

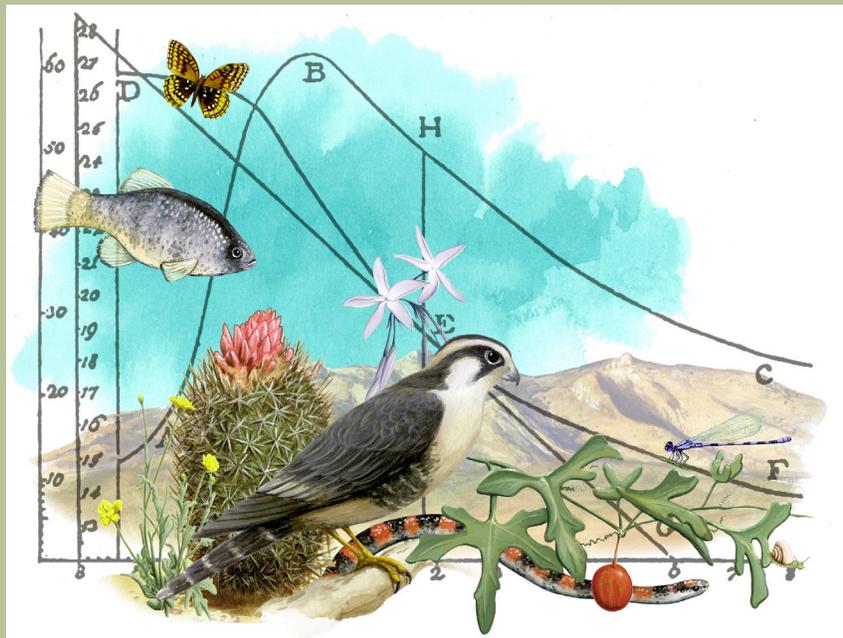
Measuring Our Progress



An Overview

of the Sonoran Desert Conservation Plan (SDCP) and its overarching vision of conserving the heritage and natural resources of the west, as described earlier in this report, includes goals for moving us closer to achieving that vision, as well as tools to get us there. One of the most significant tools used by the County so far is the purchase of land. As we are close to completing the first major installment of land purchases under the SDCP, it is important that we assess how effective our land conservation efforts have been at meeting the goals of the Plan, and use that knowledge to guide future land conservation efforts. In this section, we assess the progress made under each of the elements of the SDCP and use this assessment to provide recommendations for future actions.

Left: Pima County Ranch Manager John L. Sullivan on Rancho Seco. Photo by Brian Powell.





Significant Progress Made in Protecting Plants, Animals and Streams

Critical Habitat, Biological Corridors, and Riparian Elements

The biological goal of the SDCP is 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. In August 2009, Julia Fonseca, Pima County Office of Conservation Science, and Cory Jones, Pima County Geographic Information Services, undertook an analysis of how effectively County owned and managed lands have contributed to conservation goals for protecting land for particular species (i.e. Priority Conservation Areas for Lesser long-nosed bat) and particular landscape features (i.e. springs and grasslands). The full title of the report is “Progress Report: Measuring Effectiveness of Open Space Land Acquisitions in Pima County, Arizona in Relation to the Sonoran Desert Conservation Plan”.

Conservation goals developed by the SDCP planning process through the Science Technical Advisory Team were compared to the reserve of lands owned and managed by the County for conservation, in addition to conservation lands owned and managed by partners such as the Coronado National Forest.

The study found that considerable progress has been made in meeting these biological goals. The amount of grasslands conserved has significantly increased. Similarly, more portions of the area’s streams, bat caves, and limestone outcrops have been conserved. Future acquisitions or restoration projects should include ironwood forests, saltbush, and talus slopes.

At an individual species level, County acquisitions have increased the amount of protected habitat for nearly all of the targeted species. For the yellow-billed cuckoo, ground snake, Longfin dace, Mexican gartersnake, and Needlespined cactus, more natural areas for these species are owned or managed by Pima County than by any of the other land conservation partners combined. However, conservation of additional natural areas, in particular for ground snake, Mexican gartersnake, Tumamoc Globeberry, Tucson shovel-nosed snake, and the endangered Pima pineapple cactus are needed.

Each category of the Maeveen Marie Behan Conservation Lands System (CLS) has a conservation goal. For example, the conservation goal for the Multiple Use Management Areas is to conserve two thirds of the areas identified as Multiple Use Management Areas.

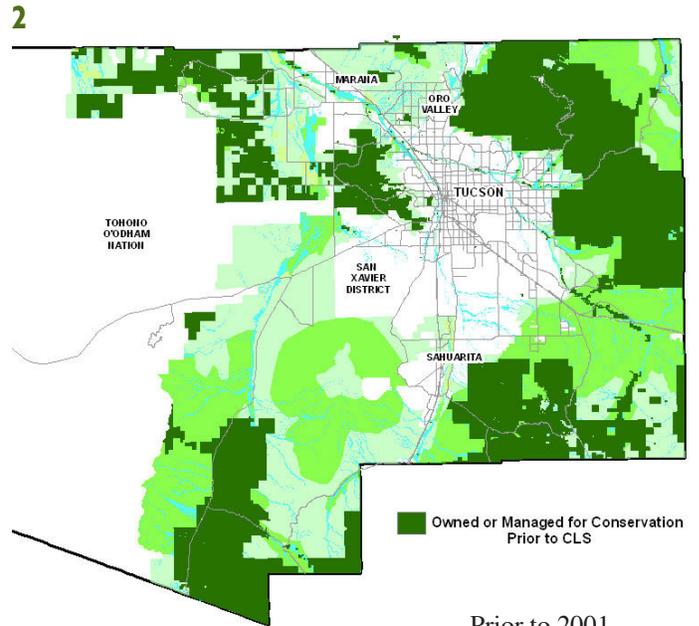
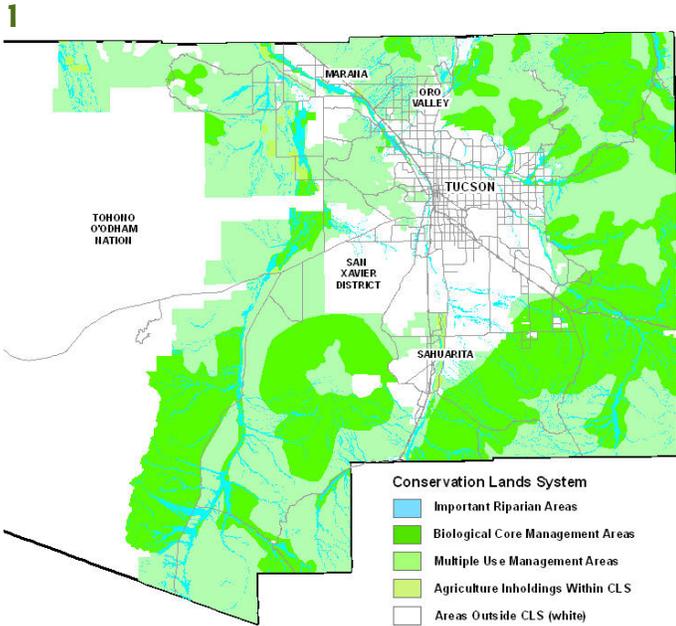
“[The] Flood Control District’s Floodprone Land Acquisition Program (FLAP) has been particularly important for the ground snake and burrowing owl, two species with low levels of regional habitat protection. FLAP acquisitions are based primarily on social and hydrological criteria, not biological criteria. FLAP acquisitions tend to be smaller in size and higher in cost [than other conservation acquisitions], sometimes including flood-damaged housing that is demolished after acquisition. Collectively this program has been protecting and restoring habitat that would not be acquired under the open space program.” (Fonseca, Jones. Progress Report: Measuring Effectiveness of Open Space Land Acquisitions in Pima County, Arizona in Relation to the Sonoran Desert Conservation Plan. P.12)

In terms of the Conservation Lands System goals, we have met the land conservation goal for Multiple Use Management Areas. Conservation of additional land is needed in the areas of Biological Core, Special Species Management, and Important Riparian Areas.

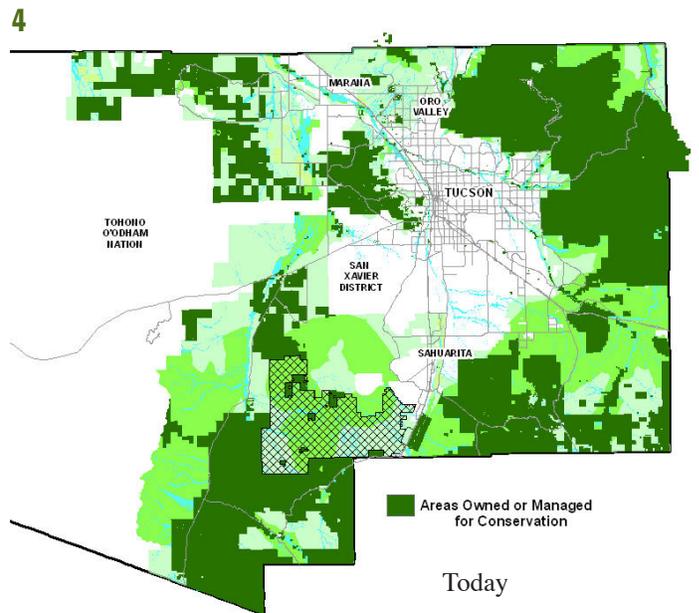
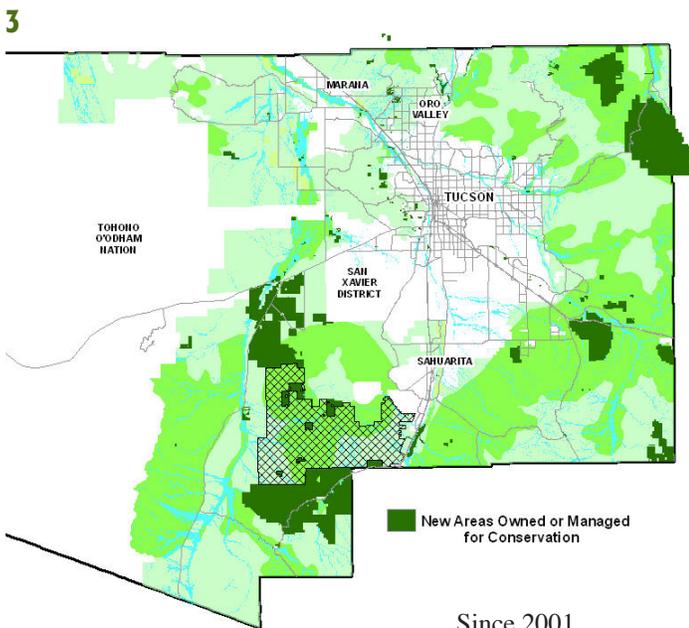


Edgar Canyon on the County’s Six Bar Ranch. Photo by Locana de Souza. The goal is to conserve 100 percent of streams in Pima County. To date 77 percent of streams are found on lands under conservation. Pima County owns or manages 16 percent, or 800 acres, while the remaining 61 percent, or 3,000 acres, are conserved by partners such as the Coronado National Forest.

Following the blueprint: Conserving areas within the Conservation Lands System



Prior to 2001



The goal is to conserve the blue and green areas within the Conservation Lands System (map 1). Over time, maps 2, 3, and 4 show which lands are owned or managed for conservation (shown in dark green). The cross hatched areas in maps 3 & 4 show lands the County purchased options on for future acquisition.

Measuring Our Progress

Recommendations for future purchases:

- Pursue purchase of Habitat Protection Priority properties along the Brawley Wash;
- Prioritize acquisition of State Trust land in low-elevation valley floors and gently sloping piedmonts in the Avra, Altar and Tortolita piedmonts;
- Continue to conserve low-elevation Important Riparian Areas and mesic canyons at mountain front locations;
- Target Important Riparian Areas, Special Species Management Areas, and Biological Core Management Areas over Multiple Use areas within the CLS;
- Continue to explore and support measures that would achieve conservation of State Trust land;
- Continue the Floodprone Land Acquisition Program, as well as the Conservation Acquisition Program; and
- Acquire lands that protect critical movement corridors for wildlife between Habitat Protection Priority properties.

- Conserving tax dollars since working ranches do not require urban services
- Facilitating continued development in more suitable areas of the County by serving as mitigation for such development

The County has purchased 16 ranches or portions of ranches. With the exception of Canoa Ranch, all of these are working ranches. Out of the 230,000 acres in total that the County owns and manages for conservation, the far majority are part of working ranches. The majority of the working ranches that the County owns are managed under detailed ranch management agreements with ranchers for terms typically lasting ten-years. The ranch operators continue their operations while serving as stewards of the land for Pima County.

A priority management concern for these working ranches is grazing use, forage availability and effects of the grazing operation. All of the County's ranches already have very low stocking rates, and continual adjustments on grazing levels and practices are the norm with the current drought conditions. Stocking rates and grazing plans are developed annually with our ranch operators and lease holders to balance use with conservation needs. Eventually, each ranch will have an extensive cooperative resource management plan developed for it that will be built with involvement of stakeholders.

Ranch management currently involves a wide array of partners. Close cooperation with the state and federal land management agencies occurs on a weekly basis. These ranches are being integrated into landscape level planning efforts to re-introduce fire into appropriate areas as a management tool, restore landscapes impacted by past negative natural events and land use, reintroduce native wildlife species, control invasive plant species and protect or recover threatened and endangered plant and animal species. The County also partners with non-governmental organizations, community groups and individuals to implement management activities. The Altar Valley



16 Ranches Conserved

Ranch Conservation Element

Ranching continues to be the single greatest determinant of an urban boundary in the Tucson area. However, as is true for many areas across the country, drought conditions and development pressure continue to result in the conversions of ranches to housing developments. Through the conservation of working ranches that surround the Tucson metropolitan area, vast landscapes of natural areas are prevented from transforming into housing subdivisions, wildlife movement corridors are maintained, and the rural heritage and culture of the southwest are preserved. Ranch conservation also increases the size of adjacent conservation areas, which is important for restoring large natural areas and adapting to the effects of climate change. The County understands that working ranches, along with the state and federal lands leased for ranching, are essential for achieving multiple community and conservation goals, including:

- Protecting water supplies and water quality
- Maintaining natural floodplain functions
- Conserving wildlife habitat, and archaeological and historic sites
- Protecting a local agricultural industry
- Protecting scenic landscapes
- Conserving western heritage and culture
- Protecting recreational opportunities



Kathy Williams, one of the ranch operators for the Sands Ranch, participates in monitoring activities with County staff. Photo by John L Sullivan



On the Bar V Ranch, a portion of the Davidson Canyon riparian area south of Interstate 10, adjoining the Cienega Creek Natural Preserve, is fenced so that cattle cannot enter the riparian area. Photo by Gloria Browne.

Conservation Alliance, Boy Scouts, Coalition for Sonoran Desert Protection, Sky Island Alliance, Sonoran Desert Weedwackers, Natural Resource Conservation Districts and Sportsmen Who Care are just a few of our many partners. Without the assistance of our diverse partners, our overall ranch conservation goals and objectives would be far more difficult to accomplish today and into the future.

Alternative Funding Sources Used for Management of County Ranches

- US Fish and Wildlife Service Partners for Wildlife Grants
- Arizona Game and Fish Habitat Partnership Grants
- Arizona Game and Fish Heritage Access Grants Program
- Safari Club International – Sportsmen Who Care funds
- Arizona Game and Fish Heritage Urban Wildlife Grants
- State Land Department Wildfire Protection Grants
- USDA Wildlife Habitat Improvement Program
- Arizona Watershed Protection Fund Grant
- US Department of Energy- Stimulus Funds

Recommendations for this element:

- Complete the acquisitions of the future two phases of the Marley Ranch to create the 100,000-acre Marley Ranch Conservation Area
- Continue to partner with federal, state and local agencies for funding of ranch projects
- Develop additional funding sources for ongoing management costs
- Continue to develop cooperative resource management plans for each County ranch.

“The importance of the ranch conservation program is also evident. The ranch conservation program works at the other end of the size spectrum, increasing the effective size and maintaining connectivity of the landscape. Many of the County ranches offer the most habitat for species of concern. . . . Cooperative projects with ranchers and federal agencies will assist a number of these species.” (Fonseca, Jones. Progress Report: Measuring Effectiveness of Open Space Land Acquisitions in Pima County, Arizona in Relation to the Sonoran Desert Conservation Plan. P.12)



Significant Expansions Made to County Mountain Parks

Mountain Parks Element

Since 1997, the County has acquired over 3,000 acres to expand Tucson Mountain Park, Tortolita Mountain Park, and Colossal Cave Mountain Park. As well as conserving natural areas for wildlife, these mountain parks provide countless recreational opportunities. Hiking, biking, horse riding, and bird watching are only a few of the activities available. These park expansions have enabled the County to increase the number of trails and public access areas available to the public. In addition to these recent acquisitions, County land acquired as part of Cienega Creek Natural Preserve with 1986 bond funds provided land for two trailheads southeast of Vail.



Trailhead into Tucson Mountain Park at the end of Camino de Oeste, just south of Gates Pass. Photo by Nicole Fyffe.

Measuring Our Progress

Trailheads resulting from County land conservation acquisitions.

36th Street Trailhead - Located at the western end of 36th Street, this trailhead provides access to Tucson Mountain Park and has space for 22 vehicles and 4 horse rigs.

Camino de Oeste Trailhead - This parking area near the south end of Camino de Oeste has room for 14 vehicles. The trailhead provides access to the Yetman Trail in Tucson Mountain Park.

Honey Bee Canyon Trailhead - This trailhead doubles as the parking lot for Honey Bee Canyon Park and has 24 spaces for vehicles including 4 accessible spaces. The trailhead is located immediately east of Honey Bee Canyon and south of Rancho Vistoso Boulevard approximately 3.2 miles west of Oracle Road.

Richard Genser Starr Pass Trailhead - The Richard Genser Starr Pass Trailhead is the primary trailhead access to Tucson Mountain Park. It has room for 44 vehicles and 5 horse rigs. The Rock Wren Trail connects the trailhead to the Tucson Mountain Park Trail System.

Sweetwater Trailhead - The natural-surface Sweetwater Trailhead is located at the southern end of Tortolita Road and has parking for 7 horse rigs or 22 cars. This trailhead provides access to the Sweetwater Preserve Trail System.

Colossal Cave Road Trailhead - An undeveloped dirt parking area south of Colossal Cave Road at the northern end of the Cienega Creek Preserve, this trailhead provides access to the preserve and has room for 10 vehicles. Horses are not allowed in Cienega Creek Natural Preserve. Note: A permit is required to access the preserve.

Davidson Trailhead - This small paved lot provides access to the Cienega Creek Natural Preserve and Davidson Canyon. The trailhead is located just off Marsh Station Road a short distance west of Three Bridges. Horses are not allowed in Cienega Creek Natural Preserve. Note: A permit is required to access the preserve.



Horse riding in Tucson Mountain Park. Photo courtesy of JW Marriot Starr Pass Resort

Recommendations for this element:

- Continue efforts to expand County Mountain Parks;
- Continue to develop access to suitable areas for public recreation;
- Develop additional funding sources for ongoing management; and
- Partner with outside groups and agencies for Park projects, such as Tucson Mountain Park's participation in wildlife monitoring projects recently conducted by the University of Arizona.



Protection of Historic and Archaeological Sites

Historic and Cultural Preservation Element

“Stewardship extends beyond preserving for future generations those spectacular sites and historic structures that pay tribute to America’s past and the principles upon which our great nation was founded. Our cultural heritage is the gift to our forebears which carries a responsibility for us to share this inheritance with our children for future generations to understand and enjoy.”

Bruce Babbitt, Secretary of Interior 1993-2001

Consistent with these nationally-held principles of preservation and stewardship, the Cultural Resources Element of the Sonoran Desert Conservation Plan defined as its goal: The preservation of Pima County’s cultural and historical resources in order to protect their educational, scientific, recreational, aesthetic, cultural and spiritual values for the benefit of the citizens of Pima County.

Historic and archaeological sites reflect places where people lived in the distant past and include ancestral sites of the Tohono O’odham and some of the earliest agricultural villages in the Southwest dating to between 1200 BC and 200 AD. Other sites reflect Hohokam culture from about 600 AD to 1400 AD, and still more represent the period when Europeans and later Americans settled following the Spanish entrada into southern Arizona in AD 1540. The historic sites consist of buildings, structures, and landscapes that have been used during the Spanish Colonial, Mexican, and American periods.

Voter approval of the 1997 and 2004 Historic Preservation Bond programs allowed a diverse set of the 229 Priority Cultural Resources to be prioritized for acquisition, protection, rehabilitation, and adaptive use – Agua Caliente Ranch, Ajo Curley School, Anza National Historic Trail, the Binghamton Rural Historic Landscape, Canoa Ranch, Colossal Cave, Coyote Mountains archaeological complex, Dakota Wash archaeological site, Dunbar School, Empirita Ranch, Fort Lowell, Honey Bee Village archaeological site, Los Morteros archaeological site, Pantano Townsite, Performing Arts Center, Robles Ranch, San Agustin Mission Gardens, San Pedro Chapel, Steam Pump Ranch, Tumamoc Hill, and the Valencia archaeological site.

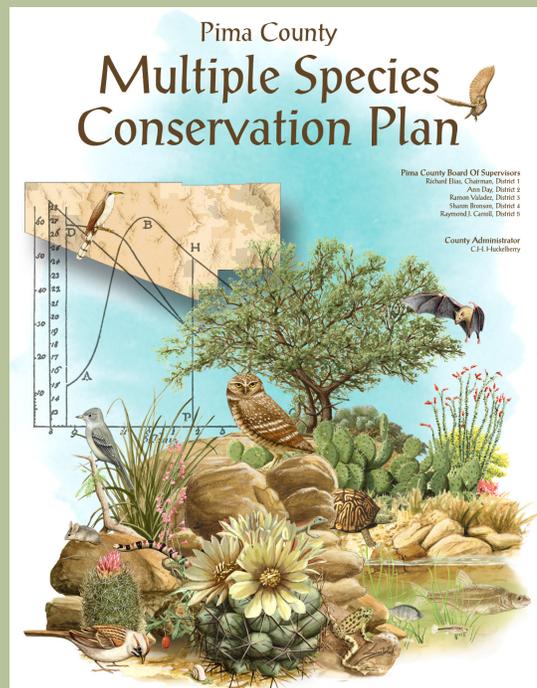
The successful preservation and protection of these 21 historic places contributes to multiple values embraced by the Sonoran Desert Conservation Plan, conserving open space and preserving significant aspects of Pima County’s cultural and historical legacy.

Recommendations for this element:

- Continue to conserve additional Priority Cultural Resources in Pima County; and
- Continue to partner with agencies for funding opportunities for rehabilitation and adaptive use.



Anza Trail signage at the base of A Mountain.



Multi-Species Habitat Conservation Plan and the Endangered Species Act

Leading up to the 2004 bond election, voter information materials explained that one benefit of conserving important natural areas was that it would reduce the red tape associated with public and private development projects that would be required to comply with the federal Endangered Species Act. These materials were referring to the County’s intent to apply for a permit under the Endangered Species Act, by submitting what is known as a Multi-Species Habitat Conservation Plan (MSCP). The MSCP will take a more comprehensive approach to complying with the Act by conserving lands important to the long-term survival of our native plants and animals (referred to as mitigation lands) as compensation for the loss of habitat caused by future private and public development activities.

To date, the County has acquired roughly enough mitigation land to cover more than 20 years of continued public and private development activities. With few exceptions, the sum of the lands that we have already acquired appear to adequately protect habitats for nearly each plant and animal proposed for coverage under the plan. The Pima pineapple cactus, however, is one species where our current acquisitions may fall short. In recognition of this deficit, the County holds options to purchase the remainder of the Marley Ranch, west of Green Valley which contains very high quality habitat for the Pima pineapple cactus. If the County can raise additional funding through a future bond election to complete acquisition of the Marley Ranch Conservation Area, there would be enough mitigation land to offset projected impacts to the Pima pineapple cactus.

For the latest information on the MSCP, please check the County’s web site at www.pima.gov/cmo/sdcp/MSCP/MSCP.html

Sustainable Action Plan for County Operations

An important part of implementing the SDCP is integrating it into the way that County government operates. Only through our actions can we expect others to do the same. Through the Sustainability Plan for County Operations, adopted by the Board in 2008, staff reports annually on the progress made based on four success indicators under the category of Land Conservation and Management. Below is a page from the plan that shows sustainability goals and guiding principles.



Land Conservation and Management

Resolution No. 2007-84 Sustainability Goals

- Support sustainable development and the continual emphasis on sustaining a livable community.

Guiding Document

- Sonoran Desert Conservation Plan

Guiding Principles

THE COUNTY WILL:

LAND AND FACILITY ACQUISITION

- Acquire land and facilities that are best suited for the intended use and will most effectively achieve the goals of the Sonoran Desert Conservation Plan; and
- Acquire or set aside County lands for conservation to offset unavoidable County operational impacts to the Conservation Lands System, designated riparian habitat, and cultural resources.

FACILITY AND INFRASTRUCTURE SITING

- Evaluate and track the siting of new facilities and infrastructure to avoid or minimize impacts to the Conservation Lands System, designated riparian habitat, floodplains and cultural resources.

MANAGEMENT OF LAND, FACILITIES, AND INFRASTRUCTURE

- Monitor and manage its land, facilities, and infrastructure to achieve the goals of the Sonoran Desert Conservation Plan;
- Manage lands purchased for the conservation of biological and cultural resources to ensure the integrity, diversity and long-term viability of the resources;
- Monitor and control invasive species to minimize impacts on natural ecological systems, protect public safety, and maintain economic viability;
- Assess the impacts on natural and cultural resources prior to the decision to modify or dispose of any County land, facilities, or infrastructure;
- Implement informational and educational programs to improve cultural resources and environmental literacy in the County; and
- Encourage smart growth decisions to promote the most efficient use of infrastructure.

Below is a page from this year's report card that shows the progress we are making through our land conservation programs to compensate for the impacts we cause by building roads and other public facilities.

Land Conservation & Management Year Two

Number	Success Indicator	Target	Score / Progress Report
26	Acreage of Conservation Lands System conserved	Acres conserved greater than acres impacted	 Achieved The County acquired 4,261 acres within the Conservation Lands System (CLS) to be managed for conservation. County public improvement projects impacted 73 acres of land elsewhere in the CLS.
27	Number of Cultural Resources Sites conserved	Acres conserved greater than sites impacted	 Achieved The County acquired 64 acres of Cultural Resource sites to be managed for conservation. County public improvement projects impacted 24 acres of cultural resource sites located elsewhere.
28	Acreage of Designated Riparian Habitat conserved	Acres conserved greater than acres impacted	 Achieved The County acquired 523 acres of Designated Riparian Habitat for conservation. County public improvement projects impacted 54 acres of designated riparian habitat located elsewhere.
29	Education of County Employees	Provide annual training to employees on environmental education	 In Process Project managers from the Regional Flood Control District and Department of Transportation were educated on riparian mitigation practices and policies. Cultural Resources training was provided on a project specific basis. The comprehensive environmental education program offered last year is now being revised and will be provided in FY 2011.



A skate and BMX park next to the Picture Rocks Community Center is a popular venue for Pima County kids and teens. The County constructed the park on 1 acre of land the County has identified as being within the Conservation Lands System (CLS).

In the same year, the County acquired the Bloom property (below) on the eastern boundary of Saguaro National Park West, which conserved 140 acres of CLS land and offset the impacts to natural resources caused by the construction of the skate/BMX park as well as other County-funded public improvements.



Photo by Jason Bahe



Photo by M. Bell