSION ELEMENTS

Ranch Conservation

By virtue of the ongoing land stewardship and management provided by ranchers, ranch lands in Pima County are uniquely suited to preserve natural, unfragmented open space, habitat, and the land's natural and cultural resource values. In eastern Pima County, there are approximately 1.4 million acres, comprised of a mosaic of private and public land ownership, that are currently dedicated to ranching use. Virtually all of the larger ranches manage both privately owned and leased public and state trust lands. Most ranches are family-owned enterprises, often representing the descendants of original homesteaders who established ranching operations in the late 1800s. Ranching has probably been the single greatest determinant of a definable urban boundary in eastern Pima County and has served to preserve natural open space. To prevent unwanted urban sprawl and unregulated development, it is most important that Pima County encourage and retain viable and sustainable ranching operations. Ranching has served well to protect our natural open space, and it continues to be an important traditional industry that has shaped the rural landscape. Unfortunately, many of these ranches and the natural and cultural landscapes they protect are now threatened with urban encroachment and fragmentation as a consequence of the conversion of ranch lands to real estate development.

Ranch Map



Sonoran Desert Conservation Plan
Ranching in Pima County

Mountain Parks

Of all the counties in the State, Pima County has been a leader in natural resource protection. The establishment of Tucson Mountain Park in 1929 marked the beginning of an unparalleled conservation ethic. Since the Sonoran Desert Conservation Plan was proposed in 1998, we have successfully conserved 135,000 acres of Bureau of Land Management land in the Ironwood Forest National Monument. The Monument was designated by former President Bill Clinton on June 9, 2000. The Cienega Creek Watershed has been afforded greater protection due to the declaration of the Las Cienegas National Conservation Area, passed by Congress and signed by the president December 7, 2000. Regardless of the amount of open space that exists across Pima County, we have not assembled a system that effectively preserves and conserves natural, biological assemblages of species. We must expand and redouble our efforts at mountain park development and conservation and do so in a manner that directs our resources and energies at sustaining and maintaining biological diversity in the Sonoran Desert.

Mountain Parks Map

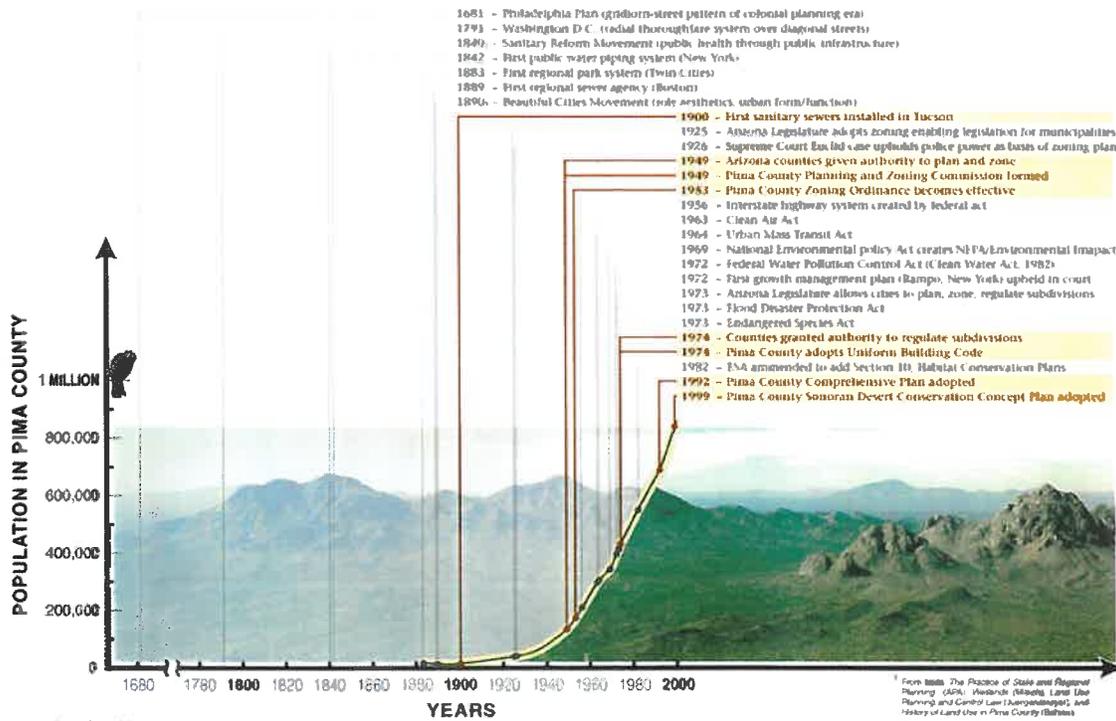


Sonoran Desert Conservation Plan
Mountain Parks and Natural Reserves

ADDRESSING THE PROBLEM

*of land consumption, declining tax base,
and past regional resistance to planned development*

Timeline of Planning Events and Population Growth in Pima County



Sonoran Desert Conservation Plan **FACT SHEET**

Pima County, Arizona

WHAT?

The law allows a certain type of unregulated development, often called "lot splitting," or "wildcat development."

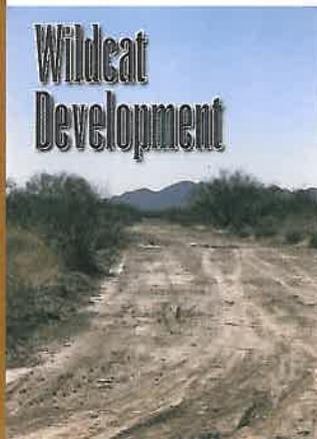
Wildcat subdivision, or lot splitting, is generally defined as the proliferation of new residential parcels without the benefit of subdivision regulation. Often these areas are devoid of any basic infrastructure, standard environmental regulation, subdivision standards, or infrastructure requirements. Such items are commonplace in the regulation of subdivided land.

Under the Arizona Revised Statutes, a minor parcel division of less than six plots is not considered to be a "subdivision." The county may not deny approval or require a public hearing in such cases. The effect of the law is that lot splits which occur under such circumstances, no matter how extensive the geographic becomes, are not required to produce a plat and the related improvements that are required of subdivisions.

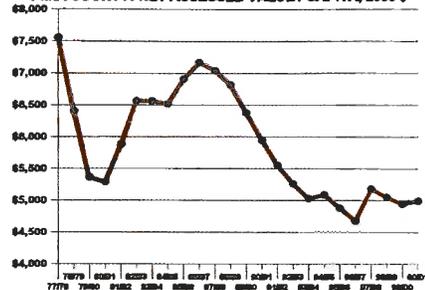
A significant number of new dwellings are created through unregulated lot split activity.

In 1997, a total of 3,729 new residential dwelling units received permits in unincorporated Pima County. Of this, 1,525 - or 41% - of the new units were not part of planned subdivisions.

Wildcat Development



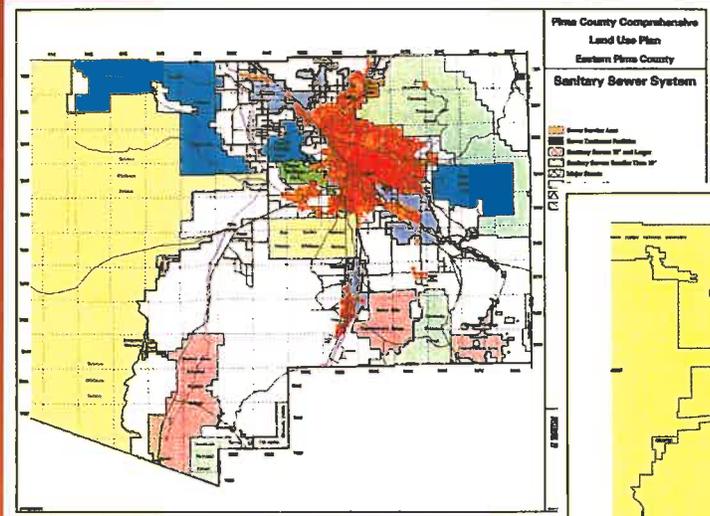
PIMA COUNTY: NET ASSESSED VALUE / CAPITA, 2000 \$



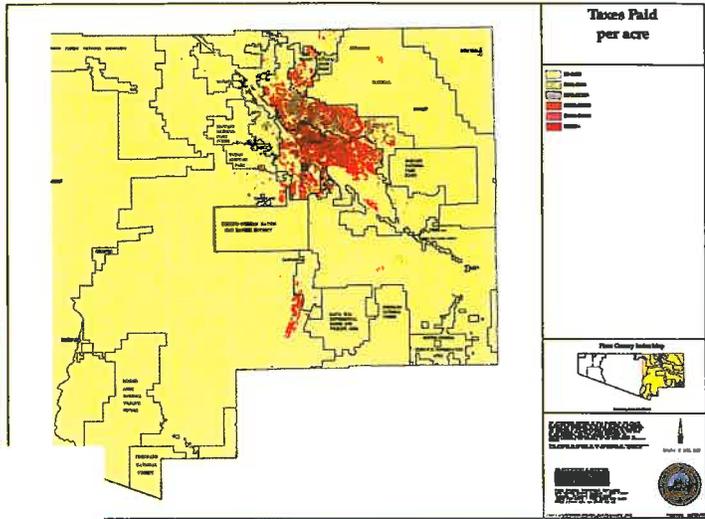
Arizona State law has encouraged unregulated development, which lacks basic infrastructure. The resulting land uses have led to a 38% decline in the tax base, when measured in constant dollars and divided per capita.

A CASE FOR MIXED USE DEVELOPMENT

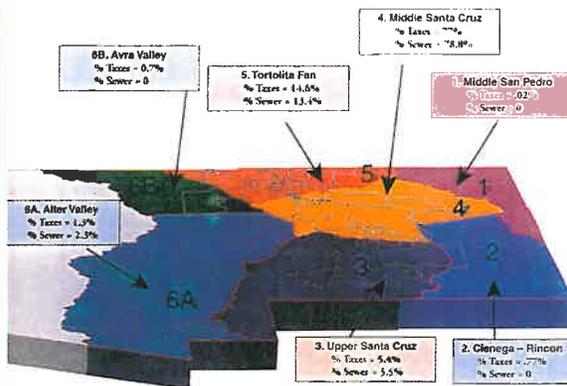
*Infrastructure, Density, and Commercial Use
carry the tax base*



Pima County Comprehensive
Land Use Plan
Eastern Pima County
Sanitary Sewer System



Eastern Pima County Watersheds Revenue and Infrastructure Relationship



WATERSHED	% OF TOTAL PRIMARY & SECONDARY TAXES PAID	% OF SEWER SYSTEM
Middle San Pedro	0.02%	0
Clonoga Rincon	0.77%	0
Upper Santa Cruz	5.4%	5.5%
Middle Santa Cruz	7.7%	5.8%
Tortolita Fan	14.6%	13.4%
Avra Valley	1.3%	2.3%
Avra Valley	0.8%	0

Residential and Commercial Components of Built Environment

1. Full cash value of the residential and commercial built environment -- The last section of the study established that as of November 2000:

- The full cash value of land and improvements for all of Pima County was \$35.3 billion.
- The full cash value of Eastern Pima County was \$34.7 billion.
- The full cash value of the land and improvements for the 16 urbanizing areas in Pima County, covering 468,089 acres (1/12th of the county) was \$34.2 billion.

This section reviews the 165,275 acres of Pima County that constitutes the residential and commercial built environment. The full cash value of this land area is \$27.76 billion.

AREA OF PIMA COUNTY (ACRES)	FULL CASH VALUE/ NOV 2000 (PERCENT)
All of Pima County (5.88 million acres)	\$35.3 billion (100 %)
Eastern Pima County (2.44 million acres)	\$34.7 billion (98.5 %)
16 Urbanizing Areas (468,089 acres)	\$34.2 billion (98.6 %)
Commercial / Residential (165,275 acres)	\$27.76 billion (78.6 %)

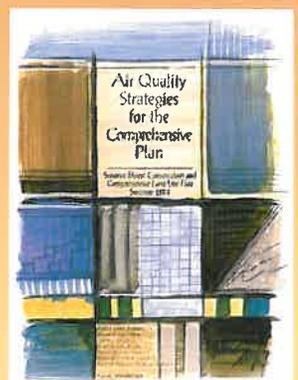
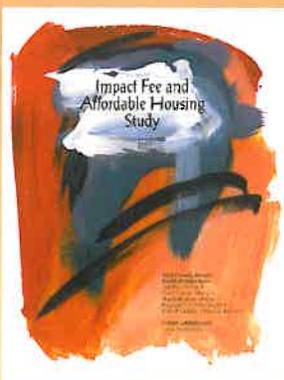
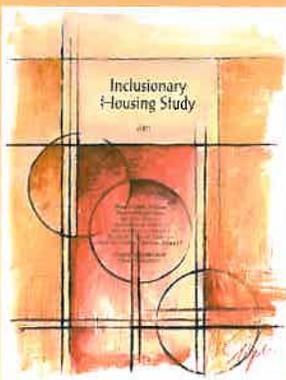
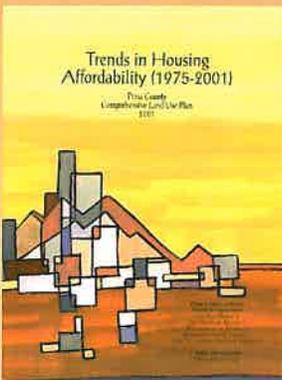
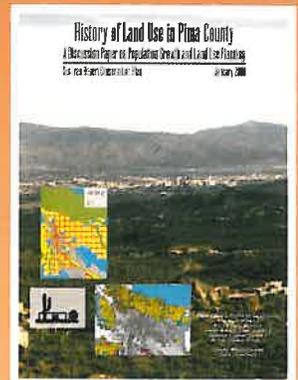
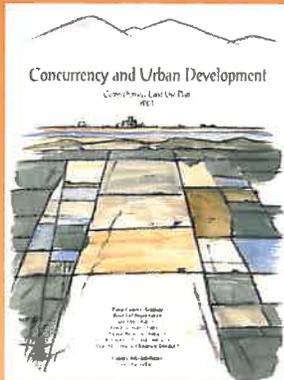
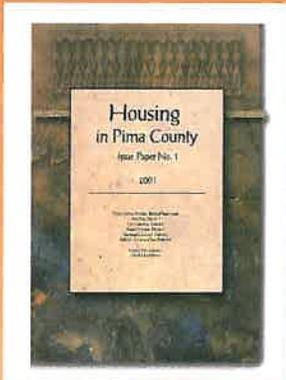
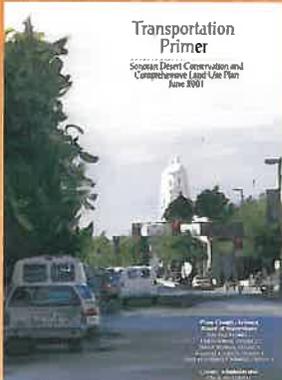
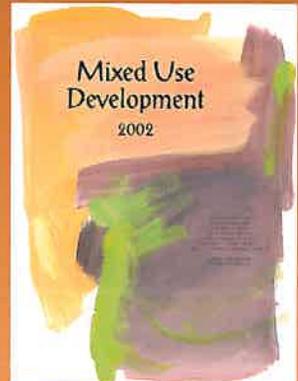
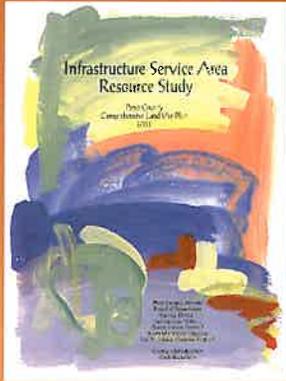
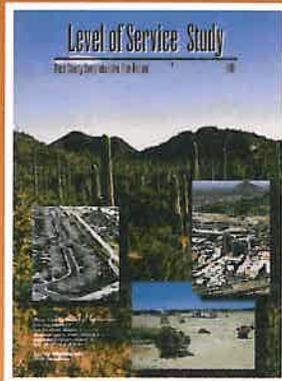
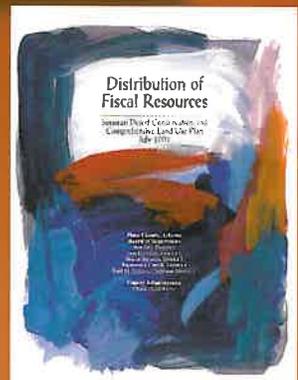
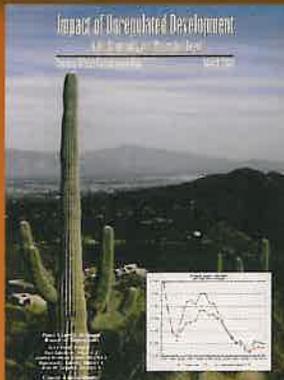
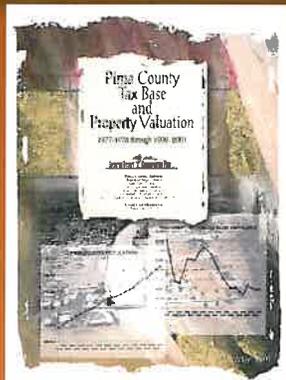
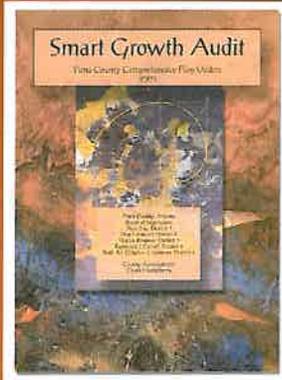
2. Commercial land uses tend to have greater value on a per acre basis -- The state law that defines the elements of the comprehensive plan promotes mixed use development. Traditionally, neighborhood concern has been voiced against including commercial uses near or within areas with residential uses. The chart below demonstrates that commercial uses tend to carry a much greater full cash value per acre than residential uses.

LAND USE TYPES	FULL CASH VALUE PER ACRE
Business centers	\$ 586,489 / acre
Malls and strip centers	\$ 508,573 / acre
Restaurants	\$ 393,106 / acre
Multi-family residences	\$ 341,868 / acre
Hotel, motel, resort	\$ 340,328 / acre
Grocery, retail, convenience	\$ 283,480 / acre
Single family residences	\$ 185,888 / acre
Warehouses / Industrial	\$ 154,129 / acre
Mobile homes	\$ 25,098 / acre (\$12,820 / home)

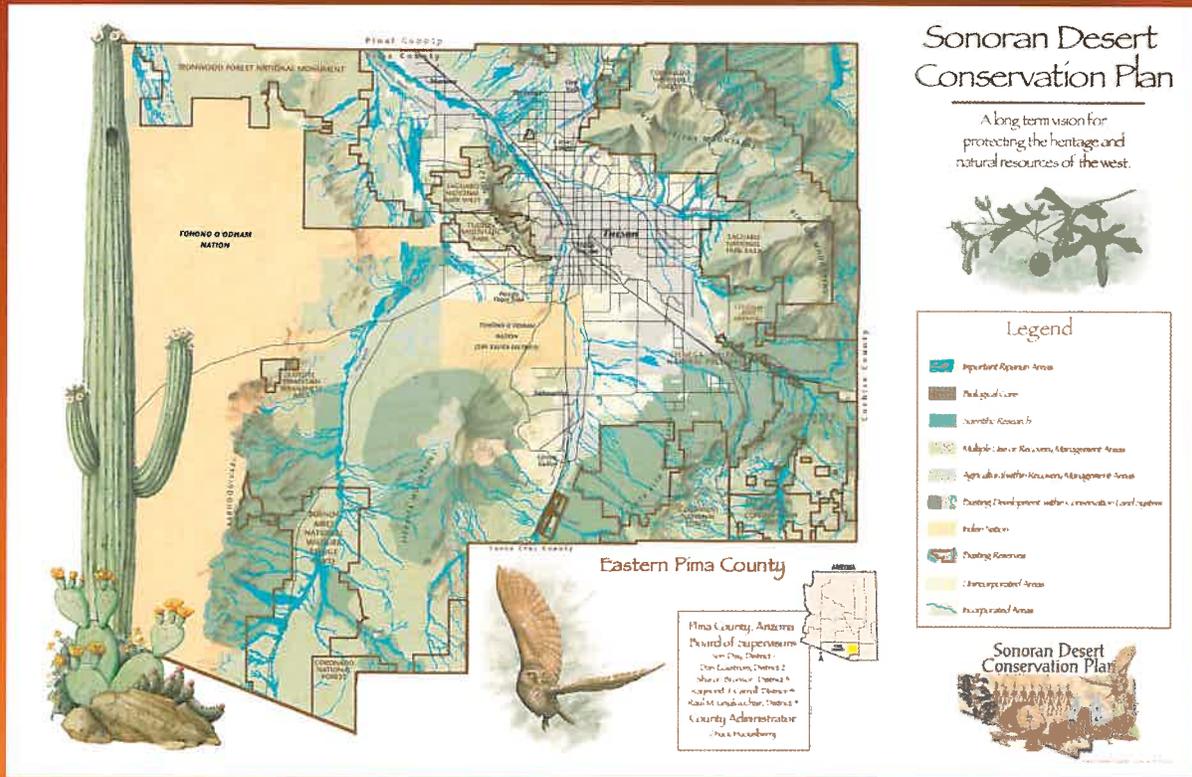
To a surprising degree, the value of the tax base is found in the improvements, not the land; and this supports both the conservationist and New Urbanist--fiscal resources are protected when we commit to quality in both the built and preserved environments.

STUDIES THAT CONTRIBUTED

*to the adoption of the Pima County
Comprehensive Plan and built environment,
including new urbanism concepts*



CONSERVATION LANDS SYSTEM



CONSERVATION LANDS SYSTEM

Regional Plan Polices for the Conservation Lands System protect natural resources according to their value. Intensity policy guidance ensures that new rezoning and specific plan requests, time extension requests for rezonings, requests for modifications or waivers of rezoning or specific plan conditions, including substantial changes, requests for Comprehensive Plan amendments, Type II and Type III conditional use permit requests, and requests for waivers of the subdivision plat requirement of a zoning plan approved within the Conservation Lands System conform with the intensity and quality standards that is appropriate for the protection of existing natural and cultural resources. New applications for more intense land uses within the Conservation Lands System will be evaluated against the following criteria to determine their appropriateness

PLAN COORDINATION

The Pima County Board of Supervisors adopted the Comprehensive Land Use Plan Update on December 18, 2001. The Environmental Planning Element of the Comprehensive Plan requires analysis, planning and strategies to address anticipated effects of plan elements on natural resources associated with proposed development under the comprehensive plan. The policies and strategies to be developed under this element shall be designed to have *countywide applicability*. The Sonoran Desert Conservation Plan is our analysis, planning and strategies for natural and cultural resource protection. What follows documents the Conservation Lands System as identified in the adopted Comprehensive Land Use Plan and provides development guidelines to ensure that conservation goals are given proper consideration in evaluating any development proposal. The Conservation Lands System does not alter, diminish or affect existing valid land uses.

CONSERVATION LANDS SYSTEM

DEFINITIONS

The purpose of the Conservation Lands System is to *ensure the long-term survival of the full spectrum of plants, animals and biological communities that are indigenous to this county*. The Conservation Lands System identifies those areas in Pima County that are necessary to accomplish this goal. Listed below are general land-use recommendations associated with each of these land categories. In some cases, more than one category is indicated for a given land unit (for example, Scientific Research Management Areas may overlap Biological Core areas). In these situations, the goals for the most protective status should take precedence.

1. Important Riparian Areas

These are areas defined by *meso-riparian and xero-riparian vegetation, higher water availability, denser vegetation, and high biological productivity*. In addition to the inherent biological value of these water-related vegetation communities, important riparian areas and the adjacent uplands provide a framework for linkages and landscape connections. These important riparian areas are extremely important elements in this Conservation Lands System and every effort should be made to protect, restore and enhance the structure and functions of these areas, including hydrological, geomorphic and biological functions.

2. Biological Core Management Areas

These are areas of very high biological importance distinguished by *high potential habitat for five or more priority vulnerable species, special elements (e.g. caves, perennial streams, cottonwood-willow forests), and other unique biological features*. Land use and management within these areas will focus on conservation, restoration, and enhancement of natural communities, with provision for other land uses that are consistent with improvement of conditions for "vulnerable species," soils, and native vegetation.

3. Scientific Research, Multiple Use, Recovery, and Agriculture Within Recovery Management Areas

Scientific Research Management Areas - These areas are *currently managed for scientific research*: the Santa Rita Experimental Range and the University of Arizona Desert Laboratory (at Tumamoc Hill). Land use and management within these areas focus on balancing conservation, restoration, and enhancement of natural communities in support of scientific research on the environment and natural resources (e.g., monitoring ecological change, measuring effects of experimental grazing methods).

Multiple Use Management Areas - These areas are generally defined by the occurrence of *high potential habitat for three or more priority vulnerable species and special elements*. Land use and management goals within these areas will focus on balancing conservation, restoration, and enhancement of natural communities with other uses compatible with the maintenance of biological values. Land uses appropriate for these areas must be consistent with maintaining open space, natural vegetation, and wildlife habitat values.

Multiple Use Management Areas - These are areas defined as crucial for the conservation of *specific plants or wildlife species that are currently listed as threatened or endangered by the U.S. Fish and Wildlife Service*. Land use and management within these areas will focus on balancing conservation, restoration, and enhancement of habitat for the listed species.

Agriculture Within Recovery Management Areas - These are areas identified as having *existing or abandoned agricultural uses*. Agriculture provides greater permeability than higher intensity land uses for many wildlife species and this should be considered where changes from agricultural uses are proposed.

Critical Landscape Connections - These are broadly defined areas that contain potential or existing barriers that tend to isolate major conservation areas. Specifically, these regional-scale areas are located: (1) Across the I-10/Santa Cruz River corridors in the northwest; (2) Through Oro Valley, between the Catalina and Tortolita Mountains; (3) Across the I-10 corridor along Cienega Creek in the east; (4) Across the I-19 and Santa Cruz River corridors in southern Pima County; and (5) Across the Garcia strip extension of the Tohono O'odham Reservation; and (6) The CAP canal in Avra Valley. Habitat loss and fragmentation by roads and other infrastructure pose major challenges to *wildlife movement in these areas and high priority should be given to identifying, preserving and re-connecting habitat linkages*.

4. Existing Development Within Conservation Land System

These are areas within the Conservation Land System identified as having *existing low-density development that could be intensified under existing zoning*. Land use changes within or adjacent to areas within the Conservation Land System have implications for conservation management and the influences of such changes in land use on the Conservation Lands System must be considered where they are proposed.

5. Urbanizing Areas

In general, urbanizing areas, are not typically found within the Conservation Lands System.

CONSERVATION LANDS SYSTEM

GUIDELINES

The Conservation Lands System is designed to protect natural resources according to their biological value. This policy guidance ensures that land use proposals that require legislative consideration by the Board of Supervisors conforms with the intensity and quality standards that is appropriate for the protection of existing natural and cultural resources.

1. Important Riparian Areas

Riparian areas have the highest level of biological resources and should be retained in their natural state. Important riparian areas should retain 95 percent of their existing natural resources, including all riparian linkage areas and all washes with a discharge value of 250 cubic feet per second or larger regardless of whether such wash is located within or outside the biological reserve boundaries.

2. Biological Core Management Areas

Biological core areas should retain 80 percent of their biological resources and proposed land uses should achieve actual conservation for the species that occupy the landscape.

3. Scientific Research, Multiple Use, Recovery, and Agriculture Within Recovery Management Areas

In general, these areas should retain between 75 percent and 60 percent of their biological resources, and proposed land uses, particularly in the recovery area, should achieve actual conservation for the species that occupy the landscape.

4. Existing Development Within Conservation Land System

These areas should retain 60 percent of their existing biological resources.

5. Urbanizing Areas

Urbanizing areas, typically not found within the Conservation Lands System, should retain if possible 30 percent of the existing biological resources and configure the conserved areas to create urban natural areas.

Procedure to Demonstrate Compliance

Applications for land use intensity changes requiring a legislative action by the Board of Supervisors shall include information that provides (1) mapped and descriptive documentation of the natural resources of the area applicable to the site; and (2) mapped and descriptive explanations as to what extent natural resource disturbance will occur, if at all, and how actual conservation will occur as part of the development.

Actual conservation means a demonstration of in-place conservation or mitigation where natural biologic resources are protected from loss or where disturbed areas are restored to the level of biological resources surrounding the disturbed area.

Conservation actions are to be encouraged and protection of biological resources is considered an essential component of land use planning.

Sonoran Desert Conservation Plan

