

Pima County spans more than 9,000 square miles and is located at the crossroads for two eco-regions – the Apache Highlands, which include the mountainous sky islands, and the Sonoran Desert, which stretches west from Tucson across the Colorado River into California and south into Mexico. Considered the largest of the North American deserts, the Sonoran Desert is also the most biologically diverse, with bi-annual rainfall and mild winters. The County is also known for its rich cultural and historic resources, with some archeological sites dating back thousands of years. An attractive place to live, Pima County has experienced rapid population growth and development since the 1950s.

For the past 10 years, the Sonoran Desert Conservation Plan (SDCP) has been guiding regional efforts to conserve the most important lands and resources in Pima County, while trying to balance our community's growth. The SDCP was developed using science-based principles shaped by public review and discussion, resulting in a plan that reflects community values. Most urban areas across the nation have plans or programs that protect to some extent natural, historical, and cultural resources and a different set of ordinances that regulate the built environment. Pima County was no exception prior to the SDCP. What Pima County achieved through the SDCP is the integration of natural and cultural resource protection and land use planning activities into one plan.

The ongoing implementation of the SDCP has been possible through land acquisition and management, land use and infrastructure planning, development regulations and more importantly, the community's support. The success of the SDCP can be attributed to these four components, as well as the Plan's sound foundation developed through years of intense public participation.

Sonoran Desert Conservation Plan



Origins of the Plan

In response to the Federal listing of the Cactus ferruginous pygmy owl as an endangered species in 1997, the Pima County Board of Supervisors initiated what has come to be one of the nation's most comprehensive conservation and land use planning efforts. In 1998 the Board initiated discussions on land use planning and conservation, but redirected the growth debate to include biological and scientific concepts and assessments of our natural and cultural resource base. Work on the SDCP fulfilled three areas of need: a science-based conservation plan, an update of the comprehensive land use plan, and compliance with federal regulations that protection of endangered species be addressed through a habitat conservation plan. Numerous individuals and agencies with diverse backgrounds and viewpoints recognized the importance of this effort and dedicated time, thought, and cooperation to its success. Broadly defined, the SDCP considered conservation of the following elements:

Critical Habitat and Biological Corridors

Riparian Areas

Mountain Parks

Historical and Cultural Preservation

Ranch Conservation

The strong interconnections of all five elements were critical in forming a viable land management plan that ensured the continuing biodiversity for Pima County.

Planning for Sensible Growth

For several decades, Pima County has been undergoing rapid population expansion and development of our natural and cultural landscape. Until the recent collapse of the housing market, it had been estimated that each year new construction consumed approximately ten square miles of desert. At the same time, the Sonoran Desert, rich in biodiversity, had been identified by the Nature Conservancy as one of the top eco-regions world-

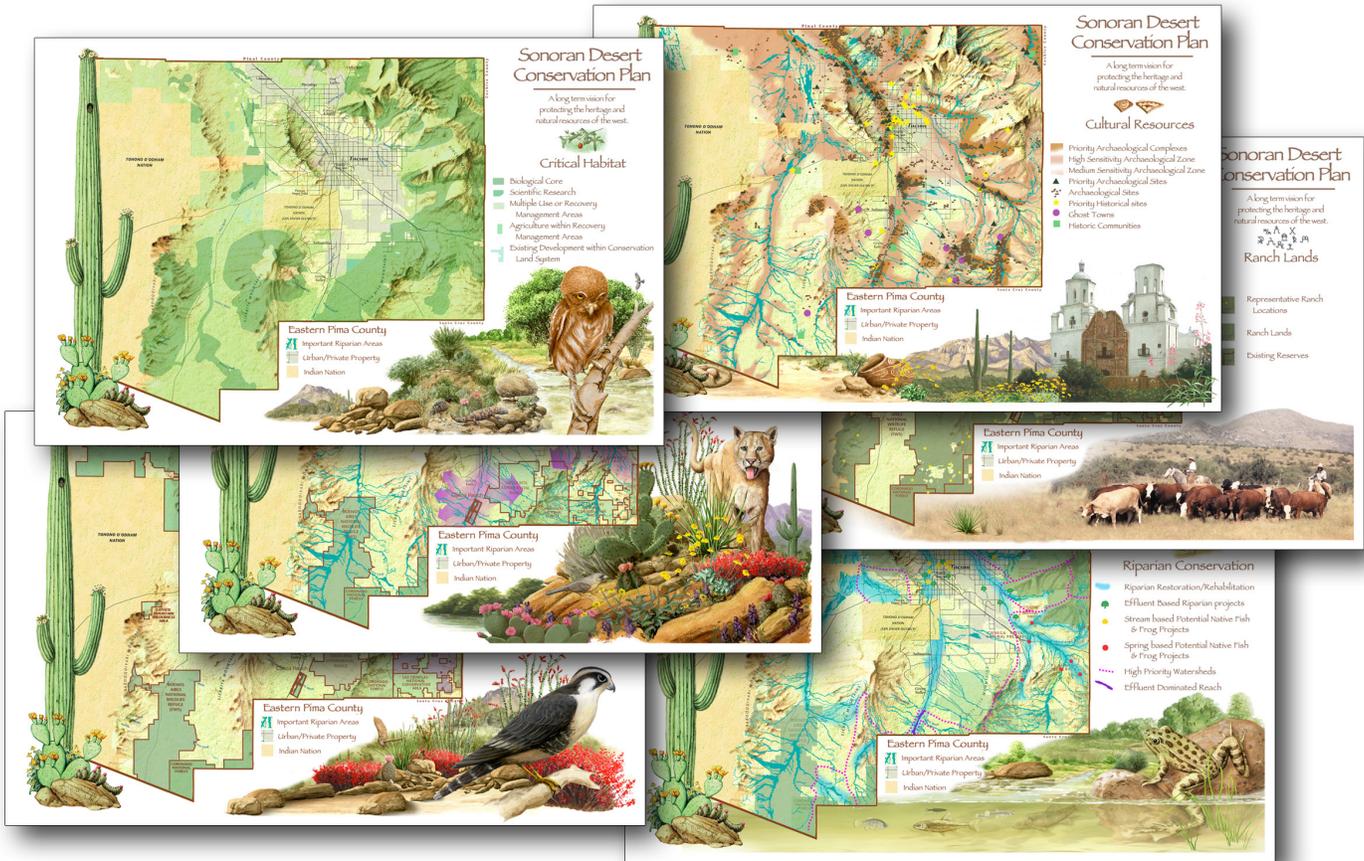
wide, deserving of special conservation attention. The challenge facing the County was how to address the problems of declining natural resources and the loss of cultural identity in one of the fastest growing parts of the country.

The SDCP, mindful of the factual correlation between growth and the consumption of natural and cultural resources, gives high priority to preserving and protecting the most important of these resources. Growth is directed to areas with the least natural, historic, and cultural resource values. The SDCP is not about whether Pima County will continue to grow; it is about where the County grows.

The Planning Process

From its inception, the Pima County Board of Supervisors fully recognized that the success of the SDCP required the support and approval of the people of Pima County and consequently integrated broad participation by many agencies, organizations and interested citizens into the conservation planning effort.

Public participation and process transparency were top priorities. Keystone elements included a citizens' steering committee of over 80 members that met from 1999 to 2003, over 400 public meetings, a series of educational sessions and workshops, meetings of 12 advisory and technical teams and numerous informal meetings held with a variety of interest groups and concerned citizens. More than 150 scientists from various disciplines contributed their expertise, and nationally recognized peer reviewers provided insights and suggestions throughout the process. Local jurisdictions and state and federal agencies participated in meetings, on committees, and as members of the Science Technical Advisory Team (STAT) to further the successful implementation of the Plan.



Implementation

In 2001, the Pima County Board of Supervisors adopted the Pima County Comprehensive Land Use Plan Update. Integrated into this plan update were the land-use policies and principles of conservation developed in the SDCP, including the Conservation Lands System (CLS), which represents the biological reserve developed with more than 150 members of the science community after 3 years of study. The CLS is a blueprint for conserving the desert's biological diversity, while defining an urban area designed to improve quality of life for

residents. Since 2001, the SDCP has been an evolving endeavor whose conservation principles serve as guidance for land use and public infrastructure decisions by the County. It is also used as a guide in directing where public money is spent to conserve important natural areas, providing the basis for how cultural and historic resources are protected, and serving to help ensure that our western lifestyle, heritage, and traditions continue. The purchases made under the County land acquisition programs highlighted in this report contribute towards achieving the goals of the SDCP.



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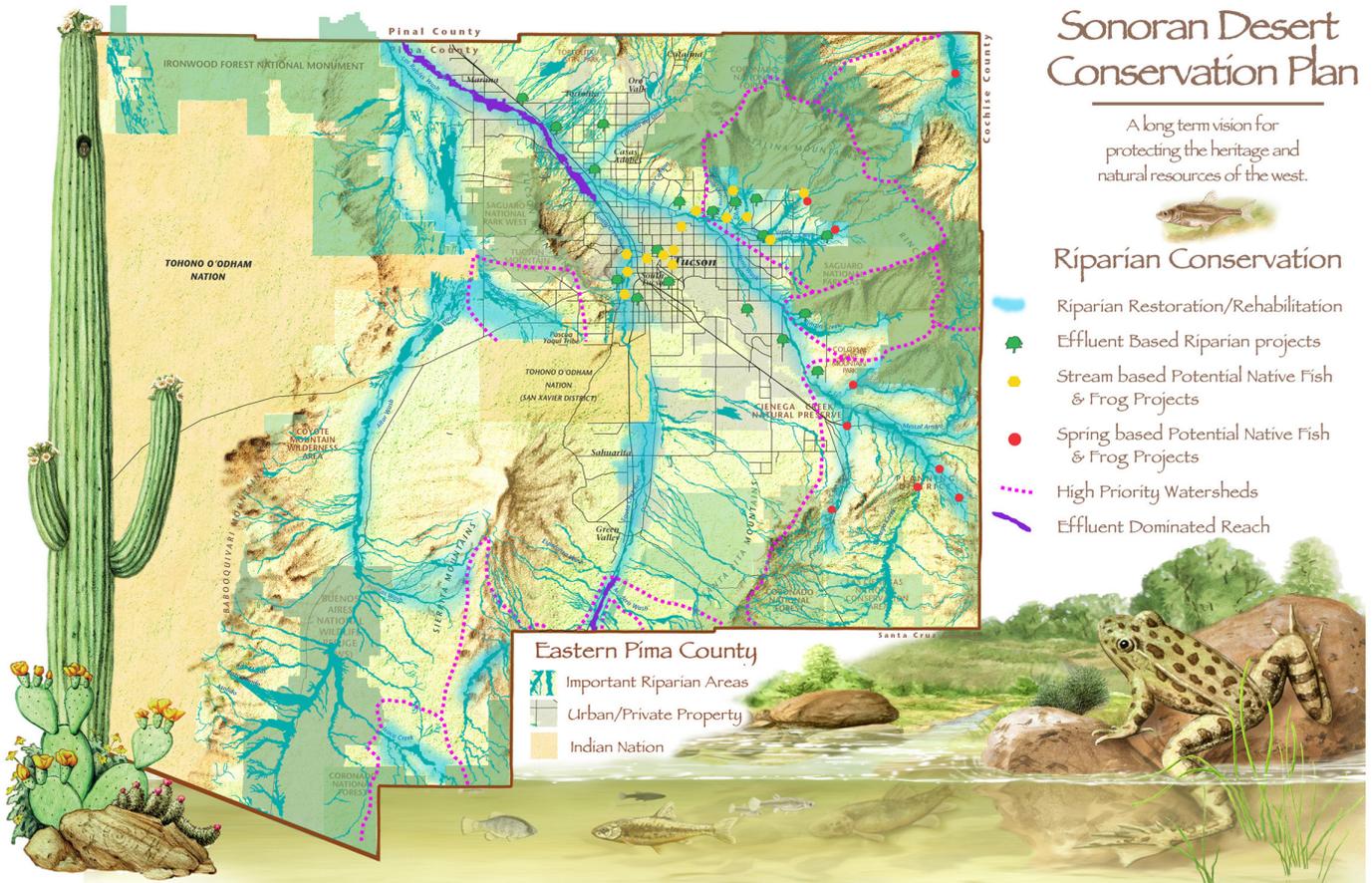
Elements

Riparian Areas Element

Riparian areas along water courses in our desert environment are vital places. However, riparian resources and aquatic systems have been the most vulnerable habitats in Pima County. Although 60 to 75 percent of all species in Arizona rely on a riparian environment at some point during their life cycle, a significant 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. While it is far too late to restore many of our riparian communities to their historical natural condition, the Riparian Element of the SDCP proposed that other natural riparian systems be preserved, restored, and managed to compensate for decades of largely unintended destruction of these systems.

Following the devastation of the 1983 flood, the Pima County Regional Flood Control District enacted new regulations to minimize development in floodplains and to require developers to dedicate water courses to the public domain. In essence, these actions reduced the risk posed to the public and reduced costs to taxpayers while laying the ground work for a regional open space and riparian system that now includes thousands of acres of protected floodplain environment.

The SDCP validates Pima County’s previous investments in protecting riparian areas such as Cienega Creek, Tanque Verde Wash, the San Pedro River, and Sabino-Bear Canyon. The map below shows the riparian areas identified for protection during the early development of the Riparian Element.



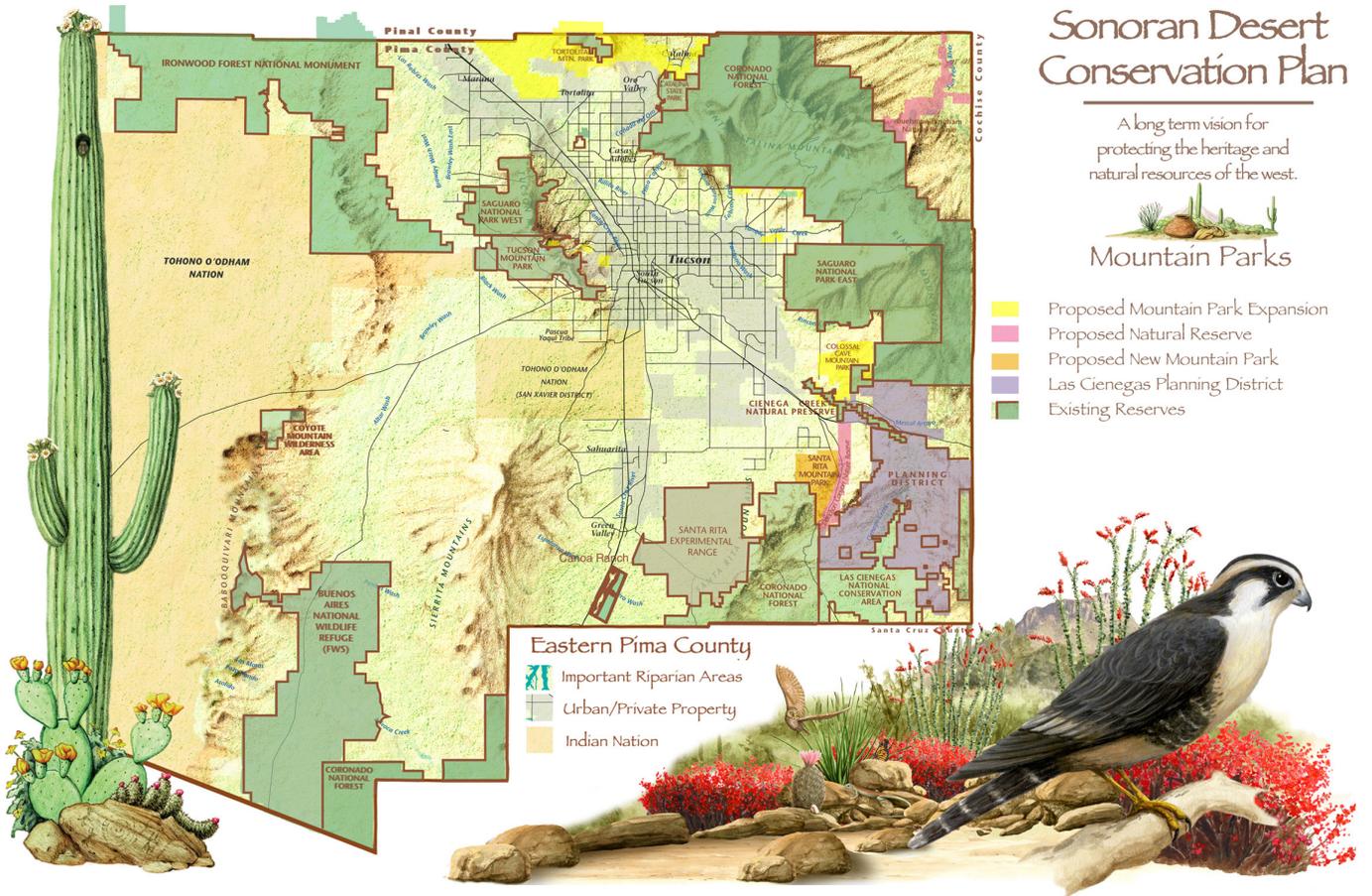
Early graphic representation of this element. Illustration by Bill Singleton

Mountain Parks & Natural Preserves Element

Pima County's extraordinary and unique natural resources have drawn visitors and residents to the area over many decades. Mountain parks and natural preserves have always played an important and diverse role in the life of our community. Following the Great Depression, heritage tourism based on the natural and cultural assets for the region was seen to be an opportunity for economic development. Pima County's establishment of Tucson Mountain Park in 1929 and development of the Park by the Civilian Conservation Corps for outdoor recreation marked the beginning of an unparalleled conservation ethic in Pima County that set the course and direction for conservation policy for the last 70 years.

Currently, the County's mountain parks consist of Tucson Mountain Park, Tortolita Mountain Park, and Colossal Cave Mountain Park. The County has two natural preserves, with the principle purpose being to provide a higher degree of protection for the sensitive natural, and often cultural resources contained within them. The preserves are the Cienega Creek Natural Preserve and the Bingham-Cienega Natural Preserve.

During the early development of the Mountain Parks and Natural Preserves Element, the map below was created to depict possible expansion areas. Many of these parks and preserves were later expanded using both 1997 and 2004 bond funds.



Sonoran Desert Conservation Plan

A long term vision for protecting the heritage and natural resources of the west.



Mountain Parks

- Proposed Mountain Park Expansion
- Proposed Natural Reserve
- Proposed New Mountain Park
- Las Cienegas Planning District
- Existing Reserves

Early graphic representation of this element. Illustration by Bill Singleton

Sonoran Desert Conservation Plan

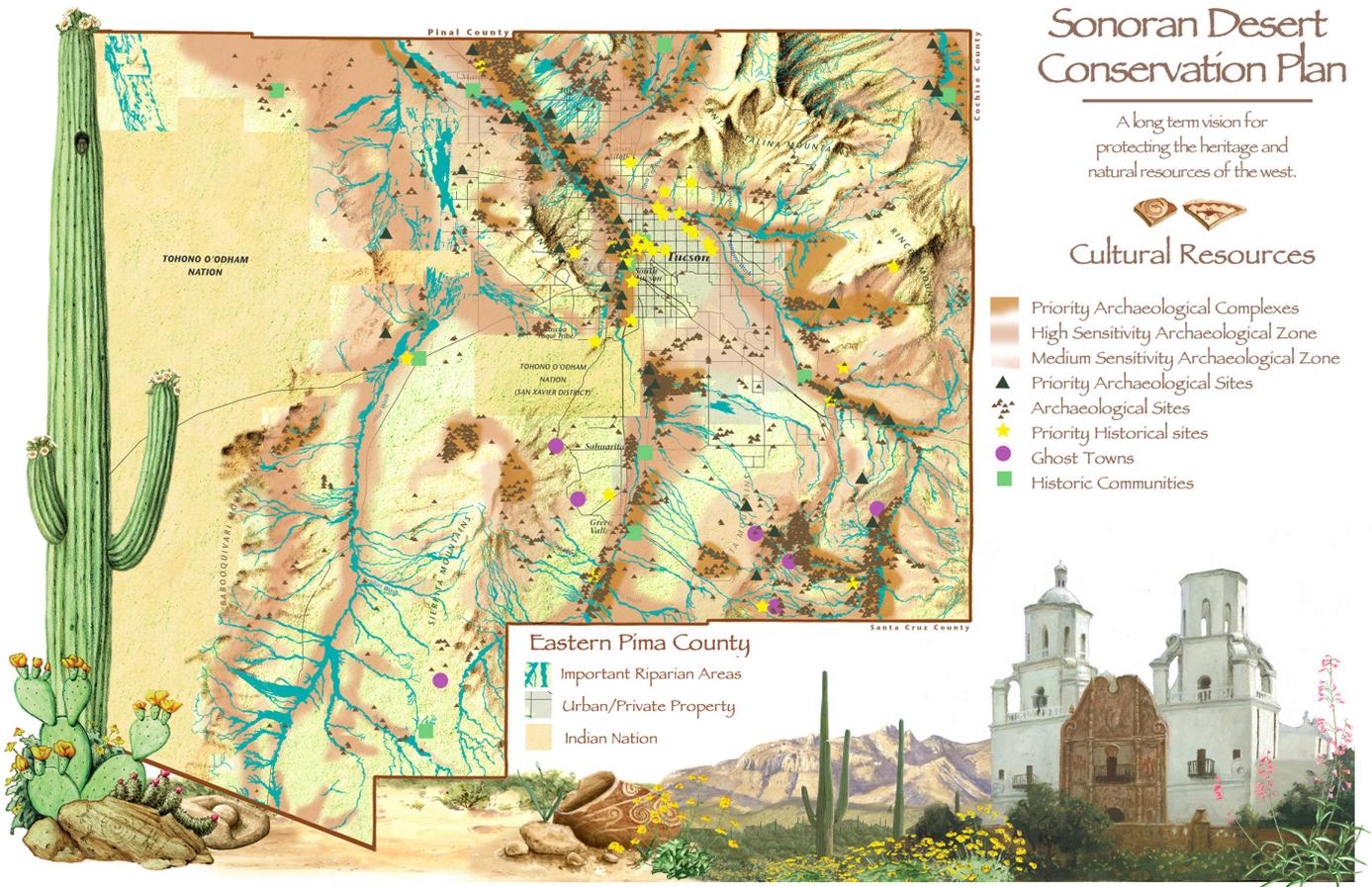
Historic and Cultural Preservation Element

The Historical and Cultural Preservation Element of the SDCP has a spectacular scope – the experience of hundreds of generations of peoples living in a vast landscape during the last 12,000 years of history that reflects the major traditions that have shaped our community – Native American, Spanish Colonial, Mexican, and American. The legacy of these traditions, which are a vital part of our heritage, is visible to us today as cultural resources and historic places that have great importance to living communities, our identity and sense of place.

Cultural resources, generally defined as historic places or properties, may include sites, structures, buildings, objects, districts, landscapes and traditional cultural places that are significant representations of our history, archaeology, architecture, engineering, and culture. Through this legacy of culture and history that has shaped our region’s landscape, we are able to piece together the story of this place we call Pima County.

As a parallel to the biologically derived Conservation Lands System, Pima County set out to identify, describe, and evaluate those places of such importance to the history and culture of Pima County that their protection is warranted for future generations. Working with teams of experts in the fields of archaeology, history, architecture, and historic preservation, more than 3,500 recorded archaeological sites and 4,000 historic sites, buildings and structures were identified as well as a number of nationally significant historic trails and traditional cultural places important to traditional living communities.

Sensitivity maps were developed and more than 200 priority cultural resources were identified for conservation and preservation so that future generations may know and appreciate the wonders of their past.



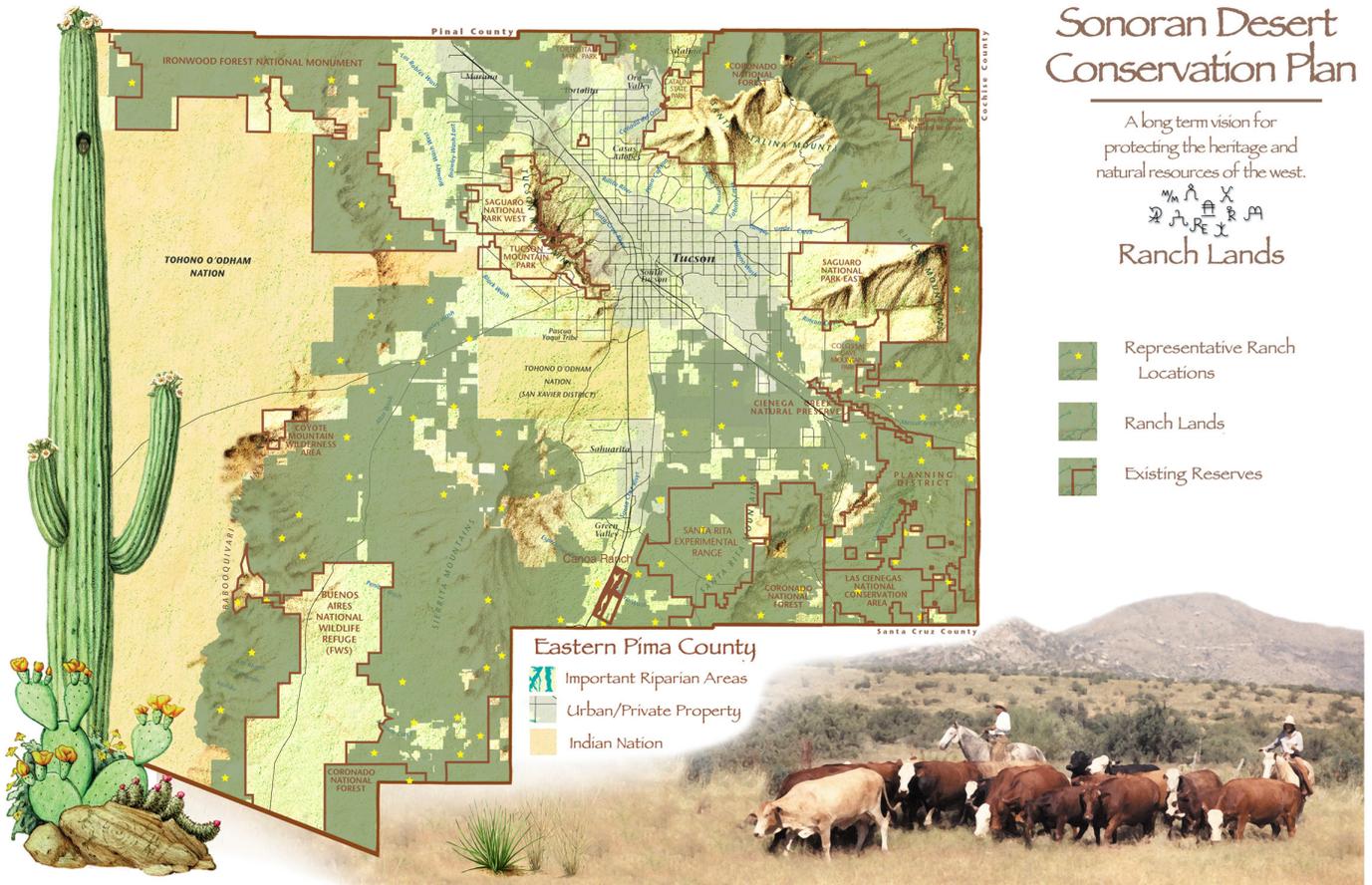
Early graphic representation of this element. Illustration by Bill Singleton

Ranch Conservation Element

Historically, ranching has been a significant determinant of a definable urban boundary in eastern Pima County. While over half of our 2.4 million-acre region currently appears to be open and unused land, virtually all of this open space is used for ranching. Through the conservation of working ranches that surround the Tucson metropolitan area, vast landscapes of open space are preserved, natural connectivity is maintained, and the rural heritage and culture of the Southwest are preserved. Ranching contributes in defining a compact urban form that can help keep the costs of growth to a minimum by utilizing existing infrastructure and facilities and help to prevent unwanted urban sprawl and unregulated development.

In eastern Pima County, there are approximately 1.4 million acres, comprising a mosaic of private and public land ownership, presently dedicated to ranching. Virtually all of the larger ranches include both privately owned and leased public lands. Most ranches are family-owned enterprises, often operated by the descendants of original homesteaders who established ranching operations in the late 1800s.

Pima County's Ranch Conservation Element was designed to encourage viable and sustainable ranching operations to preserve working landscapes and the integrity of vast tracts of connected and unfragmented open space and wildlife habitat. The map below was developed during the early stages of the SDCP to show the extent of ranch lands in eastern Pima County.



Early graphic representation of this element. Illustration by Bill Singleton

Sonoran Desert Conservation Plan

Critical Habitat and Biological Corridors Elements

The critical habitat and biological corridors elements embody the biological goal of the SDCP – to ensure the long-term survival of the full spectrum of plants and animals that are indigenous to Pima County by maintaining or improving the habitat conditions and ecosystem functions necessary for their survival.

When the planning process began 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 were in decline. After an intensive research effort involving dozens of members of both the local and national science community much was achieved. A list of priority vulnerable species had been identified, the best available vegetation maps were assembled, and the science community identified habitat and connecting corridors that established an effective and lasting strategy to improve the status of these species. Moreover, data on the interaction of land development and the decline of biodiversity provided a scientific basis for decisions regarding lands to be acquired for conservation as well as long-term investment in research, monitoring and adaptive management to ensure the sustained bio-diversity of our region.

The Conservation Lands System (CLS) is the ultimate expression of those lands where conservation is fundamental and necessary to achieve the Plan’s biological goals, while delineating areas suitable for development. The CLS was renamed the Maeveen Marie Behan Conservation Lands System in November 2009 in memory of Dr. Behan’s work on the SDCP and the development of the CLS.

The various land use categories of the CLS were established based on the different resource values identified, with Important Riparian Areas, Biological Core and Special Species Management Areas being the most critical. Each CLS designation, as shown on the map on the right, has an associated conservation guideline. The CLS is regional and covers approximately 2 million acres in eastern Pima County.

In the pages that follow, a detailed description is provided for how the CLS was used to prioritize properties for the 2004 Conservation Acquisition Bond Program.

Categories of the Conservation Lands System



Important Riparian Areas are critical elements of the Sonoran Desert where biological diversity is at its highest. These areas are valued for their higher water availability, vegetation density, and biological productivity. They are also the backbone in preserving landscape connectivity.

Landscape conservation objective: 95% undisturbed natural open space.



Biological Core Management Areas are those areas that have high biological values. They support large population of vulnerable species, connect large blocks of contiguous habitat and biological reserves, and support high value potential habitat for five or more priority vulnerable wildlife species.

Landscape conservation objective: 80% undisturbed natural open space.



Special Species Management Areas are those areas that are crucial to the survival of three species of special concern to Pima County: the Cactus ferruginous pygmy-owl, Mexican spotted owl, and Southwest willow flycatcher.

Landscape conservation objective: 80% undisturbed natural open space.



Multiple Use Management Areas are those areas where biological values are significant, but do not attain the level associated with Biological Core Management Areas. They support populations of vulnerable species, connect large blocks of contiguous habitat and biological reserves, and support high value potential habitat for three or more priority vulnerable species.

Landscape conservation objective: 66 2/3% undisturbed natural open space.



Critical Landscape Connections are six broadly-defined areas where biological connectivity is significantly compromised, but where opportunity to preserve or otherwise improve the movement of wildlife between major conservation areas and/or mountain ranges still persists.

Landscape conservation objective: Protect existing wildlife habitat linkages, remove obstacles to wildlife movements and restore fragmented landscapes.

Maeveen Marie Behan Conservation Lands System Priority Biological Resources of the Sonoran Desert Conservation Plan

Providing Sustainable Development Guidelines as Adopted in the Pima County Comprehensive Plan

