



Recreation E.I.S. Issue Paper

Sonoran Desert Conservation Plan
2002

Pima County, Arizona
Board of Supervisors
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County Administrator
Chuck Huckelberry



MEMORANDUM

Date: August 1, 2002

To: The Honorable Chair and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator

A handwritten signature in black ink, appearing to be "CH", is written over the printed name "C.H. Huckelberry".

Re: **Recreation Issue Paper**

I. Background

The technical teams and members of the expert community have completed data collection and prioritized natural and cultural resources for the Sonoran Desert Conservation Plan. This fall the Steering Committee will recommend the approach they would like to see Pima County take in applying for a Section 10 permit. To facilitate development of the Environmental Impact Statement (EIS) which must accompany the Section 10 multi-species conservation proposal, a series of issue papers has been and will continue to be forwarded to the Board and interested members of the community during the next weeks.

A Spring 2002 public survey shows about 70 percent of the households in Pima County say they visited a park or recreation area an average of 7.4 times in the past three months. Eighteen percent say they travel more than 50 miles to get to the park they visit the most often; 30 percent travel 6 to 50 miles; 34 percent travel 1 to 5 miles; and 18 percent travel less than two miles. Forty-two percent of respondents say they would go more often if the park was closer. Residents were asked to prioritize which type of parks should receive the limited available park funding: 42 percent chose nature-oriented parks (like Tucson Mountain Park); 24 percent chose open space (large or small with development usually limited to trails); 19 percent chose neighborhood parks (a small park with just a few facilities such as a playground or basketball court); and 15 percent chose multi-use parks (like Reid Park). Regarding land acquisition for open space, 77 percent say they prefer to see acquisition dollars go toward buying large open spaces with habitat for wildlife, while 22 percent prefer the dollars go to acquiring open spaces between housing developments.

The attached study reviews the effect of five alternative permit strategies on the County's ability to maintain recreation opportunities. The federal action of granting Pima County a Section 10 permit in compliance with the Endangered Species Act could have some site specific impact on recreation, depending on the type of activity and the management strategies of the particular reserve area. Given that a relatively small land area will be needed to mitigate Pima County's take of habitat, however, it is unlikely that recreation activities will be more limited within the region as a result of Pima County's permit. This paper presents a brief look at outdoor recreation issues and describes the impacts five alternatives might have.

II. Priority Conservation Areas

Pima County created a Recreation Technical Advisory Team to assist in developing the Mountain Park Element of the Sonoran Desert Conservation Plan. The Team has conducted surveys, participated in meetings and workshops, and provided technical advice to County staff and the Steering Committee. The Recreation Team has developed a list of the common types of recreational activities that occur in Pima County, shown here in alphabetical order:

- Birding
- Camping, Developed Sites (tent/RV camping in designated campgrounds or sites)
- Camping, Dispersed (including driving to, backpacking to camp site)
- Caving/Mineshaft Exploration
- Cultural/Historical Resources Observation
- Dog Walking
- Equestrian Use (individuals, group rides, commercial rides)
- Fishing
- Hang Gliding, Parasailing, Hot Air Ballooning, Ultralight
- Hiking (including trail running, orienteering, etc.)
- Hunting (rifle, shotgun, handgun, archery)
- Mineral Collection/Rockhounding
- Mountain Biking (including variations such as fat-tire in-line skating)
- Native Plant and Animal Collecting
- Natural History Study/Appreciation (wildlife and native plant study, photography, etc.)
- Off-Highway Vehicle Use (dirt bike, 4-wheel drive, ATV, commercial tours)
- Picnicking
- Rock Climbing
- Scenic Driving
- Stargazing/Astronomy
- Swimming - Wading - Water based activities (in creeks, pools, lakes)
- Target Shooting

These activities have varying levels of impacts and management of reserve lands contemplate the needs of species in relation to such impacts. For example, in the San Diego (California) Multiple Species Conservation Program, preserve areas are open to passive recreation. Although the San Diego Plan did not clearly define "passive recreation," it equates through current administration to hiking, biking and equestrian activities. Camping is allowed in designated areas, but off-road vehicle activities are not allowed.

The Austin (Texas) Balcones Canyonlands Conservation Program places different activity restrictions in different regions of the preserve. Educational tours and research are permitted in the majority of the Canyonlands Preserve. Hiking is allowed in 32 percent of the Reserve and mountain biking is allowed in 25 percent of the Reserve. The Clark County Nevada plan is different again. It identifies the following management activities that may be used to address recreational impacts: education; monitoring; protection; and restoration and enhancement. Each participating land management agency lists specific actions to implement the multi-species program, including recreation related activities.

Pima County Natural Resources, Parks and Recreation Department manages mountain parks and natural preserves, and several other properties for the purpose of resource conservation. Tucson Mountain Park and Colossal Cave Mountain Park both contain commercial enterprises and experience heavy recreational use. Other areas such as Bingham Cienega and Cienega Creek Natural Preserves have limited allowed recreational uses. Currently, the Natural Resources, Parks and Recreation Department performs some trail maintenance within resource parks to minimize recreational impacts. Wildcat trails are covered, vegetation replanted, and "no access" signage installed. Rangers regularly patrol the parks and provide education and enforcement of all park rules and regulations.

Bingham Cienega and Cienega Creek Natural Preserves have sensitive riparian habitats and perennial water flows. Bingham Cienega is not open for recreational use, but can be accessed by appointment. Cienega Creek access is limited to 50 people per day, with equestrian and mountain biking limited to trails outside of the creek corridor. Off-highway vehicles are not allowed in the preserve, although occasionally all-terrain vehicles will enter the preserve through breached fences or through unlocked gates along utility corridors. The Pima County Flood Control District owns property along the major flood-prone washes in the Tucson Basin. Much of this land is unmanaged, and equestrian and off-highway vehicle use is prevalent on several of these properties, including the Tanque Verde, Canada del Oro, and Bear Canyon areas.

III. Alternatives

The May 2002 cost model described future impacts and assessed costs for unincorporated Pima County's compliance with the Endangered Species Act. Four alternatives relative to the cost of implementing the Section 10 permit were presented: ranch conservation; mountain park expansion; high conservation value land on the northwest side; and riparian protection and restoration. A combination of these might be recommended by the members of the Sonoran Desert Conservation Plan Steering Committee. In the following text, each alternative, plus a no action alternative, is briefly described and possible impacts to natural resource recreation are discussed. The conclusions drawn for purposes of this discussion paper are of a general and comparative nature. When specific recommendations are forwarded by the Steering Committee or interested members of the community, the merits of each specific proposal can be weighed.

No Action Alternative

Under the No Action Alternative, Pima County will continue to provide recreational amenities as outlined in the various mountain park management plans or other governing policies. The realization of plans to increase the size and scope of parklands or other recreational sites to address recreational demand is often a function of available funding devoted to that purpose. Outdoor recreation is expected to increase proportionate with the increase in the population in Pima County. Natural resource-based outdoor recreational opportunities would continue under existing recreation management guidelines. Charts within the study outline current use and resource policies to manage the natural resource oriented parks and reserves managed by Pima County. Under a No Action Alternative all of these policies will continue.

Ranch Alternative

Under the Ranch Alternative, Pima County would establish a reserve of 20,400 acres of high resource value ranch land. Recreation opportunities in the ranch land reserve may increase or decrease depending on current ranch management and future purchase and mitigation stipulations. Activities determined to be detrimental to the biological resources may be limited or prohibited, or actions to mitigate these impacts may be required. A total of 69 miles of trail currently intersect private ranch lands within the Conservation Lands System.

Mountain Park Expansion

Under this alternative, Pima County would expand natural resource parks and county-owned ranch lands by a total of 20,400 acres. Recreation opportunities in the expanded park and ranch areas would likely be similar to the surrounding park management. Newly acquired parcels would be evaluated by the Pima County Natural Resources, Parks and Recreation Department. Activities determined to be detrimental to the biological resources may be limited or prohibited, or actions to mitigate these impacts may be required.

A total of 26.3 trails intersect within the existing Pima County Mountain Parks and the Conservation Lands System: 58.7 miles of trails are found within a one-mile buffer of the parks and within the Conservation Lands System; 179 miles of trail are found within a five-mile buffer of the parks and within the Conservation Lands System. A total of 8.6 miles of trail currently intersect within the Pima County Board of Supervisor's designated expansion area and the Conservation Lands System.

Riparian Protection and Restoration

Under this alternative, Pima County would create a 20,400 acre reserve comprised of rural and ranch riparian lands and riparian lands closer to urbanized areas. Recreation uses that impact land to a greater degree would likely continue at current levels as discussed in the No Action Alternative in existing Pima County parks, but probably not increase in sensitive riparian areas.

A total of 238.6 miles of trail currently intersect important riparian areas.

High Conservation Value Land on the Northwest Side

Under this alternative, Pima County would create a 20,400-acre reserve in northwest Tucson. Recreation opportunities on the reserved land may increase or decrease depending on current land management and future purchase and mitigation stipulations. Some of the reserve acreage under this alternative will be highly fragmented parcels in pygmy-owl Recovery Area 3. Recreation would be compatible with pygmy-owl recovery and other Section 10 mitigation stipulations. Currently, 6 miles of trail are within the Recovery Area 3 and the Conservation Lands System; 3.3 miles of trail intersect areas of high conservation value area and the Conservation Lands System.

IV. Conclusion

Five alternatives have been presented for the Section 10 conservation program. Under each alternative, outdoor recreation opportunities may or may not be impacted, depending on the implementation policies for the alternative. Because of the increased demand for natural resource-based recreation, it is foreseeable that recreation opportunities will be increased under each alternative. Certain recreational activities determined to be detrimental to the biological resources may be limited or prohibited. Recreational opportunities in some areas would be restricted or curtailed by species and habitat protection needs. Given that a relatively small land area will be needed to mitigate Pima County's take of habitat, however, it is unlikely that in aggregate recreation activities will be more limited within the region as a result of Pima County's permit.

Draft issue papers have been forwarded on the topics of cultural resources and ranching. Each study ranked alternatives from most beneficial to least beneficial in light of goals of those particular resources. While the conclusions drawn for purposes of this discussion paper are of a general and comparative nature, the study of ranch land supported a ranking of the alternatives as follows:

Rank	Alternative
1	Ranch Conservation
2	Riparian Conservation
3	Mountain Park Expansion
4	High Conservation Value Land in Northwest Tucson
5	No Action

This relative ranking compares to that of the cultural resources analysis, with the exception being that Mountain Park Expansion could be more beneficial than Riparian Protection.

This study of recreation resources indicates that Mountain Park expansion and Ranch land protection seem to hold the most promise for recreation goals, depending on the particular areas protected, the needs of the species in that area, and the level of impact associated with the recreation activity.

The final recommendation for land to be included in the Section 10 permit will likely include a combination of lands from the ranch, mountain park, riparian and northwest areas. When a specific recommendation is forwarded by the Steering Committee or by interested members of the community, the merits of each specific proposal will be reviewed and published in light of considerations in the attached issue paper, and additional information that might be provided as part of future discussions.

Attachment



Section 10 Endangered Species Act Permit: Impacts to Recreation

A Discussion Paper for the Sonoran Desert Conservation Plan

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Members of the University of Arizona "Ramblers" club hike up Montrose Canyon in 1950, with a clear view of the area that will much later become the town of Oro Valley.

Section 10 Endangered Species Act Permit: Impacts to Recreation

A Discussion Paper for the Sonoran Desert Conservation Plan

Introduction

In May 2002, Pima County released a cost model for an Endangered Species Act Section 10 permit for the unincorporated area of eastern Pima County. The cost model described future impacts and assessed costs for unincorporated Pima County's compliance with the Endangered Species Act.

Four alternatives relative to the cost of implementing the Section 10 permit were presented: ranch conservation; mountain park expansion and ranch conservation; high conservation value land on the northwest side; and riparian protection and restoration.

The purpose of this paper is to describe the range of future impacts to natural resource based recreation in unincorporated Pima County as a result of each alternative, including a no action alternative.

Background

From sharing a traditional Easter family picnic beside a creek to zooming down a trail on the latest style of mountain bike, residents and visitors to Pima County enjoy an abundance of opportunities for natural resource based outdoor recreation. The federal action of granting Pima County a section 10 permit in compliance with the Endangered Species Act will have some impact on recreation, both negative and positive. This paper presents a brief look at outdoor recreation issues and describes the impacts five alternatives might have.

The scenic beauty and rich diversity of Pima County's deserts, canyons and mountains provide the backdrop for a wide variety of recreation pursuits, all of which benefit our community in many ways. Outdoor recreation promotes the physical and mental health of participants. It also generates economic benefits (expenditures by visitors, purchase of equipment, travel, etc.) for Pima County that, though poorly quantified by any study to date, are generally agreed to be substantial. For instance, preliminary results from a nation-wide survey undertaken by the U.S. Fish and Wildlife Service show that in 2001, Arizona had 419,000 anglers, 148,000 hunters, and 1.7 million persons who engaged in wildlife-watching activities (including 638,000 from out of state), which generated a total of more than \$1.65 billion in expenditures. In addition, the amenities provided by the forests, parks, ranches, reserves and other public lands where outdoor recreation occurs contributes significantly to Pima County's tourist industry, to the willingness of employers to locate here, and to the quality of life of residents in general.

Pima County residents' involvement and support for outdoor recreation are demonstrated in the recently released draft of the 2003 Statewide Comprehensive Outdoor Recreation Plan prepared by the Arizona State Parks to guide the state's priorities for outdoor recreation and open space grant projects (document available at www.pr.state.az.us). A Spring 2002 public survey shows about 70 percent of the households in Pima County say they visited a park or recreation area an average of 7.4 times in the past three months. Eighteen percent say they travel more than 50 miles to get to the park they visit the most often, 30 percent travel 6-50 miles, 34 percent travel 1-5 miles and 18 percent travel less than two miles. Forty-two percent of respondents say they would go more often if the park was closer.

Residents were asked to prioritize which type of parks should receive the limited available park funding: 42 percent chose nature-oriented parks (like Tucson Mountain Park), 24 percent chose open space (large or small with development usually limited to trails), 19 percent chose neighborhood parks (a small park with just a few facilities such as a playground or basketball court), and 15 percent chose multi-use parks (like Reid Park). Regarding land acquisition for open space, 77 percent say they prefer to see acquisition dollars go toward buying large open spaces with habitat for wildlife, while 22 percent prefer the dollars go to acquiring open spaces between housing developments.

It is also recognized that recreational activities can damage natural and cultural resources. Current problems will only be compounded as Pima County continues to grow: increased population generates additional demand for recreation and new developments can replace former recreation sites and prevent access to others. Management to prevent, avoid or mitigate the negative impacts from recreation will be a critical part of the adaptive management process of any lands designated to meet the requirements of the Section 10 permit. Actions taken to further the permit can also have a positive effect by providing new or improved recreation experiences.

Recreation Considerations in Other Habitat Conservation Plans

Recreation has been treated in varying degrees by U.S. Fish & Wildlife Service Section 10(a) habitat conservation plans. Most plans restrict some recreational activities in areas designated as reserves in order to protect endangered species.

In the San Diego (California) Multiple Species Conservation Program, preserve areas are open only to passive recreation. Although the San Diego Plan did not clearly define "passive recreation," it is essentially hiking, biking and equestrian activities (Holly Boessow, Associate Planner, San Diego MSCP). Camping is allowed only in designated areas. No off-road vehicle activities are allowed.

The Austin (Texas) Balcones Canyonlands Conservation Program places different activity restrictions in different regions of the preserve. Only educational tours and research are permitted in the majority of the Canyonlands Preserve. Hiking is allowed in 32 percent of the Reserve and mountain biking is allowed in 25 percent of the Reserve.

The Clark County (Nevada) Multiple Species Habitat Conservation Plan (MSHCP) analyzes how five proposed management alternatives would impact recreational activities. Under the MSHCP alternative, Clark County will assist land management agencies with conservation measures that may prohibit or limit recreational activities that are detrimental to biological resources in particular areas. This may result in these activities shifting to other areas where they are permitted. The Clark County plan identifies the following management activities that may be used to address recreational impacts: education; monitoring; protection; and restoration and enhancement. Each participating land management agency lists specific actions to implement the MSHCP, including recreation related activities.

San Mateo County (California) has parks with federally listed endangered butterfly and plant species. They manage recreation impacts to the grasslands in Edgewood Park by restricting access to 80 percent of the park. Trails that traverse critical habitat have wood barriers. The barriers can be easily crossed and serve more to delineate the critical areas. According to Dave Moore, Edgewood Park Manager, good signage and park patrol are key to successful preservation. Through partnerships with universities and community groups, endangered species monitoring, scientific research into vegetation manipulation, and removal of exotic vegetation are also occurring.

Pima County's Early Recognition of Section 10 Recreation Issues

Recognizing that even seemingly benign outdoor activities such as hiking and wildlife viewing can undermine efforts to save an endangered species, Pima County initiated a study of this issue with publication of the report, *Recreation Impacts in Eastern Pima County* (March 2001). This report analyzed how outdoor recreation impacts soil, water, vegetation and wildlife, looked at the specific impacts associated with nine different activities, and summarized the recreation policies of several agencies that manage public lands in the County.

During the summer of 2001, Pima County formed a Recreation Technical Advisory Team (RecTAT) to investigate the significance and impact of recreational activities to the overall Sonoran Desert Conservation Plan. The team, composed of individuals from land managing agencies, recreation user groups, recreation consulting firms and the university, developed a broad mission: "To provide expert information on issues arising from existing and growing demand for natural resource based outdoor recreation in Pima County, so that high quality recreational opportunities and experiences are available to the public while achieving the goals of the Sonoran Desert Conservation Plan."

Among the RecTAT's first activities was its participation in a January 2002 public forum organized by the Coalition for Sonoran Desert Protection entitled, "Outdoor Recreation and the Sonoran Desert Conservation Plan: Impacts, Benefits, and How to Better Plan for Our Future." Don Weir, an environmental assessment professional, spoke on the impacts of non-motorized trail use. Patricia Orr's presentation was on the recreational benefits of natural resources and the environment, highlighting how a University of Arizona recent study quantified the economic benefits from birdwatchers visiting the San Pedro River area. Rod Mondt, from Columbia University's Biosphere 2 Center, spoke on how people active in outdoor recreation have contributed to conservation successes. RecTAT Chair Randy Gimblett wrapped up the forum by explaining the team's mission, and inviting the public to participate in its work, so that recreation concerns can be represented in the SDCP implementation process.

The forum also marked the beginning of a survey and mapping project that RecTAT is using to collect information helpful in describing the state of outdoor recreation in Eastern Pima County. Surveys distributed at the forum and elsewhere ask respondents where they recreate and what types of activities they do. It also asks if people have encountered obstacles to recreating, had particular concerns, or if they have suggestions for improving outdoor recreation opportunities in Pima County. The RecTAT has also collected information from leaders of special-interest outdoor groups to collect specific information on birding, climbing, recreational small mining, four-wheel drive enthusiasts, and hunting. The mapping project continues, and is expected to result in a series of maps and a report this fall. RecTAT has developed a list of the common types of recreational activities that occur in Pima County that it plans to address in these maps (shown in alphabetical and not priority order):

- Birding
- Camping, Developed Sites (tent/RV camping in designated campgrounds or sites)
- Camping, Dispersed (including driving to, backpacking to camp site)
- Caving/Mineshaft Exploration
- Cultural/Historical Resources Observation
- Dog Walking
- Equestrian Use (individuals, group rides, commercial rides)
- Fishing
- Hang Gliding, Parasailing, Hot Air Ballooning, Ultralight

- Hiking (including trail running, orienteering, etc.)
- Hunting (rifle, shotgun, handgun, archery)
- Mineral Collection/Rockhounding
- Mountain Biking (including variations such as fat-tire in-line skating)
- Native Plant and Animal Collecting
- Natural History Study/Appreciation (wildlife and native plant study, photography, etc.)
- Off-Highway Vehicle Use (dirt bike, 4-wheel drive, ATV, commercial tours)
- Picnicking
- Rock Climbing
- Scenic Driving
- Stargazing/Astronomy
- Swimming – Wading – Water based activities (in creeks, pools, lakes)
- Target Shooting

Existing Pima County Outdoor Recreation Policies and Practices

Outdoor recreation policies have been addressed in the Eastern Pima County Trails System Master Plan, and the Pima County Comprehensive Plan, updated in December of 2001. It has also been a common practice for the Natural Resources, Parks and Recreation Department to cooperate with other land managing agencies and interested non-profit organizations whenever possible and appropriate. While there are many different types and forms of recreation, trail information is the most readily available for planning and analysis purposes, and so our examples below focus on trail issues.

Eastern Pima County Trails System Master Plan

The Eastern Pima County Trails System Master Plan (EPCTSMP) identified acquisition priorities for the development of a trail network for pedestrians, equestrians, bicyclists, and other non-motorized users (Pima County, 1989). The network is to expand on the existing and planned river park system to connect with all major public lands. Priority selections for these recreational trails take advantage of locations that offer the community multiple benefits such as flood control, groundwater recharge, wildlife habitat preservation, and open space protection.

The overriding consideration in the implementation of the proposed network is public ownership of trails and trail access points. This can be accomplished in a variety of ways, including the purchase of property, designation of county rights-of-way as trails, dedication of private lands for trails during the rezoning process, or exchange of land. The establishment of conservation and trail easements and use of trail-use agreements or land leases may also help in some limited cases.

Pima County Comprehensive Plan

The Comprehensive Plan addresses policies for the regional trail system (Pima County, 2001). The proposed regional trail system, as identified in the Eastern Pima County Trail System Master Plan (EPCTSMP) is a blueprint for a public trails network. The network will expand on the existing and planned river park system, and is intended to include natural tributary washes and upland segments, and road and utility rights-of-way that together form an interconnected system linking urbanized areas with surrounding public reserves. Successful implementation of the Eastern Pima County Trails System Master Plan will require a collaborative effort between Pima County, local jurisdictions and land managing agencies.

Regional Trail System Policies (excerpt from the Pima County Comprehensive Plan)

1. **Dedication of High Priority Trail System Elements:** High priority trail system elements, as identified in the EPCTSMP and approved the Department of Natural Resources, Parks and Recreation, shall be given a high priority for acquisition by Pima County for the regional trail system. Based on the priority status of the trail system element, as determined by the Department of Natural Resources, Parks and Recreation, dedication of particular trail system elements shall be required as a condition of rezoning approval. Examples of high priority trail system elements include, but are not limited to, primary trails identified in the EPCTSMP, trail corridors that link individual public lands units, connect public lands with existing or planned river parks, create local trail linkages to parks, schools, or activity centers, or provide public access to established public lands trails.
2. Regulatory flood-prone areas, which are dedicated as drainage easements to the Flood Control District and which are identified as candidate trails on the EPCTSMP, shall also be dedicated to Pima County to allow additional uses such as recreational and equestrian activities.
3. Dedication of high priority trail corridors, trail access points, and associated staging areas for public use shall be negotiated by the Department of Natural Resources, Parks and Recreation. Any fencing of the rail corridor shall meet the specifications of the Department of Natural Resources, Parks and Recreation and said specifications shall be included as a condition of rezoning or specific plan approval.
4. **Trails Access-Vehicular Access to Public Land Trailheads:** Vehicular access to trailheads at public preserve boundaries shall be promoted, based on a determination by the public lands manager and the Department of Natural Resources, Parks and Recreation. In those cases where road access to public lands trailheads is deemed critical, dedication of public road rights-of-way and associated parking and equestrian staging areas shall be required as a condition of rezoning or specific plan approval.
5. **Trails within the Project Site:** (1) Where appropriate to the scale and nature of the planned development and its location relative to inventoried trail system elements, trails and paths within the project site shall connect with the regional system to provide open space and recreational opportunities for planned community residents. The developer and the Department of Natural Resources, Parks and Recreation will determine the application of this policy; (2) If the project site contains a route identified in the EPCTSMP that provides irreplaceable access to a public preserve boundary, public access through the site shall be provided.

Intergovernmental Cooperation

Pima County Natural Resources, Parks and Recreation Department has a history of cooperating with other agencies to accomplish mutual outdoor recreation goals. For instance, Pima County has built and maintained trailheads that access trail systems in the Coronado National Forest and Saguaro National Park. With funding and support from Arizona State Parks, Pima County recently opened the Pima Motorsports Park, a facility where motorized recreation and education can take place. For years, the department has participated in the Tucson Basin Land Managers, a consortium of agencies and organizations including the Bureau of Land Management, U.S. Forest Service, Arizona Game & Fish, U.S. Fish & Wildlife Service, U.S. National Park Service, Tucson Parks & Recreation, Arizona-Sonora Desert Museum and Arizona State Parks; among the group's educational projects was the publishing of the Southeastern Arizona Birding Trail map in January 2000.

Cooperative Activities With Non-profit Groups and Individuals

Dozens or more non-profit organizations help with outdoor recreation plans and projects in Pima County, from hands-on clean-up projects (Scouts, Friends of Cienega Creek, etc.) to helping plan for the future (Pima Trails Association's work on the Trail System Master Plan and other organizations represented on the Recreation Technical Advisory Team). Several exceptional non-profit groups have unique educational and research facilities on some of our natural resource parks (Arizona-Sonora Desert Museum, Parklands Foundation, Sonoran Arthropod Studies Institute). Specialized hobby groups, such as hiking, birding, mountain-biking and equestrian clubs lead trips into the parks for their members and the public. The parks and outdoor recreation also benefit from the generous volunteer support from individuals, such as the campground hosts at Gilbert Ray.

Existing Conditions

Pima County Natural Resources, Parks and Recreation Department manages mountain parks and natural preserves, and several other properties for the purpose of resource conservation. Tucson Mountain Park and Colossal Cave Mountain Park both contain commercial enterprises and experience heavy recreational use. Other areas such as Bingham Cienega and Cienega Creek Natural Preserves have limited allowed recreational uses.

Currently, the Natural Resources, Parks and Recreation Department performs some trail maintenance within resource parks to minimize recreational impacts. Wildcat trails are covered, vegetation replanted, and "no access" signage installed. Rangers regularly patrol the parks and provide education and enforcement of all park rules and regulations. The department needs additional funding in order to enhance a trail monitoring and maintenance program.

Bingham Cienega and Cienega Creek Natural Preserves have sensitive riparian habitats and perennial water flows. Bingham Cienega is not open for recreational use, but can be accessed by appointment. Cienega Creek access is limited to 50 people per day, with equestrian and mountain biking limited to trails outside of the creek corridor. Off-highway vehicles (OHVs) are not allowed in the preserve, although occasionally all-terrain vehicles (ATVs) will enter the preserve through breached fences or through unlocked gates along utility corridors.

The Pima County Flood Control District owns property along the major flood-prone washes in the Tucson Basin. Much of this land is unmanaged, and equestrian and OHV use is prevalent on several of these properties, including the Tanque Verde, Canada del Oro, and Bear Canyon areas (J. Fonseca, pers.comm., 2001).

Impacts Under the Alternatives

The May 2002 cost model described future impacts and assessed costs for unincorporated Pima County's compliance with the Endangered Species Act. Four alternatives relative to the cost of implementing the Section 10 permit were presented: ranch conservation; mountain park expansion and ranch conservation; high conservation value land on the northwest side; and riparian protection and restoration. A combination of these might be recommended by the members of the Sonoran Desert Conservation Plan Steering Committee.

In the following sections, each alternative, plus a no action alternative, is briefly described and possible impacts to natural resource recreation are discussed. Table 1 summarizes miles of trail and acres of vacant state and private parcels found in each alternative.

No Action Alternative

Under the No Action Alternative, Pima County will continue to provide recreational amenities as outlined in the various mountain park management plans or other governing policies. The realization of plans to increase the size and scope of parklands or other recreational sites to address recreational demand is often a function of available funding devoted to that purpose and Pima County priorities.

Outdoor recreation is expected to increase proportionate with the increase in the population in Pima County. Natural resource-based outdoor recreational opportunities would continue under existing recreation management guidelines.

Tables 2 and 3 were compiled from the August 2000 preliminary report, *Mountain Parks, Reserves and Biologically Significant Resource Land: the Mountain Parks Element of the SDCP*. They outline public use and resource policies currently utilized to manage the natural resource oriented parks and reserves managed by Pima County. Under a No Action Alternative all of these policies will continue and Pima County will amend their management practices as needed to address social and environmental issues.

Ranch Alternative

Under the Ranch Alternative, Pima County would establish a reserve of 20,400 acres of high resource value ranch land. Recreation opportunities in the ranch land reserve may increase or decrease depending on current ranch management and future purchase and mitigation stipulations. The Pima County Natural Resources, Parks and Recreation Department will evaluate newly acquired land parcels. Activities determined to be detrimental to the biological resources may be limited or prohibited, or actions to mitigate these impacts may be required.

A total of 69 miles of trail (Table 1) currently intersect private ranch lands within the Conservation Lands System (Map 1).

Recreation uses in existing Pima County managed parks will continue as discussed in the No Action Alternative.

Mountain Park Expansion and Ranch Conservation

Under this alternative, Pima County would expand natural resource parks and county-owned ranch lands by a total of 20,400 acres. Recreation opportunities in the expanded park and ranch areas would likely be similar to the surrounding park management. Newly acquired parcels would be evaluated by the Pima County Natural Resources, Parks and Recreation Department. Activities determined to be detrimental to the biological resources may be limited or prohibited, or actions to mitigate these impacts may be required.

A total of 26.3 trails intersect within the existing Pima County Mountain Parks and the Conservation Lands System (Table 1). 58.7 miles of trails are found within a one-mile buffer of the parks and within the Conservation Lands System. 179 miles of trail are found within a five-mile buffer of the parks and within the Conservation Lands System. A total of 8.6 miles of trail currently intersect within the Pima County Board of Supervisor's designated expansion area and the Conservation Lands System (Map 2).

Riparian Protection and Restoration

Under this alternative, Pima County would create a 20,400 acre reserve comprised of 50 percent rural and ranch riparian lands, and 50 percent riparian lands closer to urbanized areas. Recreation uses in existing Pima County parks will continue as discussed in the No Action Alternative.

High Conservation Value Land on the Northwest Side

Under this alternative, Pima County would create a 20,400-acre reserve in northwest Tucson. Recreation opportunities on the reserved land may increase or decrease depending on current land management and future purchase and mitigation stipulations. Some of the reserve acreage under this alternative will be highly fragmented parcels in pygmy-owl Recovery Area 3. Recreation will be compatible with pygmy-owl recovery and other Section 10 mitigation stipulations.

Currently, 6 miles of trail (Table 1) are within the Recovery Area 3 and the Conservation Lands System. 3.3 miles of trail intersect areas of high conservation value area and the Conservation Lands System (Map 3).

Recreation opportunities in the reserve may expand or decrease depending on current land management practices, and future purchase and mitigation stipulations. Riparian areas attract not only wildlife species, but are popular recreation destinations for humans. The Pima County Natural Resources, Parks and Recreation Department will evaluate newly acquired land parcels. Activities will be compatible with fragile or sensitive riparian resources.

A total of 238.6 miles of trail (Table 1) currently intersect important riparian areas (Map 4).

Recreation uses in existing Pima County parks will continue as discussed in the No Action Alternative.

Conclusion

The clear, sunny skies, pleasant winters, and natural beauty of southern Arizona are conducive for natural resource-based outdoor recreation, with many opportunities available on the public lands found within Pima County. In recent decades, outdoor recreation demand has increased greatly. In the case of Pima County, part of this demand is caused by a growing urban population in greater proximity to national parks and forests. Not only has a greater population contributed to increased outdoor recreation demands, but the public is also demanding new recreation opportunities.

Five alternatives have been presented for the Section 10 conservation program. Under each alternative, outdoor recreation opportunities may or may not be impacted, depending on the implementation policies for the alternative. Because of the increased demand for natural resource-based recreation, it is foreseeable that recreation opportunities will be increased under each alternative. The Natural Resources, Parks, and Recreation Department will evaluate newly acquired land parcels in unincorporated Pima County. Certain recreational activities determined to be detrimental to the biological resources may be limited or prohibited. Recreational opportunities in some areas would be restricted or curtailed by species and habitat protection needs. Consequently, some recreational areas would receive either greatly reduced use or less intense use, while other areas could receive greater use.

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Outdoor recreation has enduring appeal: members of the University of Arizona "Ramblers" Club backpacking on Baboquivari Mountain in 1946.

Table 1: Summary of Trail Miles and Acres of Vacant State and Private Land Found within Each Alternative

	Existing Miles of Trail	Vacant Private Land (acres intersecting trails)	Vacant State Land (acres intersecting trails)	Parcels of Private Land (intersecting trails)	Parcels of State Land (intersecting trails)
Ranch Alternative	69 miles	47,266 acres (private ranch lands)	N/A	160 (private ranch parcels)	N/A
Mountain Park Alternative	26.3	0.05 acres	0.07 acres	2	4
Mountain Park Alt (1-mile buffer)	58.7 miles	1,314 acres	29,067.6 acres	104	48
Mountain Park Alt (5-mile buffer)	179 miles	5,174.5 acres	74,733 acres	312	81
Mountain Park Alt (BOS designated expansion area)	8.6 miles	79.8 acres	9,351.6 acres	4	10
Northwest Side Alternative (Recovery Area 3)	6 miles	637 acres	547.5 acres	51	1
Northwest Side Alternative (area of high conservation value)	3.3 miles	470 acres	0.0 acres	37	0
Riparian Alternative	238.6 miles	2,167 acres	18,384 acres	328	126

Table 2: Public Use Policies

Managing Entity	Reserve Name	Public Use Policies														Comments	
		Hiking	Off-Trail Hiking	Horse Back Riding	Mountain Bicycle Riding	Access Permits	Overnight Parking	Overnight Camping	Camp Fires	Firearms Hunting	Archery Hunting	Shooting Range	Fishing	Swimming	Dogs On Leash		Rock Climbing/Rappelling
Arizona State Parks Board	Catalina State Park	Y	Y	Y	Y	Y	R	R	R	Y	Y	N	NA	NA	Y	NA	Fee Area
Pima County Parklands Foundation	Colossal Cave Mountain Park	Y	Y	Y	Y	Y	R	R	R	N	N	N	NA	NA	Y	N	Fee Area
Pima County	Tucson Mountain Park	Y	Y	Y	Y	N	R	R	R	Y	Y	Y	NA	NA	N	N	
Pima County	Tortolita Mountain Park	Y	Y	Y	Y	Y	N	N	N	Y	Y	N	NA	NA	Y	N	Change Pending, Rec. Use permit to cross State Land
Pima County	Cienega Creek Natural Preserve	Y	Y	Y	Y	Y	N	N	N	Y	Y	N	NA	NA	Y	N	Access Permit Required
Pima County	Empirita Ranch	Y	Y	Y	Y	Y	N	N	N	Y	Y	N	NA	NA	Y	N	Access Permit Required
Pima County	Arthur Pack Regional Park	Y	Y	Y	Y	N	R	R	R	N	N	N	NA	NA	Y	N	
Pima County	Roy P. Drachman - Agua Caliente Park	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	Y	N	
Nature Conservancy	Bingham Cienega Natural Preserve	Y	Y	Y	Y	N	N	N	N	Y	Y	N	N	N	Y	N	
State of Arizona	State Trust Lands	Y	Y	Y	Y	Y	P	P	P	Y	Y	NA	Y	Y	Y	Y	Recreational permit required to enter for recreation

Y=Yes
R = Restrictions
P = Permit Required
N=No
NA=Not Applicable

Table 3: Resource Management Policies

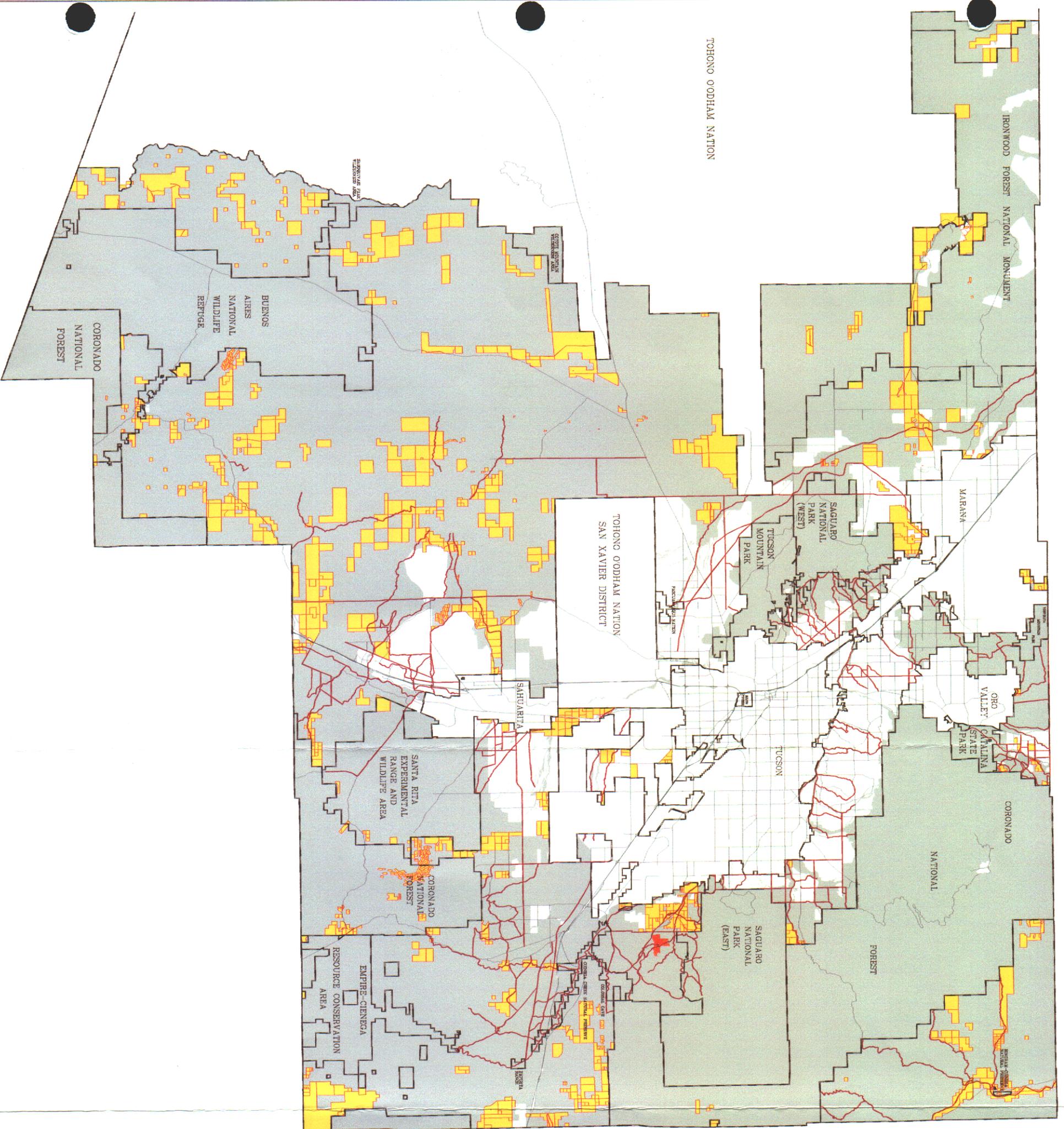
Managing Entity	Reserve Name	Resource Management Policies														Comments							
		Fuel Wood Harvesting	Reptile Collecting	Mineral Collecting	Plant Collecting	Grazing	Mining	Commercial Use	OHV Use	Wildfire Suppression	Controlled Burns	Pesticide Mgmt. Program	Vegetation Control Prog.	Landfills	Sewage Treatment		Groundwater Pumping	Surface Water Diversion	Livestock Mgmt. Prog.	Refuse Removal Program	Cultural/Hist. Mgmt. Prog.		
Arizona State Parks Board	Catalina State Park	N	P	P	P	N	N	P	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Pima County Parklands Foundation	Colossal Cave Mountain Park	N	P	P	P	P	P	P	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Pima County	Tucson Mountain Park	N	Y	P	P	N	N	P	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	
Pima County	Tortolita Mountain Park	N	Y	P	P	N	N	P	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	
Pima County	Cienega Creek Natural Preserve	N	P	P	P	N	N	P	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	
Pima County	Empirita Ranch	N	P	P	P	N	N	P	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	
Pima County	Arthur Pack Regional Park	N	P	P	P	N	N	P	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	
Pima County	Roy P. Drachman - Agua Caliente Park	N	P	P	P	N	N	P	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	
Nature Conservancy	Bingham Cienega Natural Preserve	N	R	R	R	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Access only with permission of The Nature Conservancy
State of Arizona	State Trust Land	P	P	P	P	Y	Y	Y	Y	Y	R	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	

Y=Yes
R = Restrictions
P = Permit Required
N=No
NA=Not Applicable



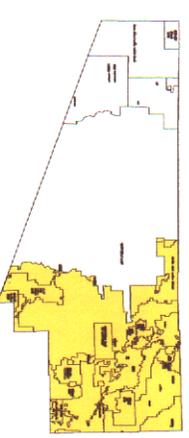
Private Ranch Lands And Trails

-  Trails
-  Administrative Boundaries
-  Major Streets
-  Conservation Lands System (CLS) in Unincorporated Eastern Pima County
-  Private Ranch Land



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Pima County Index Map



Index Map Scale 1:1,500,000

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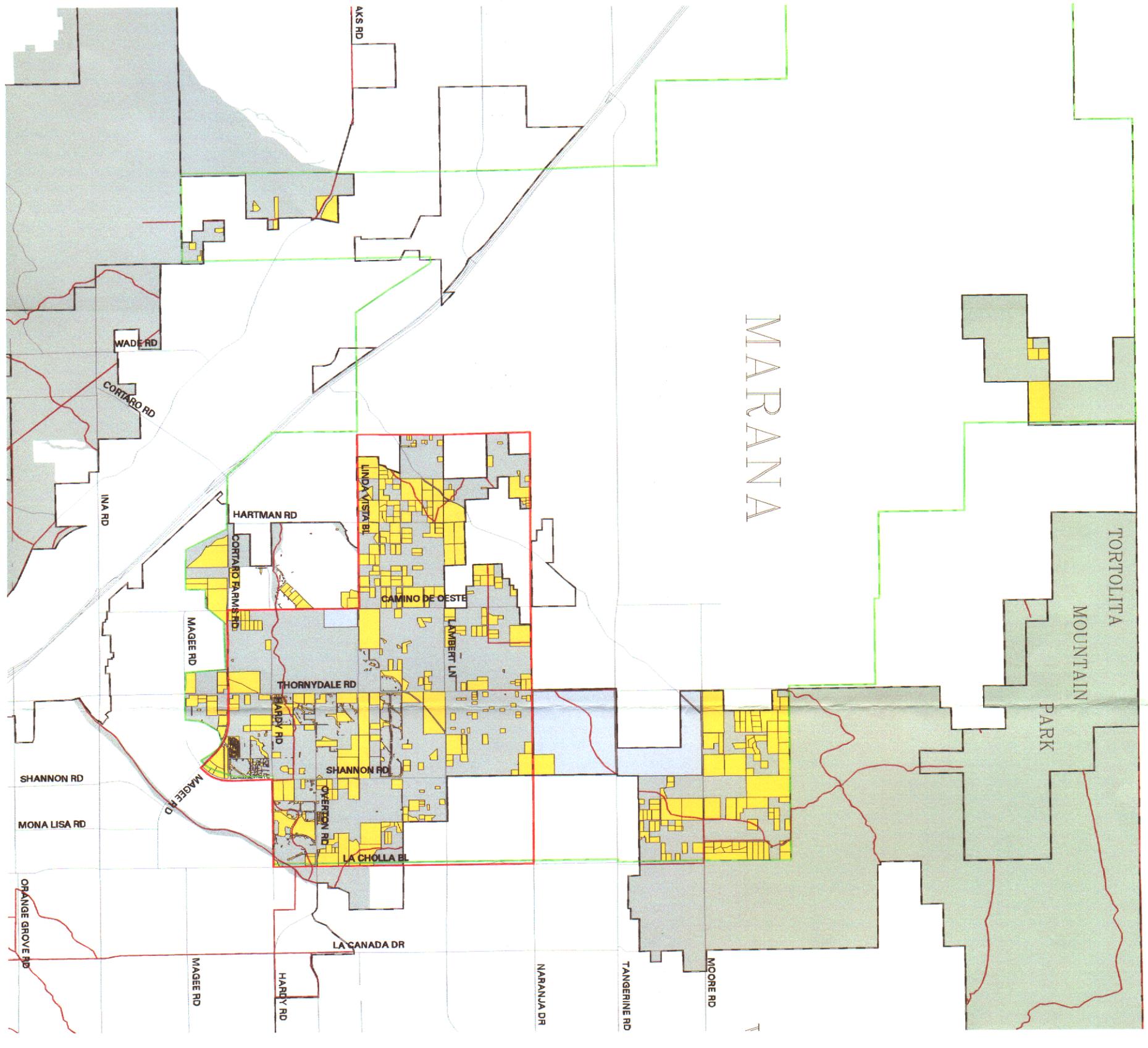
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Northwest Recovery

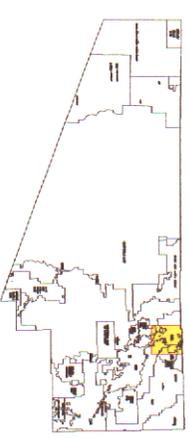
Area 3 And Trails

-  Trails
-  Recovery Area 3
-  High Conservation Value Area
-  Administrative Boundaries
-  Major Streets
-  Conservation Lands System (CLS) in Unincorporated Eastern Pima County
-  Private Vacant Parcels
-  State Trust Vacant Parcels



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Pima County Index Map



Index Map Scale 1:1,500,000

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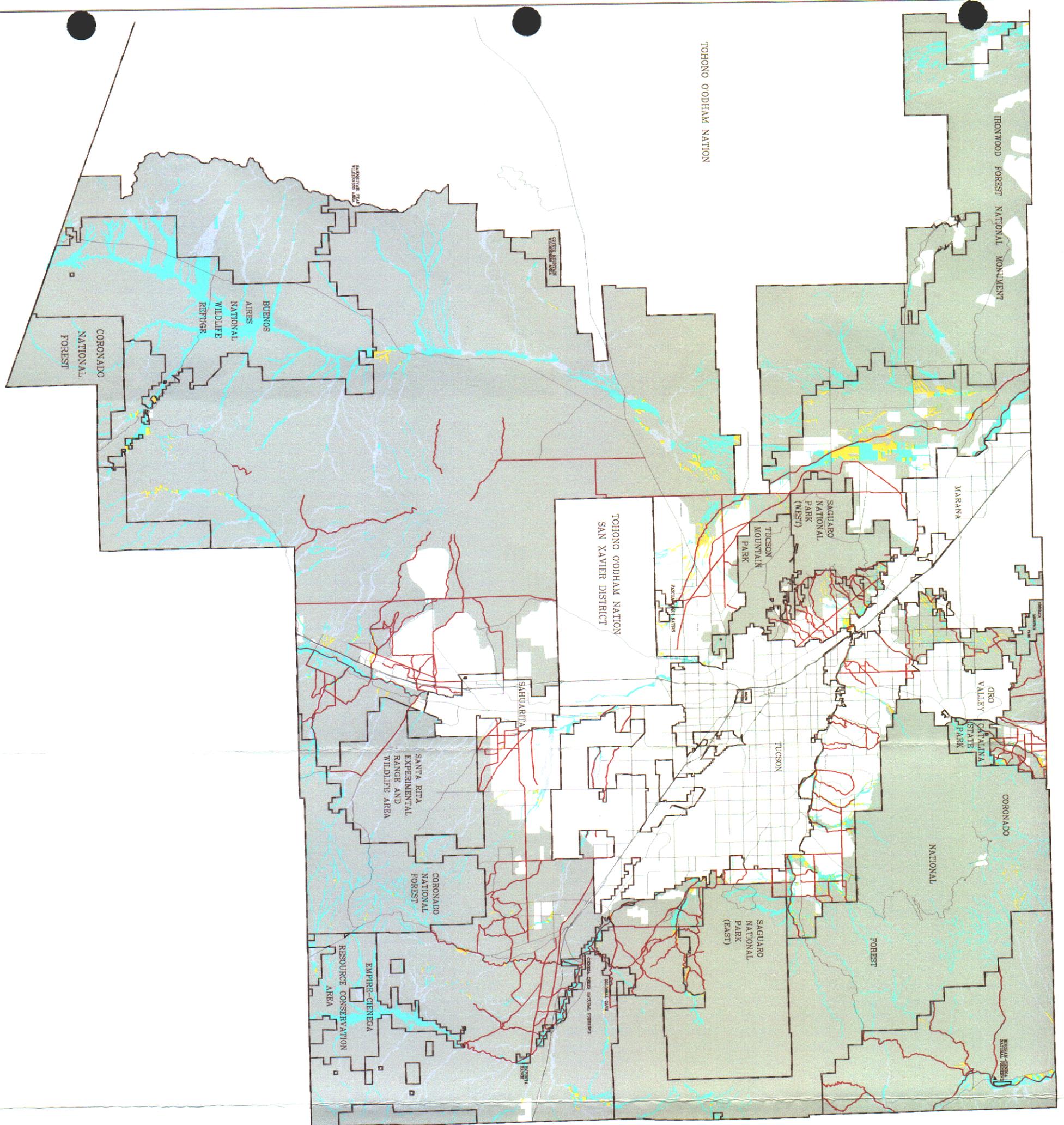


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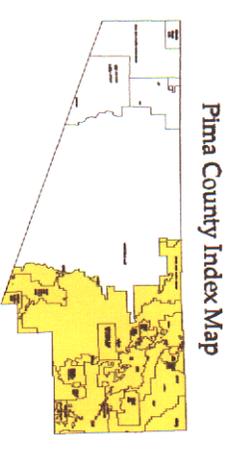


Important Riparian Areas And Trails

-  Trails
-  Administrative Boundaries
-  Major Streets
-  Conservation Lands System (CLS) in Unincorporated Eastern Pima County
-  Important Riparian Areas in Unincorporated Eastern Pima County
-  Private Vacant Parcels
-  State Trust Vacant Parcels



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