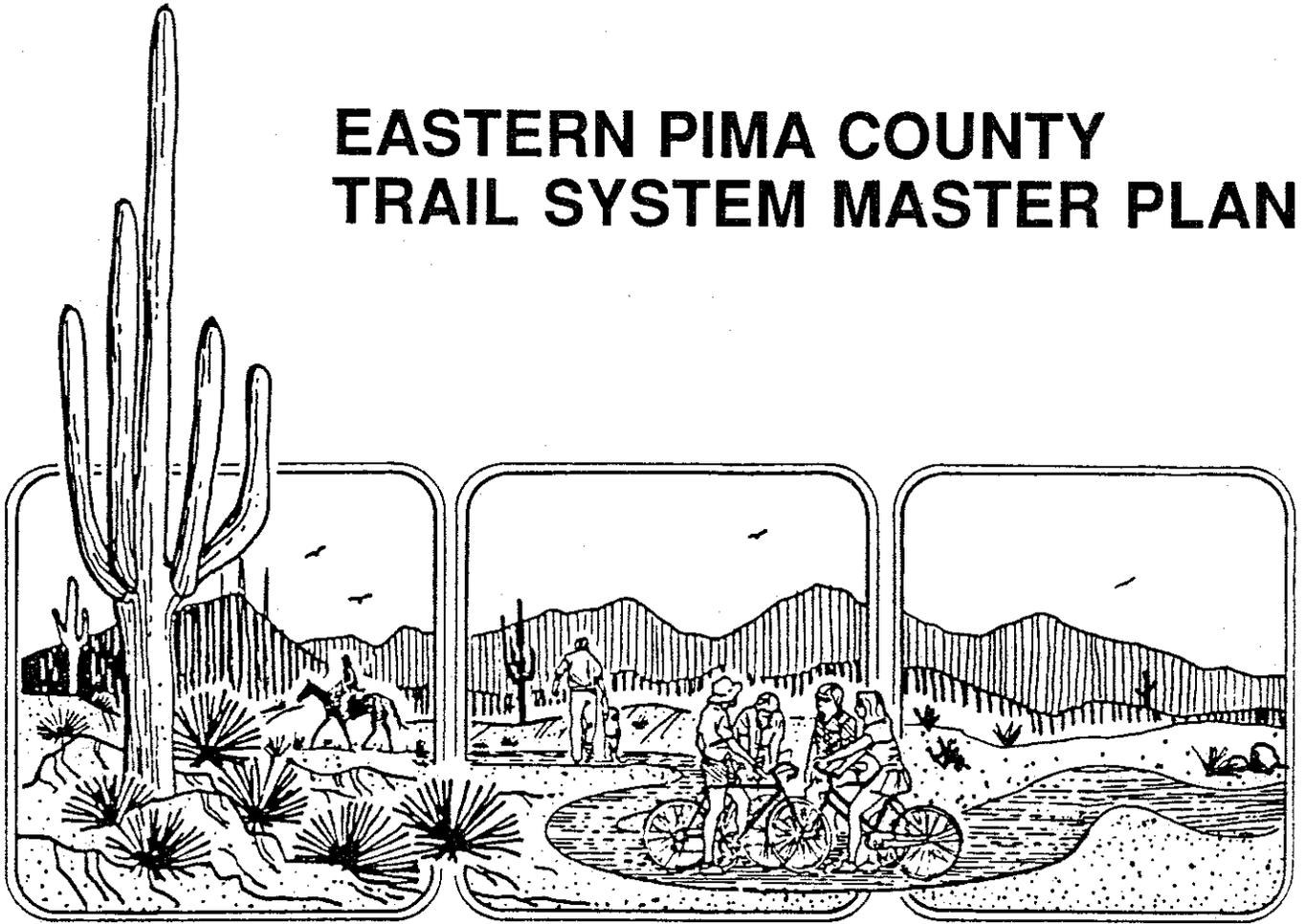


# **EASTERN PIMA COUNTY TRAIL SYSTEM MASTER PLAN**



**Phase One: Acquisition, Design and Development Priorities**

**Pima County Parks and Recreation Department**

# **EASTERN PIMA COUNTY TRAIL SYSTEM MASTER PLAN**

## **Phase One: Acquisition, Design , and Development Priorities**

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## Steering Committee

Barbara Bickel -- Southern Arizona Hiking Club  
Dottie Davis -- Federation of Pima Homeowners  
Dan Hofstader -- Sierra Club & Boy Scouts  
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Jean Russell  
Tom Vincent  
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person)

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Northwest Catalinas**

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Patty Kelly  
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Bill Olmstead  
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Vince Morrison  
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Mary Ann Rowley (resource  
person)

**Subregion 8: Metropolitan Tucson**

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Dick Edison  
Judy Edison  
John Leonard  
Bryce Lloyd  
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# GLOSSARY

**Advisory Committee:** A 22 member body of representatives from local governments and government agencies in Eastern Pima County that advised the Project Management Team, Dames & Moore, and the Steering Committee on the preparation of the Eastern Pima County Trail System Master Plan.

**Boundary Access Point or BAP:** A location on a public recreation land boundary that can be reached by road or by a proposed county trail where approved public access to the recreation lands exists or is proposed.

**Connector Trail:** A trail that connects a primary trail to public lands or two public land areas directly to each other. The proposed connector trails are located principally along or within natural washes; trails in natural washes are not to be developed. Some connector trails are proposed within road or utility rights-of-way; some trail development may occur in these locations.

**First Priority Trail Network or System:** The collection of trails, BAPs and TEPs that have been assigned first priority in this plan, for inclusion by acquisition or designation (in the case of existing public rights-of-way) in the public trail network.

**Link Trail:** A trail that is presently on private lands and is not proposed in this plan for inclusion in the public trail network. These trails link private lands to the public system. The use of these trails would be subject to the landowner's permission.

**Local Trail:** A trail that generally feeds into a primary or connector trail. Some local trails are separated from the rest of the proposed trail network.

**Mountain Bike:** Also known as an "all-terrain" bicycle. Trails identified as suitable for mountain bikes have off-pavement segments that may be useful to mountain bike users.

**Panel First Priority:** The first priority traditional trails, BAPs, and TEPs selected by the Subregional Panels.

**Panel Second Priority:** The second priority traditional trails, BAPs, and TEPs selected by the Subregional Panels.

**Panel Third Priority:** The third priority traditional trails selected by the Subregional Panels.

**Primary Trail:** A trail along or in one of the major watercourses in Eastern Pima County, along the Central Arizona Project aqueduct, or within the Flato/Franco Wash system south of Tucson. Paved pathways and other facilities will be developed along some segments of these trails to create linear river parks.

**Project Management Team:** A four member committee, composed of representatives from Pima County Parks and Recreation Department, Department of Transportation and Flood Control District, and Planning and Development Services Department, that managed the Dames & Moore contract for the preparation of the Eastern Pima County Trail System Master Plan.

**Road/Utility Right-of-way Trail:** A trail within the right-of-way of a road or utility corridor. Bicycle lanes within the road pavement are not included in this category.

**Second Priority Trail Network or System:** The collection of trails, BAPs and TEPs that have been assigned second priority in this plan, for inclusion by acquisition or designation (in the case of existing public rights-of-way) in the public trail network.

**Steering Committee:** An 11 member body of citizens that provided guidance in the preparation of the Eastern Pima County Trail System Master Plan.

**Subregion:** One of eight contiguous areas into which Eastern Pima County was divided for the purposes of assigning priorities to traditional trails, BAPs, and TEPs. Each subregion was assigned a quota of first and second priority trails, thus ensuring that priorities throughout Eastern Pima County would be geographically balanced.

**Subregional Panel:** One of eight panels composed of citizen trail users formed to (1) help identify traditional use trails, BAPs, and TEPs in their subregion and (2) assign first, second, or third priority rankings to these trails and first or second rankings to BAPs and TEPs.

**Third Priority Trail Network or System:** The collection of trails, BAPs and TEPs that have been assigned third priority in this plan, for inclusion by acquisition or designation (in the case of existing public rights-of-way) in the public trail network.

**Traditional Trail:** A trail that generally follows a natural route either along or within a wash or a cross-country path across an upland area.

**Trail Entry Point or TEP:** Refers to a location on a public recreation land boundary that can be reached only by a proposed county trail where approved public access to the recreation lands is proposed.

**Trail Network:** The interconnected matrix of trails formed by combining the primary, connector, and local trails in Eastern Pima County.

**Whole Access Trail:** A trail or trail facility that is accessible to handicapped persons.

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# CHAPTER 1

## EXECUTIVE SUMMARY

### 1.1 Background

Trail recreation is a highly valued tradition that has historically occurred in the mountain and valley areas of Eastern Pima County. The use of trails for walking, jogging, bicycling, horseback riding, and hiking is a significant part of the outdoor lifestyle that is treasured by area residents and attracts visitors, newcomers, and businesses to Southern Arizona. It is not surprising that trail users constitute an active, organized, and vocal interest group in this area. As the population of Pima County continues to grow, it is expected that the demand for public trails and adequate access will increase. A viable regional trail system will contribute to the area's quality-of-life and the community's prosperity.

Eastern Pima County is blessed with federal preserves, a state park, and county mountain parks that have protected and encouraged non-motorized trail use in most of the mountain regions in Eastern Pima County. However, access to trails in these public lands and to the use of traditionally used valley trails is not secure because many of these trails lie within private or state trust lands. On privately owned lands, trail users are trespassers unless they have the owners' permission to be there. Trail use on state trust lands is also trespass unless the user holds a valid Arizona hunting/fishing license and is pursuing those interests. As lands in Eastern Pima County are further developed or as private property owners object to trail use because of security or liability concerns, trail use and trail access may be lost.

As Eastern Pima County grows, trail use can be expected to increase as will the pressures to develop the remaining open areas that now contain trails. As traditionally-used trails are closed by development, and access to public trails is denied, trail opportunities are diminished and the burden on the remaining trails increases. Eventually, the carrying capacities of accessible trails will be exceeded, causing environmental damage, degradation of the recreation experience, and conflicts among trail users.

Recognizing the importance of trail recreation and the importance of securing access to trails on public lands, Pima County developed a trail access plan in 1976, which was adopted by resolution in 1979. In addition, there have been major acreage additions to the county's mountain parks and trail policies have been added to many land-use plans. Despite these significant trail-related actions, the perception of a growing trail crisis has been increasing in the public mind for the last ten years. Several problems contribute to this perception.

Few observers are satisfied with the progress made following the 1976 access plan. Access to public lands has increased, but these improvements appear outweighed by problems such as the continued uncertainty about access to Pima Canyon, the near loss of and ongoing threats to access at Ventana Canyon, and the failure to regain access to Madrona Ranger Station after more than 20 years.

Park land areas and trails within them have increased significantly but these gains have been offset by the explosion of urban development that has closed many traditionally used trails. These trails are being lost not only because of urban development but also because property owners are seeking to protect themselves against liability and security risks connected with public use of trails on their land.

In 1988, the Pima County Board of Supervisors authorized its staff to undertake development of the Trail System Master Plan for Eastern Pima County. This plan was prepared as the first phase for the development of a network of public trails in Eastern Pima County.

## **1.2 Plan Purpose and Process**

The principal purpose of Phase One of the Eastern Pima County Trail System Master Plan is to identify acquisition priorities for the development of a trail network for pedestrians, equestrians, bicyclists, whole access (handicapped) users, and other non-motorized trail users. 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, where possible, of locations that offer the community multiple benefits such as flood control, groundwater recharge, wildlife habitat preservation, and open space protection.

Public involvement and outreach were key components in the development of the plan. A citizen steering committee and an advisory committee, composed of representatives from federal, state, and local governments, provided guidance, advice, and information during the preparation of the plan and actively reviewed and commented upon its products.

In order to involve other interest groups and members of the general public, a trails bulletin was published and distributed three times; six public open house days were held to provide one-on-one communication opportunities; three meetings were held for the general public, and one workshop was held for members of the development community. In addition, presentations were made before interested private and public groups, and several press releases were issued

resulting in newspaper, radio, and television coverage.

## **1.3 Method**

The study area for the plan, shown in Map 1, is the portion of Pima County lying east of Anway Road within Avra Valley. This area, approximately 2880 square miles (or about the size of the combined states of Rhode Island and Delaware), was broken into eight subregions for the purposes of selecting acquisition priorities (Map 2). This helped to assure that the resulting trail priorities equitably covered all portions of the study area.

In order to inventory and assign priorities to trails in the proposed trail network, a panel composed of trail users from within the subregion, was created for each subregion. An effort was made to balance different trail-use interests within the panels to assure that all aspects of trail use were represented.

These subregional panels assisted in identifying, verifying, and describing the trails and public land boundary access points within their subregions; establishing criteria for assigning three levels of acquisition priority to the trails and access points; and in utilizing those criteria to rank the trails and access points.

Data on trails were verified through aerial photographs, map analyses and, in some cases, on-site inspections. The resulting network consists of more than 1500 miles of trails.

The priorities established by the subregional panels were then reconsidered in terms of their potential roles in the complete trail network. Lower priority trails were, in some cases, elevated in priority in the process of creating a continuous and cohesive trail network. This network and the priorities appear on Map 1.

## **1.4 Trail System**

The first priority trails form a basic network that will provide trail service to all subregions as well as linkages to public lands at more than 90 locations. As proposed, the first priority network would consist of about 650 miles of trails.

The most important benefit of the addition of second and third priority trails would be the expansion of local recreation opportunities. These additions would create a much greater number of loop routes within the trail network (Map 4). Other proposed trails, principally within road rights-of-way, would create additional long distance interconnections between subregions.

A component of the recommended first priority network would also tie the Pima County trail system into a larger statewide trail system. The Arizona Trail is a proposed non-motorized pathway that will stretch from Mexico to Utah. The proposed Arizona Trail route passes through the study area from the south along Cienega Creek, diverts to the east into Cochise County, and reenters Pima County to cross the Rincon Mountains, Redington Pass, and finally the Catalina Mountains. The first segments of this trail were opened this year, including the portion in the Coronado National Forest in Pima County.

## **1.5 Implementation**

The overriding consideration in the implementation of the proposed network is public acquisition 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, exchange of land, or, as a last resort and in situations with the highest public values, condemnation 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.

Because the trails in the proposed network pass through numerous local and state government jurisdictions and connect to county and federal lands, it will be critical for all involved governmental jurisdictions to work together to implement the plan. A trail network as extensive as that which is proposed may take as long as 20 to 30 years to implement. In order to assure that the involved jurisdictions retain their resolve to implement the plan, continued and active citizen support is critical. The establishment of two committees, one consisting of representatives from the involved government entities, and one consisting of interested citizens would be helpful in assuring that the trails plan is implemented. The establishment of a county trails coordinator position would also be valuable.

## **1.6 Recommendations**

### **1.6.1 Legislative Actions**

1. Pima County should adopt an ordinance to direct implementation of a non-motorized, multi-use public trail network. The county should further adopt, by resolution a policy to use the Eastern Pima County Trail System Master Plan as a guide for developing the trail network (Appendices A and B).
2. Other local governments in Eastern Pima County should adopt those portions of the Eastern Pima County Trail system Master Plan that apply to their jurisdictions in order to promote coordinated implementation of the proposed trail network (Appendices A and B).
3. Pima County should request that the Arizona State Legislature amend the recreational users' liability statute (A.R.S. §33-1551) to clarify its

application to public and private property owners and easement holders who open their lands for public use, so that it includes suburban/urban as well as rural locations (Chapter 8).

efforts such as the Adopt-A-Trail Program (Chapter 9).

### **1.6.2 Management Coordination**

4. Pima County and other governmental jurisdictions in Eastern Pima County should enter into formal and informal agreements to coordinate and promote acquisition, design, development, operation, and maintenance of a non-motorized, multi-use public trail network. An intergovernmental committee should meet at least biannually to address issues pertaining to the public trail network. Pima County Parks and Recreation Department should serve as the administrative coordinator for committees and actions arising from intergovernmental agreements in order to ensure continuity of the trail network (Chapter 9).

- Organize a neighborhood trail-watch program to monitor the status of established and proposed public trails (Chapter 9).
- Promote public trail etiquette and respect for private property rights and privacy (Chapters 9 & 10)

6. Create a Trails and Open Space Coordinator staff position within the Pima County Parks and Recreation Department. The coordinator will provide shared benefits to all local governments. The county should evaluate the potential of using an intergovernmental agreement to establish joint county/municipal funding for this position (Chapter 9).

5. Pima County should establish a Trails Advisory Committee of citizen representatives to work with the Parks and Recreation Department and other county departments to:

- Assist in updating the Eastern Pima County Trail System Master Plan at least every 5 years (Chapter 9).
- Help establish appropriate design guidelines for the Eastern Pima County trail network (Chapters 9 and 10).
- Facilitate the formation and actions of trail groups interested in participating in the maintenance and operation of public trails through cooperative

### **1.6.3 Trail Acquisition Program**

7. Pima County should recognize that public ownership of trail corridors and access points is essential in order to develop an effective trail network. Other trail implementation methods such as easement, lease, and license agreements, have value for complementing an acquisition program but are of limited value in developing a comprehensive public trail network (Chapters 8 and 9).

8. The Pima County Manager should identify a realistic yearly trail acquisition program in the annual update of the 5 year capital improvement projects budget (Chapter 9).

9. The Pima County Department of Planning and Development Services, when revising area plans or creating sector plans in

conformance with the proposed Comprehensive Land Use Plan, should incorporate policies reinforcing the Eastern Pima County Trail System Master Plan. The Department should also require that site analyses for specific plans and rezonings, and wherever else required by the county, demonstrate how the proposed development will comply with, or be given exemption from complying with, the Eastern Pima County Trail Plan. Minimum compliance requirements should include:

- Proposed developments should not be permitted to block or otherwise adversely impact an established public trail or to unreasonably preclude the opportunity for future implementation of proposed first, second, or third priority trails identified in this plan (Chapter 9).
  - Public trails may be required in proposed developments in which traditional trails have not been identified in this plan or are inadequate to accommodate the demands that will be generated by the new community. The public trail network within the proposed development should ideally connect to the county trail network (Chapter 9).
10. Following acquisition of a public trail, the Pima County Parks and Recreation Department should complete an analysis of the trail corridor to determine appropriate levels of environmental protection, use, maintenance, and law enforcement prior to sanctioning any public use (Chapter 10).
  11. Where road rights-of-way have been given priority as potential trail corridors, Pima County Department of Transportation and Flood Control District, in consultation with the Parks and Recreation Department, should designate trails within these rights-of-way if such use is found to be compatible and appropriate. They should determine which road rights-of-way can accommodate a trail corridor based on public safety, road designs, trail requirements, and other pertinent criteria (Chapters 8, 9, and 10).
  12. Pima County Department of Transportation and Flood Control District, in consultation with the Parks and Recreation Department, should assess the potential impacts of road projects on any first, second, or third priority trails (Chapter 10).
  13. The Pima County Parks and Recreation Department should confer with utility companies to determine the opportunities, specific requirements, and strategies for implementing trails in utility rights-of-way as identified in this plan (Chapters 8 and 9).
  14. In making any major public parkland acquisitions, Pima County should ensure that trail access to the acquired lands and to other public lands via the county trail network is protected (Chapter 9).
  15. In consultation with the Trails Advisory Committee and other intergovernmental cooperators, Pima County Parks and Recreation Department and the Department of Transportation and Flood Control District should identify uniform public trail design criteria for the Eastern Pima County Trail network. The design goals and concepts presented in this plan should be used as the basis for this effort and all site specific planning (Chapters 9 and 10).

#### **1.6.4 Trail Design Criteria**

### **1.6.5 Immediate Actions for Implementing the Trail Network**

#### **Primary Trails**

16. Pima County's first actions in terms of acquisitions within the primary trail system should be to complete the linkages joining the Rillito and Santa Cruz River Parks and the planned Cañada del Oro and Pantano Wash River Parks. The acquisition of approximately 15 miles of privately owned channel between these river parks would establish almost 50 miles of contiguous public trail within the metropolitan core of Eastern Pima County (Chapter 9).
17. Pima County Parks and Recreation Department should initiate a design process, including public participation, to determine the specific design for the Central Arizona Project trail and ensure its compatibility with the Eastern Pima County Trail System Master Plan (Chapter 9).
18. Pima County Department of Transportation and Flood Control District should require public trail rights-of-way on both sides of watercourses with river parks in order to preserve access from either side and to avoid the need for public trail cross-overs at major arterials or via the wash bottom (Chapters 9 and 10).
19. Pima County Department of Transportation and Flood Control District should provide a means to eliminate or bypass obstructions to public trail use, such as flood control structures, fences, pits, and refuse in the major watercourses or in other washes with established public use (Chapter 10).

20. Pima County should preserve the remaining natural riparian habitats along all watercourses that are designated priority trail corridors. Riparian vegetation is an essential asset for public trail recreation as well as for flood control, wildlife habitat, and open space protection (Chapters 9 and 10).
21. Pima County should consult with the San Xavier District of the Tohono O'odham Indian Reservation about developing a public river park along the Santa Cruz River within the reservation boundary (Chapter 9).

#### **Subregion 1**

22. Begin acquisition studies in this subregion with the Saginaw Hill, Peña and Cardinal Trails before development eliminates viable opportunities for these trails.

#### **Subregion 2**

23. Resolve the Sweetwater Trailhead access problem through public acquisition of the one-half mile of trail and associated canyon land presently on private land east of the Saguaro National Monument, along with acquisition of the right-of-way along Sweetwater Trail Road.
24. Undertake to acquire the trail corridor along Sweetwater Wash, which has the potential to connect to the Sweetwater Trail.
25. Develop the West Branch Nature Trail with the cooperation of the city and the support and active participation of area residents.

26. Implement the Anklam Wash local trail.

#### **Subregion 3**

27. Continue negotiations with the State Land Department for acquisition of

land and rights-of-way for Tortolita Mountain Park. Such negotiations should be preceded by preliminary park master planning and identification of feasible funding sources.

28. Develop ways to enhance coordination with the jurisdictions of Marana and Oro Valley in order to promote rezoning dedications for open space and public trails.

#### **Subregion 4**

29. Pursue the acquisition of Agua Caliente Wash, especially the portion between Agua Caliente Park and the national forest. Accompany acquisition with an arrangement that establishes adequate public access.
30. Require dedication, at the time of rezoning, of adequate public access to Pima Canyon and an adequate trail corridor within any remaining unsubdivided segments of Pima Wash.
31. Improve parking, signage and directions for public access to Ventana Canyon. Initiate steps to acquire a public right-of-way as a permanent solution.
32. Assess the compatibility of trail use within the following road rights-of-way: Birch Way, Bonanza Way, Wentworth Road, and the Agua Caliente-Tanque Verde Link. Consider acquisition of portions in private ownership.
33. Begin acquisition studies for the Shurban Loop. Begin negotiations with Saguaro National Monument concerning relocation and construction of the Old Spanish access point.
34. Begin an acquisition program for the Freeman Wash/Del Este (Reyes Wash) trail.

#### **Subregion 5**

35. Initiate an agreement among all involved parties that would ensure public access at the Buehman Canyon North access point.

#### **Subregion 6**

36. Pursue an agreement with the owners of Rocking K properties, the X-9 Ranch, and other applicable lands to allow public trail access to Madrona Ranger Station via Rincon and Chimenea creeks in the near future.
37. Explore the possibility of providing some public access to Madrona Ranger Station, perhaps on a limited permit system, via the X-9 Ranch Road. The county may also need to purchase/lease a trail right-of-way across state trust lands to effect this goal.
38. Continue to pursue attainment of an in-stream flow permit of the Cienega Creek Natural Preserve in order to maintain the outstanding trail qualities of this area.
39. Pursue measures to allow completion of the Arizona Trail along Cienega Creek and elsewhere within county jurisdiction.

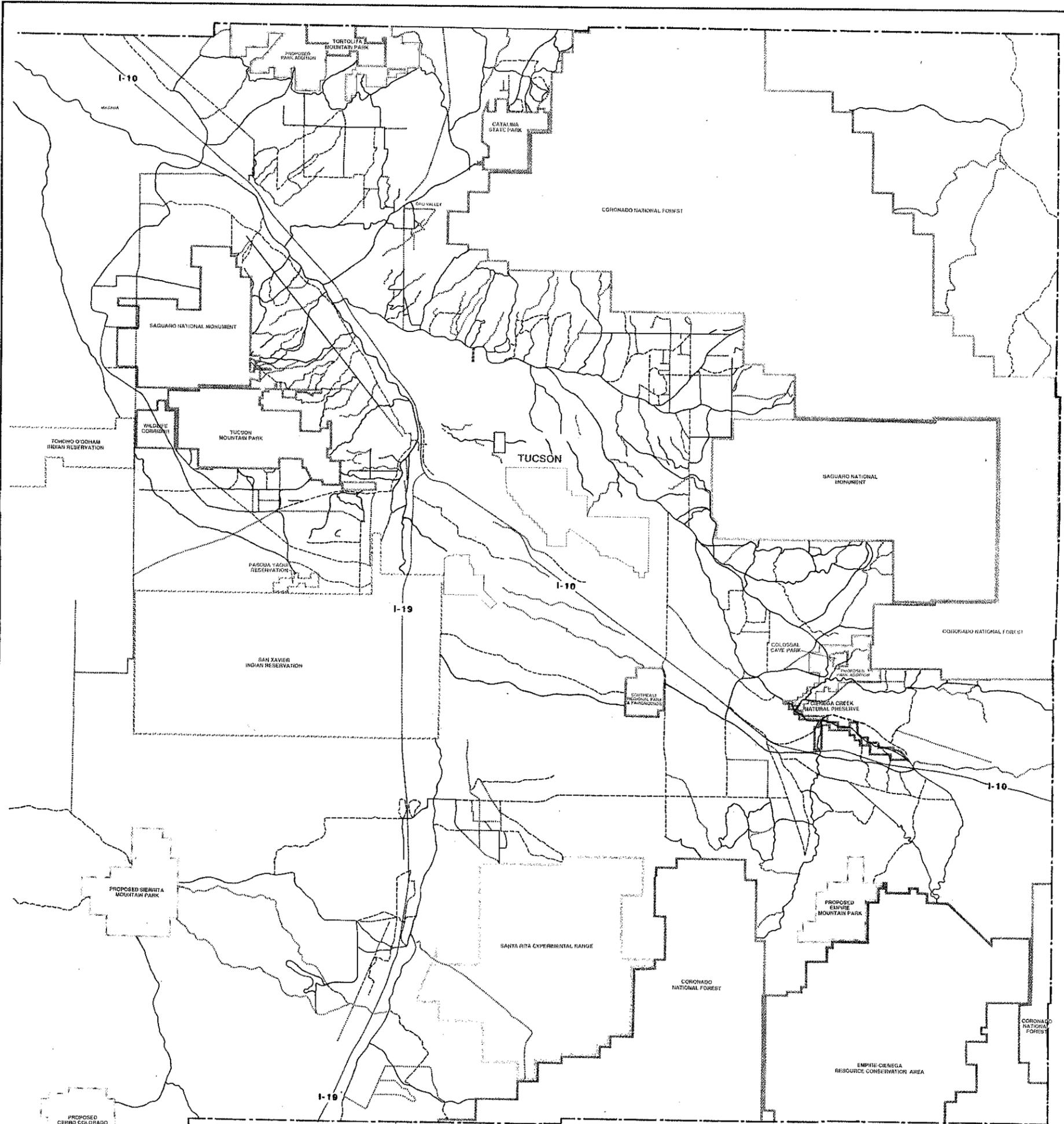
#### **Subregion 7**

40. Develop a land acquisition package for the proposed Sierrita and Cerro Colorado Mountain Parks. Parklands acquisition should include acquisition of trail corridor rights-of-way.
41. Designate bridle trails on selected road and utility rights-of-way.
42. Establish an urban trail network in Green Valley along major drainageway and road rights-of-way, which will connect to the future Santa Cruz River Park. A

footpath system could be started immediately through community support and user participation.

**Subregion 8**

43. Select one from among the five first priority wash segments and initiate a trail design effort. Take into consideration the weaknesses and strengths of the completed Alamo Wash linear park and build on the strengths.

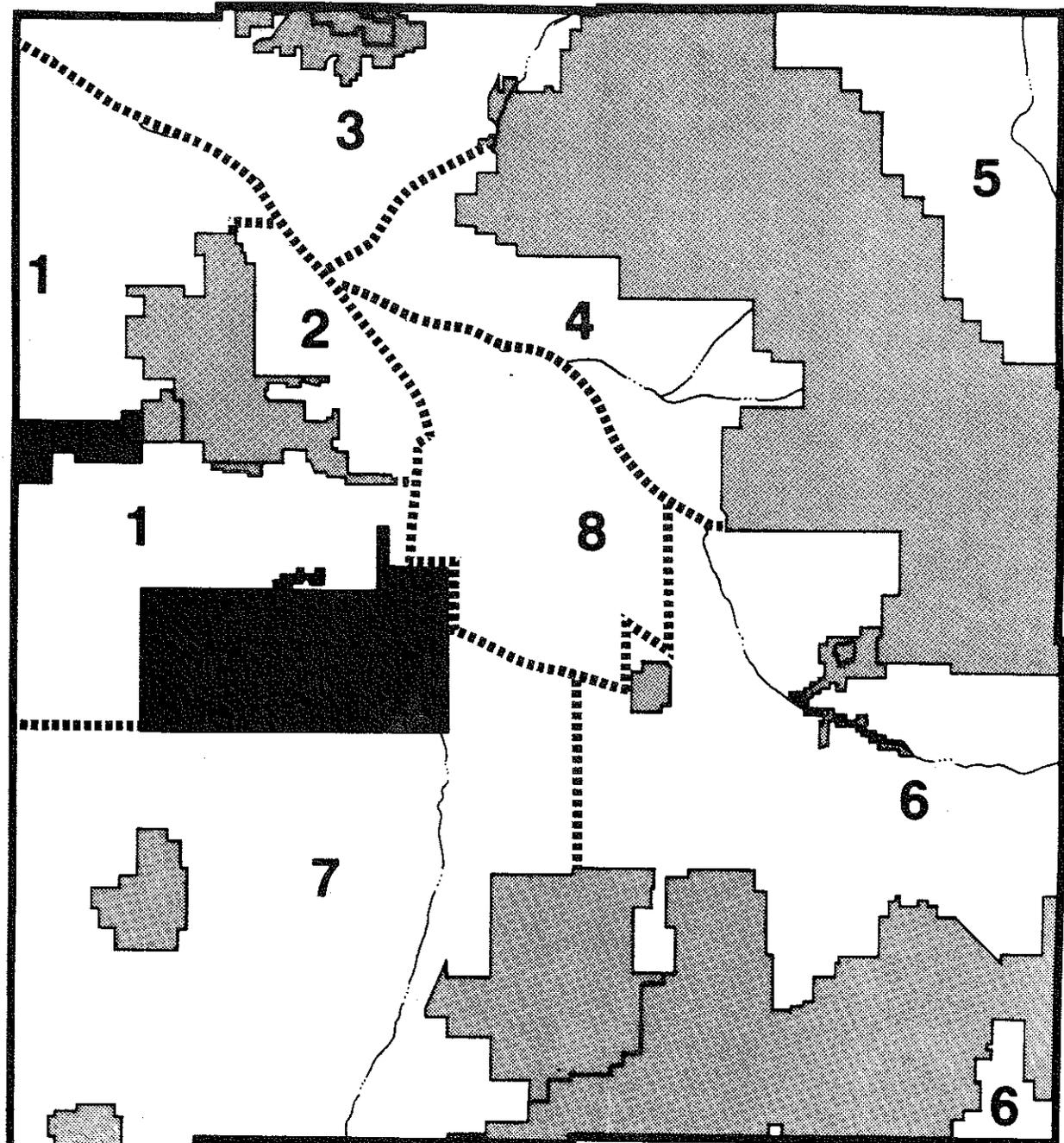


# MAP 1: COMPREHENSIVE TRAIL NETWORK FOR EASTERN PIMA COUNTY\*

- First Priority Trail Network
- - - Second Priority Trail Network
- · · Third Priority Trail Network

## EASTERN PIMA COUNTY TRAIL SYSTEM MASTER PLAN

Scale: 1" = 10 Miles / 1:62,500  
 Date: 11/2007 / 11/2008  
 Author: [illegible]  
 [North Arrow]



**MAP 2: TRAIL SUBREGIONS IN EASTERN PIMA COUNTY**

- Subregion 1: West and South Tucson Mountains
- Subregion 2: East Side Tucson Mountains
- Subregion 3: Tortolita Foothills and Northwest Catalina Mountains
- Subregion 4: Santa Catalina/Rincon Foothills
- Subregion 5: San Pedro River Valley
- Subregion 6: Rincon Valley/NE Santa Rita Mountains
- Subregion 7: Upper Santa Cruz Valley
- Subregion 8: Metropolitan Tucson

-  Public Lands
-  Tohono O'odham Indian Reservation, Including San Xavier District

0 1 2 3 4 5 MILES



## CHAPTER 2

# AN ASSESSMENT OF TRAIL ISSUES IN EASTERN PIMA COUNTY

### 2.1 Eastern Pima County Trail Heritage

Trails are an integral part of our heritage in southern Arizona. For centuries, trails, usually following major watercourses, were the only avenues of communication connecting communities. The Hohokam Indians walked the Santa Cruz River, the Cañada del Oro, and other streams to visit their relatives and friends in distant villages. They followed paths up the mountain canyons to hunt deer and traveled well-known, cross-country trails over Redington Pass and into the Avra Valley to trade with neighbors. When Father Kino and his Spanish companions rode into Tucson in the late 1600s, they traveled north from Mexico along routes that followed the Santa Cruz and San Pedro rivers.

From such ancient beginnings stems the Southwestern tradition of desert trails that have become part of the cowboy philosophy, "Don't fence me in." In southern Arizona, trails are part of our regional image of our heritage, land, and lifestyle, memorialized in ballads and legends. This image is used to sell Southern Arizona to the rest of the world through photographs of riders on horseback silhouetted against a desert sky and hikers wending their way through a stand of giant saguaro.

In recent years, the trails-oriented lifestyle has expanded to include urban walkers and joggers who exercise for their health and general well-being as well as

bicyclists who ride for exercise and recreation or commute to work.

Eastern Pima County's dry desert climate promotes these activities by seldom seriously interfering with out-of-door pursuits. In the mild winters one can walk, ride, or bicycle at virtually any time during the day. In the summers, the heat may limit trail activities to dawn and dusk, but other weather conditions seldom completely preclude them.

### 2.2 Trail Use: An Endangered Tradition

In the late 1980s, these images, representatives of an ancient tradition, as well as being symbols of ourselves, are not faring well. The crux of the matter is that undeveloped private property has long been considered *de facto* public land. During the years when many privately owned lands were natural desert, the habit of public trail use became firmly established.

In recent years, as development has expanded into the foothills and along the urban and rural washes where trail corridors are usually located, the private-public land ownership distinction has become a source of conflict for trail users and property owners. In some cases, it has even affected the ability of the public to enter public lands specifically designated for recreational purposes. An ever-growing number of private lands are being closed to public trail use and an increasing number of people are crowding into the public trails that remain.

#### 2.2.1 A Historical Perspective on Trail Planning and Related Issues

Although many traditional trails on private land have been lost, some gains, especially in related endeavors also have been made. The greatest gains have come

in bicycle planning and in the expansion of public recreation and natural resource land. Some success has also been achieved in obtaining access to public land trails, and in the creation of linear parks along major watercourses. Finally, numerous development planning documents contain trail provisions, but have been very unsystematically enforced.

### **Bicycle Planning**

Planning for bicycles facilities in the metropolitan area began in 1973-74 with the development of the first Regional Bikeway Plan. In 1981 the Pima Association of Governments Regional Plan for Bicycling was adopted. These plans have been very successful in promoting increased bicycling use within metropolitan Tucson. They note that with more than three percent of total daily travel currently being made by bicycle, Tucson has the highest level of bicycle use of any city in its size class in the entire country.

The 1981 bicycle plan points out that an important factor in the success of bicycle facilities planning has been the incorporation into the Long Range Transportation Plan of a provision stating that, "All new or reconstructed roadways included as a portion of this Plan will have sufficient outside lane width and other specific design provisions for safe, convenient use by bicyclists" (1). Supporting that provision are specific requirements for bicycle lanes within the capital improvement schedule for the regional transportation plan. In addition, in 1985 a map of bikeways and selected bikeable streets was published with an updated edition published in 1989.

### **Additions to Public Lands**

During the past 10 to 15 years, there have been significant additions to public lands in Eastern Pima County. Catalina State Park has been created; Tucson Mountain Park has almost doubled in size from 10,000 acres to nearly 18,000 acres;

Safford and Panther Peaks have been added to Saguaro National Monument West; Cienega Creek Natural Preserve has been created; the Empire-Cienega ranch property has come under Bureau of Land Management ownership; and about 3000 acres of the proposed Tortolita Mountain Park has come under county ownership, with an additional 7500 acres of state land and 1000 acres of Bureau of Land Management land expected to become part of the park. With all of these additions have come new opportunities for public trail use.

### **Trail Access**

The crisis relating to trail access was first formally identified 13 years ago when the 1976 Trail Access Plan was produced (2). This plan, written by a group of citizens with expertise and interest in trail issues and Pima County planning staff, documented the seriousness of the problem of gaining public access to trails on public lands.

The goal of the plan was to provide public access at key points into public recreation lands. It identified 14 access points and provided brief discussions regarding appropriate implementation methods for each. These points, along with the status of access in 1976 and 1989 are identified in Table 2-1. Although, many access problems have not been solved, the plan did make an impact. In 1976, there was established public access to two of the points (Finger Rock Canyon and Bear Canyon); by 1989, seven were publicly accessible.

The plan also proposed a change to the Pima County zoning code to help implement access at the identified points. After state enabling legislation was passed in 1977, the following passage was added to the code. Located in Chapter 18.69 (Subdivision Standards), it reads as follows:

*Hiking and equestrian trails easements or rights-of-way shall be provided: a. When such trails are officially*

*designated by "The Trail Access Plan for the Tucson Metropolitan Area," as amended, or by any county area plan, as amended; or b. As may be required by the planning and development services department.*

Finally, the plan itself was adopted by the Pima County Board of Supervisors as a resolution in 1979.

### **River Parks**

The other important component of trail planning in Pima County has been the program to create river parks in connection with bank stabilization programs along the major watercourses. Implementation of river parks along the Santa Cruz and Rillito Rivers has begun, with two others, along the Pantano Wash and the Cañada del Oro, just getting underway.

In 1976 the master plan for the Santa Cruz River Park in the City of Tucson was produced by Guy S. Greene and Associates, with an updated version produced in 1982 by Rogers and Gladwin. In 1978, Tucson and Pima County published Parks, Recreation and Open Space: A Conceptual Plan (3,4). The conceptual plan cited the Santa Cruz River Park as a major element of the open space program. Acquisition and development of the park was given a first priority in the 1985 capital improvement program budget. As of 1989 the river park is in place along much of the river between Speedway Boulevard and Mission Lane. Design contracts have been awarded for the portion from St. Mary's Road to Grant Road (construction planned for 1989-90); Mission Lane to Ajo Way (construction planned for 1990-91); and Ajo Way to Irvington Road (construction planned beyond 1992-93).

Planning for the linear park on the Rillito River began in connection with the Tucson Urban Study of the Army Corps of Engineers in 1982 and the Rillito Corridor Study in 1984. The main purpose of the Rillito Corridor Study was

to locate a major transportation route somewhere in the vicinity of the Rillito River. As a result of serious public opposition, the proposed parkway was never built. However, the one product of the study that was adopted by Pima County was a linear park plan for the Rillito River. At present, a portion of that park, from Flowing Wells Road to Campbell Avenue, has been completed and enjoys enormous popularity. Another mile, from Flowing Wells Road to La Cholla Boulevard, is being designed with construction planned for 1990.

Linear park design has also begun on 5 miles of Pantano Wash from its confluence with the Tanque Verde Wash to Golf Links Road (construction planned between 1990 and 1992); and 1.5 miles of the Canada del Oro from La Cholla Boulevard to Thornydale Road (construction planned between 1991 and 1993). One mile of linear design has also begun on Tanque Verde Wash from Sabino Canyon Road to Tanque Verde Road with construction planned for 1990. However, a formal linear park associated with bank stabilization is not intended to extend any distance along Tanque Verde Wash. According to the Pima County Department of Transportation and Flood Control District, the majority of the wash will stay undisturbed.

In addition to the river parks on major watercourses, a trail is presently being constructed along a portion of Alamo Wash. The soil-cemented section of the wash, from Glenn Street to a point a short way north of Fort Lowell Road, has been designed as a linear park following a plan prepared in 1986 by Wheat and Associates (5).

### **County Policies Relating to Trails**

Numerous county policies in area, community, and neighborhood plans offer guarantees relating to trails. Such policies occur in at least eight county area plans and five community or neighborhood plans.

Several pertinent examples are cited below.

**Tortolita Community Plan  
(Adopted by the Pima County  
Board of Supervisors, 1982):**

*The Board of Supervisors shall...insure (that) adequate hiking and equestrian trails are acquired during the development process. The following routes (among others) shall be considered major collector trails in the area: Cañada del Oro to Santa Cruz and Rillito; to Catalina State Park; and assorted Tucson Mountain Trails: Wild Burro Canyon, Honey Bee Canyon, Ruelas Canyon.*

**Catalina Foothills Area Plan  
(Adopted by the Pima County  
Board of Supervisors, 1983):**

*...Pima County Parks and Recreation Department should review major watercourses and washes as indicated on the map to determine the feasibility of allowing county controlled public access in these channels, and amending the Trails Access Plan as necessary.*

**Southwest Area Plan (Adopted by  
the Pima County Board of  
Supervisors, 1985):**

*The Pima County Parks and Recreation Department shall develop a trails network plan which will be a system of non-motorized hiking and equestrian trails acquired through formal recreational easements or dedicated rights-of-way to provide recreational user routes through private land and linking public recreational areas.*

**Rancho Vistoso South  
Neighborhood Plan (Adopted by  
the Pima County Board of  
Supervisors and the Oro Valley  
Town Council, 1986):**

*Big Wash, the Cañada del Oro floodway and other major drainageways should be utilized as*

*parks, public hiking and equestrian trails, buffer zones, and linkages in an open space system. Such a system shall unify and link major public and private recreational areas, including Catalina State Park, with suburban and urban development.*

**Tucson Mountain Area Plan  
(Adopted by the Pima County  
Board of Supervisors, 1986):**

*Recreation easements for hiking and equestrian trails, as determined necessary by the Department of Parks and Recreation, shall be provided as a condition of rezoning. Highest priority shall be given to trails associated with major washes shown on the plan map.*

**Northside Community Plan  
(Adopted by the Pima County  
Board of Supervisors and the City  
of Tucson, 1988):**

*Promote pedestrian links, bicycle routes, and equestrian pathways to and within Rillito Creek, area parks, and washes in the Northside area. Provide equestrian, pedestrian, and bicycle paths that link new parks with the Pima County linear park along Rillito Creek."*

## 2.2.2 A Summary of Gains and Losses

As a result of all the efforts listed above, some significant successes can be cited. The most notable include the expansion of public recreation and natural resource lands and the creation of a usable and expanding bicycle system. The linear park program, although unfortunately tied to bank stabilization activities, has also achieved some success, although it has been slow in moving toward completion. More limited success has been achieved in providing public access to public lands and almost no success has been achieved in the dedication of trails for public use that are not tied to linear park development.

In only three cases have trails been dedicated for public use in connection with the rezoning and subdivision process. The portions of Roger Wash and North Roger Wash within the proposed Agua Dulce development in the Tucson Mountain foothills were dedicated to Pima County for public trail and open space uses. The portions of Big Wash and Honey Bee Canyon within the Rancho Vistoso development are in the process of being dedicated to Pima County, with Big Wash already posted as public open space.

Finally, a public equestrian trail connecting Linda Vista Boulevard with the Cañada del Oro was recently created in response to citizen concerns that access into the Cañada del Oro at this location would be lost. Negotiations among the Pima County Parks and Recreation Department, the developer, and the Town of Oro Valley should result in having the trail dedicated to Pima County pending recording of the Saddle Ridge II subdivision plat.

The crux of the issue remains the extraordinary rate of urban development, with which trail implementation and public land additions have not begun to keep pace. A second major problem has been the ineffective use of planning policies that relate to trails and to access. Unfortunately, trail provisions are often not taken seriously, with subsequent development actions being permitted to effectively cancel their intent.

The best known example is the continuing access problem associated with Ventana Canyon. Traditionally, access has been along the private road of the landowner in front of the canyon entrance. Although a public route has never been dedicated, the property owner has not denied access. However, when a resort and apartment complex were constructed across the traditional route, no clear provisions for public access were made, although the construction post-dated the 1976 access plan by several years. At present, it is not clear where

hikers may park and signage is contradictory. No usable access routes or parking facilities have been provided. The end result is that the existing problem has been compounded in a way that will be difficult to solve.

Other key access points identified in the 1976 plan (Pima, Agua Caliente-Milagrosa, Sweetwater, and Madrona) are still either closed to the public, threatened by development, or must be reached by crossing private land where public access could be revoked at any time. In addition, so many other traditional trails crossing private lands have been lost to development that the public's impression is that the entire situation has deteriorated.

To summarize, the nature of the present crisis is threefold:

- Public access to public lands is being lost as development occurs along public land boundaries,
- Traditional riding and walking trails are being lost as a result of development,
- Many planning policies relate to trails and trail access, but lack of enforcement has led to public cynicism and discouragement.

It is clear that a serious, long-term commitment on the part of Pima County and local municipalities is required if these problems are to be solved. In addition, good-will and coordinated action among county and municipal departments, land owners, and trail users will be necessary before a successful trail and trail access program can be achieved.

**TABLE 2-1. CURRENT STATUS OF BOUNDARY ACCESS POINTS IDENTIFIED IN 1976 TRAIL ACCESS PLAN**

LOCATION	Status 1976			Status 1989			COMMENTS
	Established Public Ownership and Access	Private Ownership/ Public Use Permitted	Private Ownership/ Closed to Public Use	Established Public Ownership and Access	Private Ownership/ Public Use Permitted	Private Ownership/ Closed to Public Use	
<b>Santa Catalina Mts.</b> Sutherland Trail		X		X			Within Catalina State Park; parking available.
Romero Canyon Trail		X		X			Within Catalina State Park; parking available.
Linda Vista (Pusch Peak)		X		X			Parking Available.
Pima Canyon		X			X		Rezoning decision pending.
Campbell Avenue		X		X			Inadequate corridor; minimal parking.
Finger Rock Canyon	X			X			Pedestrian trail in unpaved part of ROW needed.
Ventana Canyon		X			X		Development has made access very difficult.
Esperero Canyon	Trail crosses private land			Condition of trail unchanged			
Bear Canyon	X			X			
Agua Caliente & Milagrosa Canyons		X			X		
<b>Tucson Mountains</b> Safford Peak		X					SNM expansion has created access. No formal parking.
Sweetwater Trail		X			X		
Camino del Oeste		X		X			TMP expansion has created access. No formal parking.
<b>Rincon Mountains</b> Madrona Ranger Station			X			X	Private road across X-9 Ranch closed to public.

## **CHAPTER 3**

### **TRAIL PLANNING: NATIONAL AND STATE PERSPECTIVES**

#### **3.1 A National Perspective**

Historically, trail-oriented recreation has taken place primarily in remote, exceptionally scenic, and undeveloped settings. Trail use was generally an adjunct to camping, hiking, or fishing; or part of a family vacation of one or more weeks in duration. To meet this type of use, trails were established in national, state, and regional parks and forests. Most of the federal trails developed were long-distance trails of national significance, and to a lesser extent within large, publicly held recreation and open space areas.

Many of today's favored outdoor recreation experiences occur on shorter urban trails. Viewpoints on trails have expanded so they are now perceived as places to take a morning run, explore new areas, observe nature, socialize with family and friends, walk the dog, and commute to work or to school -- all activities that happen near the home.

Some reasons for this changing attitude include:

- Urbanization of the nation's population has increased and is now estimated at 80 percent;
- Urban residents are adjusting themselves to shorter outdoor recreation experiences that are closer to home;

- Americans' increasing interest in aerobic exercise, which includes running, jogging, walking, and bicycling on trails, is considered to be a trend, not a fad; and
- In response to national mandates, local governments are increasingly protecting natural resources that can provide a network of trail corridors and open space.

As a result, the nation now views trails as urban necessities, not as rural wildland amenities. Riding, hiking, and bicycle trails are beginning to be considered important for the growth and prosperity of our cities. Local decisions about public investment in trails often are influenced by the increases in the tax-base that result from higher property values near trails, or by the location of new businesses to the area because of "quality of life" considerations.

For example, when the Burke-Gilman Trail in Seattle was established the value of homes near the trail increased by 6.5 percent. While the value of the properties immediately adjacent to the trail did not appear to be affected by the trail, properties on and near the trail have been easier to sell than houses further away. The trail is heavily used by local real estate brokers as a marketing and advertising tool (6).

Another example of the effect of trails on property values can be seen in a study of property values near greenbelts in Boulder Colorado. According to this study, property values in an area were highest next to the greenbelt, and declined an average of \$4.20 for each foot the house was located away from the public lands. With all other factors being equal, the average value of property adjacent to the greenbelt was 32 percent higher than those 3,200 feet away (7).

Evidence of the impact of outdoor recreation opportunities on business location decisions can be found in a

survey by Valley National Bank. A survey of 71 economists nationwide indicated that Arizona's attractiveness to individuals and to businesses was based upon its climate, job opportunities, and open space including abundant outdoor recreation opportunities. In addition, more than 70 chief executive officers of businesses that had relocated or expanded their businesses in Arizona (creating \$970 million in indirect salaries and wages), said they chose Arizona for its "outdoor lifestyle and recreation opportunities" (8).

### **3.1.1 National, State, and Local Trail Systems**

At a national level, trails planning began in the 1960s with the development of the Department of the Interior's report Trails Across America (1966) and the subsequent passage of the National Trail System Act (Public Law 90-543) in 1968.

The National Trail System Act set into motion planning for a system of trails composed of National Scenic Trails, National Recreation Trails, and Connecting and Side Trails. National Scenic Trails were considered to be extended trails that focused on nationally significant areas. These include the Appalachian Trail and Pacific Crest Trail. National Recreation Trails were located in or near urban areas on publicly owned or administered lands, that provide a variety of outdoor recreation uses. Connecting and Side trails were those within federally owned park, forest, and recreation areas that would lead to Scenic or Recreation Trails.

The legislation did not provide a vehicle for developing coordinated urban trail systems outside of existing park and recreation areas. Instead, states were encouraged to develop their own plans. The states that did, through their Statewide Comprehensive Outdoor Recreation Plans, emphasized longer-distance trails. This has created a strategic problem because the demand for

trails is not necessarily where the opportunities have been provided. As a result, some trails are over-capacity and others are under-used.

Because a balance of trail supply and demand had not been reached, in 1987, President Reagan's Commission of Americans Outdoors re-evaluated the nation's trails policies. The Commission called for the provision of outdoor opportunities close to where people live and provides a vision of national trails "... that reach out from and around and through communities all across America, created by local action...corridors for hiking, jogging, wildlife movement, horse and bicycle riding" (9). Specific recommendations include the following:

- All Americans should have access to the outdoors close to home.
- Local governments should place particular emphasis on meeting the needs of less mobile people.
- A system of scenic byways should be established as roadways that, in themselves, become recreation destinations, and could be paralleled by bicycle and walking trails.
- Communities should establish greenways, corridors or private and public recreation lands and waters, to provide people with access to open spaces close to where they live, and to link together the rural and urban spaces in the American landscape.

The Greenway System conceived by the Commission would provide Americans with the opportunity to walk out their front doors, get on a bicycle, a horse, or a trail bike, or simply to don a backpack, and, within minutes of their homes, set off on a continuous network of recreation corridors that could lead across the country. This system, according to the Commission, could achieve six goals:

- Provide access to the widest possible variety of outdoor activities, close to home;
  - Conserve the diverse elements of the American landscape and full potential for human interaction with that heritage;
  - Build partnerships between public and private groups and individuals;
  - Encourage local pride in the quality and availability of outdoor assets;
  - Diversify and strengthen local economies and lifestyles through enhanced recreation opportunities;
  - Link urban and rural areas for recreation and conservation of natural resources.
- Trails are usually contained within a network of inter-connected, publicly owned, open space lands. Trail alignments follow the conservation and acquisition of regionally significant open space resources rather than being developed solely as part of a trail system.
  - Trail easements on private property are only used to complete a link in the regional network, and are the exception rather than the norm.
  - Trail corridors typically focus on water courses or ridge lines.
  - Systems concentrate on a few links between regionally significant public recreation and open space resources and do not emphasize numerous feeder trails from surrounding communities. Local and connecting routes are left to local governments and development interests.
  - The trails systems have publicly funded maintenance and operation budgets that are commensurate with the level of use.
  - Wherever possible, trails are designed to be used for hiking, horseback riding, and bicycling. Separate trails for these different uses are used only where use levels are exceptionally high and trail conflicts are evident.
  - Implementation of the trails systems have taken place over two or three decades, requiring strong and consistent support of nongovernmental organizations and vocal citizens over these long periods of time.

### **3.1.2 Local Trail Planning Approaches**

Throughout the nation a number of successful metropolitan and regional trail networks have been developed. This discussion centers upon five such trail systems:

- Hennepin County, Minnesota;
- Alameda and Contra Costa Counties, California;
- Santa Clara County, California;
- Boulder City and County, Colorado; and
- Montgomery and Prince Georges Counties, Maryland.

Physical planning elements common to all of these trail systems consist of the following:

- Development is supported by statewide legislation and funding.

### **3.1.3 National Programs and Assistance for Local Trail Systems**

At present, the Federal government has no programs that directly finance the development of local trails.

Instead, the federal government offers technical assistance through the National Park Service's Rivers and Trails Conservation Assistance Program. In this program, staff help is provided on a case-by-case basis for organizing initial planning activities, identifying issues and researching alternative strategies for solving site-specific problems and providing information and examples of similar projects.

This program is particularly helpful to communities that do not have staff knowledgeable about trails or that cannot provide staff time for trails. Projects that show strong local support and that link other recreation and open space areas are more likely to be selected for assistance under this program. The Park Service does not wish to be a leader in developing trails, but would rather assist communities where the support and interest already exists.

## **3.2 An Arizona Perspective**

Arizonans are generally very interested in trails and in outdoor recreation.

According to the participation study by Dames & Moore for the 1989 Arizona Statewide Comprehensive Outdoor Recreation Plan, hiking or walking for pleasure was the top-ranking recreation activity for Arizona residents, and the second favorite activity for visitors. Bicycling ranked ninth. Overall, the study found that 43 percent of Arizonans bicycle, 17 percent ride horses, and 68 percent hike or walk for pleasure (10).

Interest and concern about the quality and availability of recreation in Arizona is reflected in the fact that in 1985, Governor Bruce Babbitt formed and appointed a Governor's Task Force on Recreation on Federal Lands. This task force recommended the development of a state trail system as "one of the most economical means of providing outdoor recreation. They (trails) serve a wide constituency of users at relatively small unit costs" (11).

Arizonans spent over \$300 million on trail recreation in 1987. Spending on trail recreation by visitors to the state is estimated to exceed \$200 million annually (12).

### **3.2.1 Trail Systems in Arizona**

#### **Federal**

Arizona has six National Forests, totalling approximately 11.5 million acres of land. One of these forests, the Coronado National Forest, is partially in Pima County. Recreation is one of many uses for which forest service lands are managed. Trail construction and reconstruction in the Coronado National Forest is expected to be achieved at a rate of 30 to 40 miles per year. Trails within the Coronado allow hiking and horseback riding. Within the Catalina District there are about 165 miles of trails; in the Coronado National Forest, about 900 miles.

Seventeen percent of Arizona is managed by the Bureau of Land Management. This agency has trails throughout its jurisdiction and is in the process of preparing new Resource Management Plans that will include trails policies. By means of recent acquisitions, the Phoenix District of the Bureau has formed the new Empire-Cienega Resource Conservation Area in Pima County. The Cienega Creek portion contains part of the route of the Arizona Trail recommended by the

Governor's Task Force. This Conservation Area is about ten miles from the new Pima County Cienega Creek Natural Preserve. The Bureau is currently developing an initial resources management plan for the conservation area.

In 1984, there were 928,000 visitor-days of hiking on Arizona's National Forest Service lands and an estimated 47,000 visitor-days of hiking on Bureau of Land Management lands. Unfortunately, because of federal budget cutbacks and other priorities, existing trails on federal lands are deteriorating and almost no new trails are being planned or constructed (11). However, because user interest in trails is so strong, volunteers have helped to fill in the federal funding gaps through "adopt-a-trail" programs.

Within Arizona, there are 21 areas managed by the National Park Service, many of which have extensive trail systems. The Saguaro National Monument is in Pima County, and has interpretive as well as recreation trails. Interpretive trails provide information on the desert plants, animals, and environment.

The Bureau of Reclamation is responsible for the design and construction of water resource development projects throughout Arizona. Most recently the Bureau has been involved with the Central Arizona Project. While the purpose of the project is to transport Colorado River water across the state into Central and Southern Arizona, the Bureau typically spends about ten percent of its project costs on recreation. A long-distance trail along the CAP aqueduct from the Colorado River to Tucson is supported by the Bureau of Reclamation and is under construction.

The Governor's Task Force on Recreation on Federal Lands advocated the long-term improvement of three major cross-state trails: Arizona Trail, Central Arizona Project Trail, and Colorado River Trail. As discussed earlier, segments of both of these trails, the Arizona Trail and

the Central Arizona Project Trail, are located within Pima County.

The Arizona Trail will extend over 700 miles from the Mexico-Arizona border at Coronado National Memorial to the Utah-Arizona border north of Kaibab National Forest. It will be an unpaved, non-motorized, continuous pathway through some of Arizona's most scenic, primitive, and historic areas.

The trail represents an ongoing cooperative effort among many agencies and volunteer groups: National Forest Service, National Park Service, Bureau of Land Management, Arizona State Parks, Arizona State Land Department, U.S. Army, local governments and trail groups, Arizona Committee on Trails, Sierra Club, Kaibab Forest Products Company, and many others.

Several major segments of the Arizona Trail have been opened for use and work along the route is actively proceeding. In late May 1989, a segment of the trail through Coronado National Forest was officially opened. This portion of the trail lies in the Rincon and Santa Catalina mountains, with potential for linkages into the Pima County trails system.

Finally, the Central Arizona Project Trail in Pima County will be approximately 44 miles long. The Bureau of Reclamation and Pima County have agreed to construct the trail, although no design work has begun.

### **Indian Nations**

In general, there has been very little formal hiking or riding trail development on Indian lands. Most trails are unmaintained and hiking is subject to obtaining a permit from appropriate tribal authorities. Each Indian nation has the authority to plan and manage its own trails independently of other governmental entities in the State. The Tohono O'odham Indian Reservation in Pima County is currently undertaking such a trails planning process that may

include a provision for public use along the Santa Cruz River.

### **State**

Most of the lands owned by Arizona are state trust lands, which by law must be managed for their most lucrative use. Funds raised from the lease of these lands go to a number of purposes, including schools and prisons. There is limited authorized recreation use on these state trust lands because it is difficult to directly generate funds from such use. Arizona State Parks or local governments may lease trust lands, at fair market price, for recreational trails.

Arizona has a growing system of 24 state parks, 17 of which have trail systems. There is an emphasis on interpretive trails and on linkages to other trail systems on federal lands. Catalina State Park, in Pima County, includes a birding trail, nature trail, an equestrian trail, and trailheads to the Romero Canyon and Sutherland trails which extend into Coronado National Forest.

### **3.2.2 Local Trail Planning Approaches in Arizona**

Cities and counties throughout Arizona have been active in designating and improving trail systems. Predictably, larger, more urbanized cities and counties have the most extensively developed trail systems. Several smaller Arizona communities also are creating areawide trail systems, with strong community support and extensive volunteer efforts.

The status and extent of local trails programs and systems vary considerably. Some, such as Yavapai County and the Town of Cottonwood, are just beginning to discuss the development of a trail program; others, like the cities of Prescott and Casa Grande, and Mohave County have limited trail programs; and yet others like the City of Flagstaff, and the towns of Pinetop-Lakeside and Wickenburg, have or are actively planning city-wide

urban trails systems.

Two trails systems discussed here in more detail are those in Maricopa County and in the City of Scottsdale. The Maricopa County program is of interest because, as a county with a major urban center, Maricopa County has much in common with Pima County. The Scottsdale program is of interest because it relies heavily upon the involvement of private developers for its system.

In reviewing the established trails programs in Arizona, certain consistencies emerge:

- In many locations, access across private lands is controversial unless trails are incorporated into the general plan and into the development planning process.
- Volunteers play an important role, particularly because funding for trail maintenance is often limited.
- Trail advocates are critical in helping to design and implement trails programs.
- Extensive trails systems are generally preceded or accompanied by a trails plan.
- Funding for trail systems and planning comes from a variety of sources, including private developers (Scottsdale), fund-raisers (Pinetop-Lakeside), Land and Water Conservation funds (applied for by Pinetop-Lakeside); and general funds (Flagstaff, Maricopa County, and Scottsdale).

### **Maricopa County**

Maricopa County's trail program officially began in 1964 when the Board of Supervisors adopted a plan for 720 miles of hiking and equestrian trails. One of the early trails was the Sun Circle Trail, a 110-mile National Recreation Trail looping around the Phoenix valley.

The county now has more than 20 major trails, with numerous minor link trails and many more planned, primarily in the regional parks.

The Maricopa County trails system contains linkages to the Arizona Trail; interpretive trails that identify desert trees and plants; recreation trails with special features such as caves, petroglyphs, a waterfall, and scenic desert terrain; historic trails that follow pioneer paths and silver shipment routes; and a "buggy trail" for non-motorized buggy and wagon use as well as for hiking and horseback riding, which links to historic trails.

All Maricopa County trails are for non-motorized use only. The county currently has no policies pertaining to mountain (all-terrain) bicycles.

The current focus of the trails program is the identification of major trail access points and areas of horse ownership/activity that are becoming "landlocked" because of evolving development patterns. There is an emphasis on protection of trails access, on the provision of links, and on a continuous trail system.

One of the challenges facing the Maricopa County trails program is improved communication between the Planning Department and the Parks Department. Given the rapid pace of development in the county, it is critical that trails be included in early stages of development plans when trail linkages can most easily be added.

Citizen involvement has been a critical part of the Maricopa County program. The Maricopa County Hiking and Riding Trails Committee, formed in 1961, is the leader in this area. The Committee undertakes projects, and volunteers have provided valuable assistance in trails work in individual parks.

### **City of Scottsdale**

Scottsdale has a well-established hiking and riding trails program. Trails plans are incorporated into the Circulation Element of the Scottsdale General plan and into the Tonto Foothills Plan. Scottsdale has published design guidelines for trails and works actively with developers to achieve dedication of trails in accordance with adopted plans.

Hiking and riding trails follow washes and scenic corridors wherever possible. Mountain bicycles are allowed on the trails, but primary uses are hiking and horseback riding. There is a strong emphasis on creating linkages to regional and statewide trails and on system continuity and protection.

An active citizen group, the Equestrian Trails Committee has drafted a report that proposes a comprehensive Trails Plan with about 200 miles of trails to be developed or retained. These range from urban, landscaped trails to roadside corridors, to major washes, and to mountain trails. This plan has not yet been adopted and is in preliminary stages of staff review.

Trails in Scottsdale have been constructed primarily by private development interests as development occurs. At some time in the future, the City will need to look at the existing system and allocate funds to fill in the gaps, creating trail continuity.

Scottsdale is working with the state toward eventual realization of the Central Arizona Project Trail and to include bicycle/trail crossings along the Pima Freeway.

### **3.2.3 Arizona Programs and Assistance for Local Trail Systems**

In June 1989, Governor Mofford signed the Arizona Trails Bill into law. This law:

- Requires the Arizona Parks Board to review and revise a trails plan once every five years, assessing trail use, conditions, and supply, with recommendations for trail improvements; and
- Establishes a State Trails Fund, but does not request an appropriation. The Fund will accept future appropriations, gifts, grants, donations and monies from the sale of materials. Fund monies will be spent for maintenance, acquisition, construction, operation, or planning of trails. Fund expenditures will be on a matching basis, subject to State Parks Board approval.

Arizona's statewide trail programs are administered by the Arizona State Parks Board, which also manages and develops trails in State Parks as described earlier. Major programs include the development of the State Comprehensive Outdoor Recreation Plan (SCORP), Arizona Hiking and Equestrian Trails Committee, Adopt-a Trail Program, Arizona State Trails Guide, and the Governor's Bicycle Task Force.

### **SCORP**

To establish the eligible participation of Arizona and its public subdivisions in the federal Land and Water Conservation Fund program, the state is required to prepare a comprehensive plan for outdoor recreation (SCORP) at least every five years. This plan is completed for the state by the Arizona State Parks Board, which is also responsible for administering the Land and Water Conservation Fund program in Arizona.

A major component of the 1988-1989 update of the SCORP was the Arizona Trails Plan. In addition to calling for the passage of the State Trails Act which was recently signed into law, the plan recommended:

- Expansion of the current adopt-a-trail programs at all levels of government,

and the establishment of trail coordinator positions;

- Development and dissemination of a trails protection package which would give trail providers information on exchanges, easements, donations and acquisitions in securing trail access;
- Education of trails users on ethics, conflict, safety and protection of natural and cultural resources;
- Identification of multiple-use conflicts on trails and establishment of strategies to resolve them; and
- Budgeting for adequate trail maintenance and use of volunteers, service groups, and agency personnel to improve the maintenance of trails and trailheads.

### **Arizona Hiking and Equestrian Trails Committee**

The Arizona Hiking and Equestrian Trails Committee is appointed by Arizona State Parks Board and consists of 10 trail provider agencies and 12 trail-user groups. Members serve as volunteers and have been active and effective advocates for trails throughout Arizona. Their projects have included:

- Arizona Trails newsletter;
- Long-distance trails;
- Historic Trails Guide;
- Trail Protection;
- Rails-to-Trails;
- 1989 Trails Conference (the 1990 conference will be held in Tucson in May); and
- Trail signing and monitoring.

### **Adopt-a-Trail**

In addition, since 1981 the Committee has been responsible for the state's Adopt-a-Trail program. To date, many miles of trails in Arizona have been adopted by volunteers or volunteer groups through this program. However, according to the May 1988 edition of the Adopt-A-Trail Handbook, within the Coronado National Forest's Santa Catalina Ranger District (which is mostly in Pima County), only the 7.6 miles of trail in Pima Canyon have been adopted. This program could be expanded within Pima County, given the strong interest in trails and limited participation to date on national forest lands.

### **Arizona State Trails Guide**

In 1988, the Arizona Hiking and Equestrian Trails Committee published a guidebook to Arizona's trails. Several hundred trails are described and arranged by geographic region. The guidebook includes information on trail safety and ethics, a trails bibliography and other information. The expansion and updating of the guide will be an ongoing effort.

### **Governor's Bicycle Task Force**

The Governor's Bicycle Task Force has primarily been involved with bicycle concerns on paved roads and highways. However, with the increased use of mountain bikes, new issues of multi-use and trail conservation may arise and be dealt with by the task force.

## **CHAPTER 4**

# **PLAN PURPOSES, PROCESS, AND SCOPE**

### **4.1 Purposes**

The principal purpose of Phase One of the Eastern Pima County Trail System Master Plan is to identify acquisition priorities for the development of a non-motorized, public trail network in Eastern Pima County. The identified goals for this trail network are to:

- Expand on the existing and planned river parks system to form a trails network that will interconnect the major public recreation lands and protected open space in Eastern Pima County;
- Provide for trail recreation in all subregions of Eastern Pima County;
- Extend trail service into local areas;
- Accommodate pedestrian, equestrian, bicycle and whole access types of trail use within the network; and
- Take advantage of trail locations that offer the community multiple benefits such as flood control, groundwater recharge, wildlife habitat and migration corridor preservation, and open space protection in addition to trail recreation.

As specified in these goals, the network will be located in and around metropolitan Pima County and incorporate Agua Caliente Wash, Cañada del Oro, Pantano Wash, Rillito and Santa Cruz rivers, and Tanque Verde Wash as the backbone of the system (primary trails). Other trails in the network (connector and local trails) will be located within secondary washes,

road and utility rights-of-way, and some cross-country upland corridors to form linkages to public lands, such as the Coronado National Forest, Saguaro National Monument, and county mountain parks or to form local loops. The network does not include the trails within the public lands. With the exception of the river parks along segments of the major watercourses that are bank protected for flood control reasons, wash trails are to be left in a natural condition and restricted to foot or horse use.

The plan also has two secondary purposes: to present and make recommendations on methods for acquiring public ownership of trails and to establish goals to serve as system-wide guidelines for designing individual trails within the network. This plan is being based on trails that have been traditionally used in and around the metropolitan areas but that are often on private lands. The acquisition methods will be used by Pima County and local municipalities to acquire trails for public use. Public ownership of trails has been found to be essential to secure public rights to use them and to ensure that public agencies can effectively manage and regulate them. The design goals used are necessary as a set of broad specifications from which individual trails can be designed and developed. These goals address design features such as natural resource protection, private property protection, flood hazards, and trail facilities.

### **4.2 Planning Process and Scope**

#### **4.2.1 Planning Tasks**

Phase 1 was limited by the planning purposes described above, principally to the identification of a proposed trail network and priorities for acquisition. The next phase of planning for this trail network is projected to include the development of specific design criteria to

guide its implementation. The final planning phase would be the preparation of detailed site-specific plans for implementing individual trails.

Ten major planning tasks were identified for the development of this plan. Each task is summarized below.

### **Task 1: Public Involvement Program**

A public participation process was developed that involved individual trail-users, trail interest groups, community interest groups, and public agencies. A number of methods were used to contact and involve these groups in the process including a project steering committee composed of citizens, a project advisory committee of agency representatives, public meetings, special workshops, open house information days, individual interview and contacts, trail bulletins, and news media features and releases.

The main contributions of the public participation to the planning process were:

- Extensive assistance in identifying and inventorying traditional trails;
- Guidance in developing criteria for selecting trail acquisition priorities;
- Citizen selection of trail priorities based on the identified criteria; and
- Review and criticism of trail design goals.

A detailed review of the public involvement program is presented in Chapter 5.

### **Task 2: Develop Trail Evaluation Methodology**

In Task 2, an evaluation methodology was developed to determine acquisition priorities within the trail network and to focus trail inventory efforts. Criteria that were used to develop priorities included:

- Type(s) of trail use;
- Amount of current and potential trail use;
- Multiple-use potential of trail;
- Natural resource features of trail;
- Compatibility of trail with adjoining private property uses;
- Importance of trail as an access route to major watercourses or public recreation lands;
- Importance of trail as part of a local loop;
- Relative acquisition, development and maintenance cost of trail;
- Threat of trail or access loss; and
- Relation of trail to an approved public land access point.

### **Task 3: Trails Inventory**

The proposed Pima County trail network was identified with the help of eight Subregional Panels and members of the Steering Committee. Most trails are located in natural washes; a few are in upland areas. The inventory also identified utility and road rights-of-way as possible trail corridors.

Published information that was examined in developing the trails inventory included the following sources by Pima County:

- 1976 Trail Access Plan;
- Draft Map for Land-use Element (unincorporated Pima County component of comprehensive plan);
- Drainageway Classification System;
- Interim Official River Park and Trail System Map and Report;
- Open Space Report and maps;

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- Pima County Department of Transportation and Flood Control District maps;
- Pima County Flood Plain Ordinance; and
- Pima County River Park Design Guidelines and Mitigation Standards.

In addition, the following sources were used:

- Critical and Sensitive Wildlife Habitats Study;
- Pima Association of Governments Bicycle Route Planning Data;
- Pima Trail Association maps;
- Tucson Bikeways and Bikeable Streets Map;
- University of Arizona/City of Tucson Bike Study; and
- Urban Design Commission Report.

Agencies and jurisdictions in Eastern Pima County that were kept informed of the project and the trail inventory process are listed below. Active members of the Advisory Committee are indicated with an asterisk.

- Arizona State Land Department\*
- Arizona State Parks
- Bureau of Land Management\*
- Bureau of Reclamation\*
- City of South Tucson
- City of Tucson\*: Parks & Recreation and Planning Departments
- Community of Catalina\*
- Coronado National Forest\*
- Davis Monthan Air Force Base

- Development and Business Communities\*
- Pascua-Yaqui Indian Tribe
- Pima Association of Governments\*
- Pima Community College
- Pima County\*: Parks & Recreation Department, Planning and Development Services Department, and Department of Transportation and Flood Control District
- Saguaro National Monument\*
- Tohono O'odham Indian Tribe
- Town of Marana\*
- Town of Oro Valley\*
- University of Arizona\*

### **Task 4: Trails Evaluation and Ranking**

The traditional trails identified in Task 3 were evaluated and ranked using the criteria developed in Task Two. Citizen subregional panels assigned trails to first, second and third priority rankings for acquisition.

### **Task 5: Trail Property Investigations**

Investigations to identify the specified properties on which first priority trails were located were deleted from the Phase 1 planning process because of two factors. First, the numbers and mileages of trails inventoried were far larger than anticipated. Second, the county found that property record research for trails was more involved than could be accommodated within the allocated budget and time for the study. Property research for 12 first priority trails has been initiated by Pima County Department of Transportation and Flood Control District. Future property research by this department will include

the major watercourses and other trails prior to acquisition.

### **Task 6: Trail Mapping**

Trails and trail access points inventories in this project were recorded on two scales of maps. The entire trail network is presented on the Eastern Pima County base map prepared by the Pima County Department of Transportation and Flood Control District. This map is at the 15-minute quadrangle scale and is suitable for presentation purposes. The pocket maps enclosed in this plan are approximately 50 percent reductions of the original full-size maps.

The second map scale, 7.5-minute quadrangles, was used to record the alignments of individual trails in greater detail than could be achieved with the 15-minute series. The resulting collection of 46 maps gives complete coverage of the inventoried network at a scale that can be put directly into a computer data base that the county is developing that stores, analyzes, and presents geographic information (Interactive Mapping and Automated Geographic Information Network -- IMAGIN).

A product related to but separate from this plan is a trail-users' guide to trails already open for public use within the inventoried network. This guide presents trail maps as oblique aerial views of the landscape. The scale of these views varies to fit the length of the trail depicted

### **Task 7: Link Trails Methods**

There was an emphasis early in the planning process on trying to identify methods that could be used by trail-users as tools to negotiate limited rights to use trails on lands that would probably remain in private ownership. Equestrians are particularly interested in these types of small trails to use as linkages into the public network.

This concept met with mixed results for several reasons. First, the scope of the

inventory exceeded expectations and amounted to over 1500 total miles. Efforts relating to this inventory became very time-consuming. Many of the smaller trails that fit the link trail concept were eventually included in the priority ranking process; most of them received a third priority ranking. Second, a review of other metropolitan area trail systems found that little attention had been placed on private link trails. Instead, the focus, as in this plan, has been on identifying methods for public acquisition of priority trails. Finally, a legal analysis of potential methods for trail implementation found that the options for establishing general public access or even limited public access to trails on private property are very limited.

Lease and license types of agreements between individual trail-users and property owners that potentially could be used for link trails are discussed in Chapter 8. No legislative or other types of legal innovations for this purpose were identified. The good neighbor policy appears to remain as the best tool for this need.

### **Task 8: Trail Ordinance**

Several proposed ordinances were prepared for consideration and adoption by local governments. These ordinances address formal adoption of this plan and changes in the zoning codes to support dedication of trails at the time of rezoning. These ordinances were developed as the result of legal literature review, and discussions with the Pima County Project Management Team, the Pima County Attorney's Office, and other appropriate legal authorities.

### **Task 9: Trail Intergovernmental Agreement**

An intergovernmental agreement was initially envisioned as being a useful tool for ensuring broad-scale cooperation and coordination among the various local government units that need to be involved in implementing the Eastern Pima County

Trail System Master Plan. Investigations during the planning process determined that both formal and informal means of establishing intergovernmental cooperation would be potentially effective, but formal agreements such as intergovernmental agreements were found to be limited in value to specific situations such as the intergovernmental management of individual trails. Informal arrangements and terms of agreement were indicated as being more effective for coordinating intergovernmental cooperation on a wider spectrum of trail issues. Both of these approaches were reviewed and applications recommended for use in Eastern Pima County.

#### **Task 10: Final Report**

The final task was the preparation of this plan to present the information developed in the study to the Pima County Board of Supervisors, Pima County Parks & Recreation Commission, and to the public. This report comprises the Eastern Pima County Trail System Master Plan.

#### **4.2.2 Project Study Area**

##### **Boundaries**

The project study area, Eastern Pima County, is bounded on the north by the Pinal County line, on the east by the Cochise County line, on the south by the Santa Cruz County line, and on the west by a north-south line through Avra Valley approximately along the alignment of Anway Road (Pocket Map 1). The area covers about 2880 square miles. Trails were not inventoried from the large blocks of federal state, and county land that are held for public purposes nor from Indian reservations. These public lands and the Indian reservations total about 1130 square miles, leaving 1750 square miles that were covered by the trail inventory.

##### **Topography**

The core of the area is the Tucson Basin, ranging in elevation from about 2100 to 2800 feet and largely included within metropolitan Tucson. Surrounding the core in a clockwise fashion are a series of mountain ranges: the Tucson, Tortolita, Santa Catalina, Rincon, and Santa Rita mountains. The tallest of these, the Santa Rita and Santa Catalina mountains, are 9000 to 9400 feet at their summits. Three smaller ranges, the Empire, Sierrita, and Cerro Colorado mountains, are located just outside the basin. These smaller ranges are only 4000 to 5000 feet in elevation at their high points.

The area lies largely within the Sonoran Desert, a region characterized by a hot, dry climate with a bi-seasonal pattern of rainfall.

##### **Vegetation**

Several major plant communities occur in the planning area. The fine-grained alluvium found in the valley, particularly along the washes, supports the desert saltbush community. Mesquite trees can also be found in these areas. On the gently sloping plains and lower bajadas at the foot of the mountains is the creosote-bush community. This community occurs in pure stands or interspersed with white bursage (13,14).

At slightly higher elevations the paloverde-saguaro community can be found. It contains a wide variety of plants, including trees, shrubs, cacti, and herbs. More specifically, these include the foothill paloverde, creosote bush and bursage, jojoba, brittle bush, saguaro, barrel cactus, and several species of prickly-pear and cholla.

In limited areas, where soils and climate conditions are suitable, ironwood trees are a dominant species in association with saguaros and paloverde trees. These areas are among the richest upland communities in terms of vegetative cover and structural diversity (15).

Grasslands occur at elevations up to 5000 feet above sea level. The grasslands are pure only at the upper elevations and in locations where the soil is deep and the terrain is smooth to gently rolling; at lower elevations they are interspersed with shrubs. Plants in this community include the grama grasses, sand drop-seed, sacaton grass, mesquite, catclaw and white thorn acacia, blue and foothill paloverde, and desert hackberry.

From 4000 to 6000 feet, there is an evergreen woodland, a forest dominated by widely spaced, short trees that reach 13 to 20 feet in height. This woodland includes several plant communities, including the oak woodland, the juniper-pinyon woodland, and chaparral.

The remaining upper elevations, about 6500 feet to 9500 feet, contain evergreen conifer forests. The largest plant community here is the ponderosa pine. In addition, Chihuahuahua pine, southwestern white pine, and several oak species are present to a lesser extent.

Also present in the study area, particularly in areas where the water table is shallow and along stream channels and their terraces, is the deciduous riparian forest. At higher elevations, Arizona alder and Rocky mountain maple dominate. As the altitude decreases, sycamore, Arizona ash, netleaf hackberry and cottonwood occur. On the desert floor, there are mesquite, catclaw acacia, and blue paloverde, along with the introduced salt cedar. Once extensive bands of green marking the watercourses in the planning area, these riparian areas are now few in number and limited in size (13,14).

Mesquite bosques, usually formed on floodplains 5 to 20 feet above the river channel and at the confluence of two major watercourses, form a nearly continuous canopy of trees, and may be interspersed with other deep rooted trees such as blue paloverde, cat claw acacia, burro bush, and wolfberry. The understory is often open and consists of

several species of perennial and annual grasses, and occasionally vines. Like deciduous riparian forests, mesquite bosques have been reduced to a small fraction of their former expanse (15).

### **Wildlife**

The planning area supports an abundance and variety of birds and animals, as the result of the variety of plant communities. A study carried out along the Santa Cruz and San Pedro valleys concluded that over 400 species and subspecies of terrestrial vertebrates inhabit these two areas, including 252 species of birds, 92 species of mammals, and 89 species of reptiles and amphibians (16). These animals include bobcats, mule deer, white-tailed deer, jackrabbits, coyotes, fruit bats, javelinas, ground squirrels, foxes, packrats, and other rodents. Mountain lions and bighorn sheep are less common but also present in some mountain ranges.

Bird life is abundant and is augmented seasonally with migratory species. Significant birds in the area include raptors such as the gray hawk (which is designated as threatened by the Arizona Game and Fish Department), the Harris Hawk, the rare Mexican black hawk, vultures, and eagles.

Other birds include the Gila woodpecker, cactus wren, and elf owl (found in the paloverde-saguaro and ironwood plant communities), and white-winged doves, mourning doves, Lucy's warbler, vermilion flycatcher, curved-bill thrasher, Abert's towhee, and northern cardinal (found primarily in mesquite-bosques and riparian forests).

### **Cultural History**

Eastern Pima County is rich in archaeological resources that date from approximately 11,500 years ago to historic times. Included in that long span of time are remains of the Paleo-Indian big game hunters (ca. 11,500 to 9,500 years before present), the Archaic tradition (ca. 9,500 years before present

to ca. A.D. 300), and the Hohokam tradition (ca. A.D. 300 to 1450), as well as evidence of Protohistoric peoples (the immediate predecessors of the Piman groups encountered by the Spanish), historic Indian groups, and European settlers--Spanish colonists, Mexicans, and Anglo-Americans.

Evidence of the Paleo-Indian big game hunters is sparse in the study area. A few spear points, called Clovis points, have been found, often in association with later sites. Sites where the Paleo-Indians killed and butchered mammoth and other large animals have been found at Naco and on the Lehner Ranch on the upper San Pedro River, southeast of the plan area, and mammoth tusks and bone have been found in the Avra Valley and the San Pedro River Valley (17, 18).

Remains of the Archaic tradition are more plentiful. Chipped stone and ground stone tools and debris are scattered on the surfaces of the bajadas and slopes of the Tucson, Santa Catalina, Santa Rita, and Rincon mountains. Some of these surface sites have buried components. Buried Archaic sites can be found in the alluvium of floodplains such as Cienega Creek, Tanque Verde Wash, the Rillito, and the Santa Cruz River. The buried sites include camp sites and villages with buried hearths, storage pits, and pit houses. Corn, which may have been cultivated as early as 500 B.C. in this area, has been found at buried Archaic sites in the Tucson Basin (19).

Hohokam sites are abundant in the master plan area. They include village sites, farmsteads or seasonal use habitation sites, irrigation canals and reservoirs, areas where the Hohokam practiced dry farming, sites where desert resources were obtained, rock art sites, and enigmatic trincheras sites--rock alignments and circles or rectangles of stone found with artifact scatters on hillsides and hill tops. The features that together make up a trincheras site also have been found in isolated context, making their interpretation even more difficult. Hohokam sites are distributed

throughout the Tucson Basin and adjacent areas, in valley bottoms, on bajada and hill slopes, and on the tops of hills and mountains.

Archaeologists know little about the Protohistoric period between A.D. 1450 and the time of Spanish exploration and settlement (A.D. 1690s to 1821). There is evidence that the plan area was used at least sporadically by Protohistoric peoples who were probably related to the Piman groups encountered by Father Kino. Several sites--burials, camps, and resource gathering sites--dating to that time period have been found in the study area (20).

Historically, the Tucson Basin and surrounding areas were occupied by Piman groups and by Spanish colonizers from the 1690s until 1821. During that time, areas of habitation were restricted because of Apaches, who periodically raided the Indian and Spanish settlements in southern Arizona. The presidios of Tubac and Tucson were established in 1753 and 1776 respectively to protect the Spanish settlers and the Pima, Sobaipuri, and Papago (Tohono O'odham) villagers (21, 22).

After 1821 southern Arizona (then part of Sonora) became part of the newly independent country of Mexico. From 1821 until the Gadsden Purchase in 1854, the small town of Tucson, protected by its presidio walls, was the focus of settlement for the area's Hispanic inhabitants. Ranching and farming occurred along the Santa Cruz River, especially in the area of the San Ignacio de la Canoa Grant near Green Valley. Sites from this period are found primarily along the Santa Cruz River in the vicinity of Tucson (21, 22, 23).

The Mexican occupation of the area was followed by Anglo-American settlement. Beginning in the 1820s, fur trappers traveled through the region, and Cooke's Mormon Battalion passed through and briefly occupied Tucson in 1846. In 1848 and 1849 travellers passed through the

area on their way to the California gold fields. Actual settlement by Anglos began in the 1850s, after the Gadsden Purchase made the region part of the United States (21).

Beginning in the 1850s, Anglo- and Mexican-Americans established ranches and farms in areas away from the protected Santa Cruz Valley. The more adventurous also prospected for gold, silver, and copper in the mountains on the edges of the Tucson Basin. It was not until the 1880s, when the Apaches were finally defeated, that settlement or exploration away from Tucson and the Santa Cruz Valley was considered safe. Many ranches and farms in the master plan area date to the late 1800s and early 1900s (22). Sites dating to the Anglo-American period (1856 to the present) include prospect pits, mines and markers, lime kilns, remnants of ranches and farms, and individual dwellings or other structures.

### **4.2.3 Archaeological Resources Associated with Proposed Trail Network**

In addition to the overview of prehistoric and historic cultural resources presented in section 4.2.2 above, an inventory of sites associated with the proposed trail system was conducted. The site survey file at the Arizona State Museum was examined and all sites located in the township and range of identified trails were listed. The list was organized according to the eight subregions used in this planning process. The site list is not included in this report but is on file with the Pima County staff archaeologist, Department of Transportation and Flood Control District.

## **CHAPTER 5**

### **PUBLIC INVOLVEMENT PROGRAM**

#### **5.1 Introduction**

Because the success of a public planning project depends on the quality of public interest and participation, a key objective of the project was developing and conducting an extensive public involvement program. This program included a wide spectrum of individual trail users, user groups, community interest groups, and public agencies. It was felt that involvement in all aspects of the project of the general public and relevant governmental agencies would provide information and guidance to the project staff.

During the project's course, public and agency participation took many forms, including membership on the Steering or Advisory Committees or the subregional trail evaluation panels, trail mapping and consultation with staff, and participation at public meetings. Public information was promoted through trail bulletins, media releases, and person-to-person contacts. Major aspects of this comprehensive outreach and involvement program are discussed below. The type and frequency of public involvement is summarized in Table 5-1 and discussed in greater detail throughout this chapter.

#### **5.2 Development of Public Involvement Plan**

##### **5.2.1 Interviews with Opinion Leaders**

The public involvement program began with a series of interviews with individuals identified by Pima County Parks and Recreation Department as community opinion leaders (Table 5-2). These individuals became the early resource persons for the project and helped identify other contact persons with specialized interest or expertise in recreational planning. Several opinion leaders reflected a general civic orientation in their roles in government and community organizations. Others represented federal, state, county and city agencies interested in recreation and trails planning.

As a result of these interviews, a list of community contacts was developed and organized into a community contact matrix. This list became the roster from which the county selected members for the Steering and Advisory Committees (Table 5-3).

##### **5.2.2 Issues and Findings**

Another result of the interviews with opinion leaders was the compilation of major issues and concerns. There was general support for an integrated trail system, which would include connector trails between primary watercourses and public lands. There was strong interest in multiple-use of trails (recreation, wildlife habitat, flood control, etc.) and support for further development of linear parks. There was also a keen recognition of threats to trails because of development pressures. Several of those interviewed indicated that they felt it might be too late to preserve many trails in the Catalina foothills. In general, most opinion

leaders suggested that most resources should be spent on areas where long-term gains could be made.

The composition and role of the Steering Committee was also part of the early discussions with opinion leaders. Those interviewed felt that the Steering Committee should provide an opportunity for discourse among a broad spectrum of user groups, property owners, and economic, environmental, and governmental interests. The committee should represent key constituencies, yet be small enough to be workable, and should operate in an informal, consensus-based manner.

### **5.3 Steering and Advisory Committees**

Because of the large number of persons who were identified as key prospective committee members, a small committee was not possible. At the recommendation of the County Parks and Recreation Department, a two-tiered committee structure was formed, comprised of trail users in a core, citizens steering group and governmental agency personnel in an ex-officio advisory group. Later, this large, two-tiered committee evolved into two separate committees--the Steering Committee and the Advisory Committee. The Steering Committee became the primary group, meeting nearly monthly to provide guidance and review. The Advisory Committee met less frequently than the Steering Committee but provided significant governmental expertise. The recommendations by opinion leaders regarding the role and duties of the steering committee were generally followed. Both committees met informally and arrived at consensus on major issues.

Members of the Steering and Advisory Committees, with their respective affiliations, are listed in Table 5-4. Meetings were scheduled for timely discussion of major issues and the review

of project tasks. The schedule of six formal meetings and one workshop, and major agenda items, are summarized in Table 5-5.

### **5.4 Subregional Panels**

In order to complete the trails inventory and begin to set trail priorities, the study area was divided into eight trail subregions. Panels of citizens knowledgeable about trails in each subregion were organized to help verify mapping data and identify priority trails from these subregions. Panel members represented a wealth of information about trails in the subregion. Each panel functioned as an informal coalition. A chairperson was appointed to coordinate the panel's activities but the goal was for each subregional panel to reach a consensus position on trail priorities. A Dames & Moore staff person served as a facilitator for each panel.

Panel members used a workbook that was based on the evaluation criteria developed and refined during the previous months by the Steering and Advisory Committees and staff. Although there were differences among trail issues and characteristics in each region, all eight panels used the same workbook and followed the same methodology in ranking trails to insure that trail priorities would be selected using the same criteria.

A total of 54 individuals served on subregional panels (Table 5-6). They represented a mix of trail users and homeowners within each subregion.

The eight panels met a combined total of 25 times during a six-week period in February and March. In addition to these work sessions, which focused on evaluation criteria and trail checklists, panel members spent many hours in the field, hiking or riding problematic trails.

## **5.5 Open Door Information Days**

In order to involve the general public in the trails project, Dames & Moore held bi-monthly Information Days at the project offices on the second and fourth Thursdays during the months of January, February, and March. These days were publicized through trail bulletins and by media coverage. Input from a wide spectrum of trail users and property owners was made possible through the open door policy of information days. More than 50 visitors to the project offices reviewed maps and conferred with staff during these three months, providing valuable information on trail conditions, trail use, and concerns about access to public lands. Property owners identified concerns about trail use and abuse, property rights, liability issues, and conservation of valuable natural resources.

## **5.6 Public Meetings**

Public meetings were held in January, April, and June to apprise trail enthusiasts, property owners, and the development community of progress on the trail system master plan.

The January 18th meeting attracted approximately 80 hikers, equestrians, joggers, bicyclists and property owners from throughout the project area. Although the majority of participants were from the Tucson metropolitan area, and the Catalina and Tucson Mountain foothills, distant areas such as Green Valley, Vail, and Catalina were represented. Those who attended were introduced to the project objectives and methodology and also participated in a trail mapping workshop that provided an opportunity to comment on previously identified trails and to suggest trails for priority consideration. In addition, a trail-information response card, completed by 60 of the citizens who attended the meeting, showed that an

overwhelming majority (95 percent) favored the establishment of a county-sponsored public trail system.

The second meeting, held on April 6th, unveiled trail priorities selected by the eight subregional panels to the nearly 50 persons in attendance. Meeting participants learned of the evaluation process used by the panels to identify and rank trails. Thirty-seven of those who attended filled out a trail information response cards that solicited their opinions on which trails were most important. Pima Wash was cited most frequently, followed by Ventana Canyon Wash and Finger Rock Wash. The majority of participants considered the establishment of linear parks on primary washes a high priority.

The June 21st final meeting, attended by about 50 persons, provided the last opportunity for public review of the findings and recommendations. After an introductory slide show, which integrated aerial and ground level views of trails with a commentary on the systematic approach to trail master planning, a series of map overlays was discussed. Each map overlay showed a separate level of trail priority or trail type. The final composite maps described the first, second, and third priority trail networks. The results of earlier subregional panel trail priorities were used as the basis for the various levels in the comprehensive trail network. By means of an in-depth discussion of legal issues and implementation methods, the Dames & Moore project attorney clarified private property rights issues and addressed concerns of many homeowners.

## **5.7 Trail Bulletins**

Three trail bulletins were prepared by the Dames & Moore project staff for the County Parks and Recreation Department. The first bulletin, published in January, provided a general overview of the trail project, including project

objectives, major tasks, and opportunities for public participation.

The second bulletin, distributed in March, presented highlights of the first public meeting, gave an update on the trail inventory process, discussed evaluation techniques for selecting trail priorities, and provided an overview of legal issues. This bulletin included a schematic drawing of the trail system, comprised of primary, connector, and local trails, and a map of the trail planning subregions.

The final bulletin, distributed in June, began with a special thanks from the Pima County Parks and Recreation Department to members of the Steering and Advisory Committees and the Subregional Panels for their hard work and commitment to trails planning. This bulletin summarized the major methods for implementing the trails that were earlier inventoried and given priorities by the panels. Highlights from the second public meeting were also discussed.

Each of these three bulletins publicized major project events, such as bi-monthly information days or an upcoming public meeting. Bulletins were circulated to nearly 500 persons on the trail mailing list, which was compiled by the Dames & Moore staff. Bulletins also were distributed at the project offices on Information Days, at public meetings, and at special outreach events, such as the Parks and Recreation Department's trail system master plan exhibit at the Park Mall Environmental Fair on 8 April 1989.

## **5.8 Outreach and Involvement of Other Key Community and Business Leaders**

### **5.8.1 Development and Business Community**

Contact with the development and business communities began early in the

project. Several of the opinion leaders and community contacts represented investment, real estate, or other business interests. Involvement increased after the subregion's preliminary trail priorities were unveiled. Project staff held individual meetings with major developers or developers' representatives in March and April. Firms contacted at this time were: Murphy Trust, DRD, Inc., Estes Corporation, Forest City, American Continental, Westinghouse Communities, and Del Webb Corporation.

In addition, a special trails information workshop was held on April 26th to update the development community on the trail system master plan. Approximately 30 persons received letters of invitation. Seventeen developers and representatives from planning firms attended. Members of the Steering Committee and the County Parks and Recreation Department staff were also invited to attend. The objective of this meeting, beyond an exchange of information, was to assure that the views of the development community were incorporated into the creation of appropriate and realistic strategies for trail implementation.

The Dames & Moore project manager and attorney met with representatives of major utility companies to investigate the potential for using existing utility rights-of-way or easements for trails. Meetings with Southwest Gas and Tucson Electric Power were held during March. The Southern Pacific Railroad was contacted regarding the abandoned El Paso and Southwestern rail line on the western edge of the downtown and the potential for a "rails to trails" program.

### **5.8.2 Land Management Agencies**

Because trail access to public lands is a critical element of the county's trail system master plan, project staff conferred regularly with major public

land management agencies, such as the National Park Service, National Forest Service, Arizona State Parks Department, and the Arizona State Land Department.

In addition to participation by key personnel from these agencies during Advisory Committee meetings, project staff met separately with land management agency representatives to exchange information and resolve potential problems. Staff met on four occasions with the superintendent of the Saguaro National Monument to discuss current and projected boundary access points in the monument's Rincon Mountains and Tucson Mountains districts. The meeting resulted in clarification of questions about types of access, volume of projected use, and existing or proposed trail facilities.

Present access points, planned trails, and trailhead facilities were also important points of discussion during meetings and phone consultations with representatives of the Coronado National Forest (Santa Catalina and Nogales Districts) and Catalina State Park. The State Land Department provided valuable data on existing state trust lands and relevant agency land management policy. Contact was also made with the manager of the Santa Rita Experimental Range to assess current public use of the Range and clarify management policy.

### **5.8.3 Other Governmental Agencies and Committees**

The Advisory Committee provided the primary means of involving other planning professionals and governmental agencies in the project. In addition to the land management agencies discussed above, members who were active participants on the committee represented the following governmental agencies: City of Tucson Parks & Recreation Department; Landscape Resources Department; University of Arizona; Pima County Transportation and Flood Control District; Pima Association of

Governments; Catalina Village Council; Division of Developmental Disabilities; Bureau of Reclamation (Central Arizona Project); City of Tucson Planning Department; and the Bureau of Land Management.

Because transportation and flood control planning affects trail opportunities on public road rights-of-way and major drainageways, there was regular communication with the Pima County Department of Transportation and Flood Control District and the City of Tucson Department of Transportation. Staff also attended meetings of the City Transportation Advisory Committee and the Pima County Bicycle Advisory Committee and conferred regularly with the Pima Association of Governments bicycle planner.

### **5.8.4 Public Officials and Civic Leaders**

Dames & Moore staff met periodically with city and county elected officials to apprise them of project objectives and progress. Contacts with public officials included project staff attendance at the City Council Subcommittee on Environment, chaired by Council member Janet Marcus, and individual meetings with the members of the Pima County Board of Supervisors.

The communities of Marana and Oro Valley were involved in the trails project through the representation on the Advisory Committee of Marana Councilman, Bill Schisler, and Oro Valley Planning and Zoning Commissioner, Ben Baker.

In addition, all state legislators from the area, members of the Pima County Parks and Recreation Commission and Board of Supervisors, and area tribal leaders received the three project trail bulletins.

County and city neighborhood associations, equestrian and hiking groups, and environmental associations

also received bulletins. In many cases, members of these organizations served on the Steering Committee and subregional panels.

## **5.9 Media Program**

Prior to the three public meetings, news releases and meeting announcements were prepared by project staff and distributed to five daily and weekly newspapers and 17 radio and television stations in the project area. Other media contacts between the Dames & Moore project staff and members of the print or broadcast media included interviews with reporters from the Arizona Daily Star, the Green Valley News and Sun, The Daily Territorial and KNST radio station. These contacts resulted in in-depth stories on the trail system master plan, and trail issues and problems. Television coverage included features by Cooke Cable Vision, Channel 4, and Channel 9.

**TABLE 5-1. PUBLIC INVOLVEMENT CONTACT CALENDAR**

	Oct.	November	December	January	February	March	April	May	June	July
<b>Steering Committee</b>										
Meetings										
Workshops										
Information Transmittals										
<b>Advisory Committee</b>										
Meetings										
Information Transmittals										
<b>Subregional Panels</b>										
Meetings/Workshops/Follow-up										
Subregion 1										
Subregion 2										
Subregion 3										
Subregion 4										
Subregion 5										
Subregion 6										
Subregion 7										
Subregion 8										
<b>General Public Outreach</b>										
Information Days										
Public Meetings*										
Trail Bulletins										
<b>Media Contacts</b>										
Newspaper Features										
News Releases to Daily & Weekly Papers										
TV News Features										
Radio News Features										
<b>Other Public Meetings</b>										
Development Community Workshop										
Pima County Bicycle Advisory Committee										
Tucson Transportation Advisory Committee										

\* Public Information Campaign Preceded All Public Meetings

**TABLE 5-2. OPINION LEADERS IDENTIFIED BY PIMA COUNTY  
PARKS & RECREATION DEPARTMENT**

Dave Arning, ASUA "Ramblers" (University of Arizona hikers)  
Mike Block, Pima Association of Governments  
Joe Colosa, Pima Trails Association  
Michael Deeter, Chairman, U of A Department of Landscape Resources  
John Devner, Town Manager, Oro Valley  
Glenn Dixon, City of Tucson Parks and Recreation  
Laurie Domler, Pima County Planning and Development Services  
Zack Gerganoff, Green Valley resident  
Mark Heitlinger, Nature Conservancy  
Dan Hofstadter, Sierra Club, Rincon Group, Outings Chair  
Charles Huckelberry, Asst. County Manager, Pima County  
Jan Johnson, Catalina Village Council  
Doug Koppinger, Whittell Trust  
Terry Lehrling, Chairman, Pima County Parks and Recreation Commission  
Dave Marshall, City of Tucson Department of Transportation  
Larry Mutter, Arizona State Parks  
Jan Nathanson, President, Pima Trails Association  
Austin Nunez, Chairman, San Xavier District, Tohono O'odham  
Keith Oliver, Pima County Transportation & Flood Control Department  
Bill Paleck, Superintendent, Saguaro National Monument  
Ruth Russell, President, Tucson Audubon  
Richard Salas, City Manager's Office, City of South Tucson  
Bill Schisler, Councilman, Town of Marana  
Virginia Sonett, Federation of Pima Homeowners  
Marc Soronson, City of Tucson Department of Transportation  
Rick Swats, Tucson/Pima County Bicycle Advisory Committee  
Gerald Sweeney, Pima County Transportation & Flood Control Dept.  
Barbara Tellman, President, Arizona Native Plant Society  
Ray Teran, Town Manager, Town of Marana  
Art Tower, BLM, Phoenix Office  
Myra Tuggle, City of Tucson Planning Department  
Dale Turner, Sierra Club Rincon Group Conservation Chair  
Paul Wichman, State Land Dept., Tucson Office  
Jeff Ziegler, Executive Director, Green Valley Recreation Inc.

### TABLE 5-3. COMMUNITY CONTACT MATRIX

Listed below are eighty-three individuals affiliated with diverse trail groups and interests in Eastern Pima County. Identified through interviews with thirty-four key trail opinion leaders in the County, this compilation of individuals formed the roster from which the Trails Steering Committee was selected.

Individual		Trails Affiliation				
		Property Owners/Neighborhood Group	County/Community Government	Development/Business Interest	Resource Agency/Professional Conservation Organization	Trail User Group
Dave Anning	U of A Ramblers Association					•
Frank Arrotta	Green Valley Coordinating Council	•				
Diana Barnes	Digital Land Systems			•		
Larry Barton	U of A Parking & Transportation Services			•		
Joe Berry	Tucson Saguaro Riders					•
Barbara Bickel	Southern Arizona Hiking Club					•
Mike Block	Pima Association of Governments	•				
Duane Bock	Tucson Electric Power		•			
Ann Britt	Walkers and Horse Owners Association					•
Zeke Browning	Catalina Horseman's Association					•
Dan Campbell	Arizona Nature Conservancy				•	
Joe Colosa	Pima Trails Association					•
Arian Colton	Arizona State Land Department			•		
Barbara Coon	Southern Arizona Hiking Club					•
Rich Corbett	Pima Association of Governments	•				
Pat Damiani	Southern Arizona Home Builders Assoc.		•			
Dottie Davis	Tanque Verde Valley Association	•				
Mike Deeter	U of A, Landscape Architecture			•		
John Devner	Oro Valley Town Manager	•				
Glenn Dixon	Tucson Parks & Recreation Department	•				
Dave Dolgen	Forest City Properties		•			
Laurie Domier	Pima Co. Planning & Development Services	•				
Neil Donkersley	Catalina State Park			•		
Don Ducote	Bureau of Land Management			•		
Barry Gillaspie	Oro Valley Planning & Zoning Commission	•				
Zack Gerganoff	Green Valley Resident	•				
Mike Grassinger	American Continental			•		
Lynn Harris	Rincon Valley Association	•				
Lauren Harvey	Pima County Parks & Recreation Dept.	•				
Susan Hebel	Planning Center			•		
Mark Heitlinger	Arizona Nature Conservancy				•	
Dan Hofstadter	Sierra Club/Boy Scouts				•	
Byron Howard	SAHBA/Westinghouse Properties		•			
Bill Howells	Pima Co. Dept. of Trans. & Flood Control	•				
Charles Huckelberry	Assistant County Manager, Pima County	•				
Bob Johnson	Pima Co. Planning & Development Services	•				
Jan Johnson	Catalina Village Council	•				
Doug Koppinger	Whittell Trust				•	

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Individual		Trails Affiliation				
		Property Owners/Neighborhood Group	County/Community Government	Development/Business Interest	Resource Agency/Professional Conservation Organization	Trail User Group
Andy Laurenzi	Arizona Nature Conservancy					•
Terry Lehrling	Pima Co. Parks & Recreation Commission	•				
Laura Lusk	Pima Association of Governments	•				
Dave Marshall	City of Tucson Transportation Department	•				
George Mehl	Cottonwood Properties		•			
Tom Monahan	Pima Co. Parks & Recreation Department	•				
Larry Mutter	Arizona State Trails Coordinator			•		
Jan Nathanson	Pima Trails Association					•
Austin Nunez	San Xavier District, Tohono O'odham Nation	•				
Keith Oliver	Pima Co. Dept. of Trans. & Flood Control	•				
Bill Paleck	Saguaro National Monument, NPS			•		
James Pate	Pima Community College Open Space Comm.					•
Bonnie Paulos	Campus Farm Neighborhood	•				
Steve Plevel	Coronado National Forest			•		
Richard Ramirez	San Xavier District, Tohono O'odham Nation	•				
Kim Richards	Estes Homes		•			
Jim Ronstadt	Tucson Parks & Recreation Department	•				
Jean Russell	Resident, West Branch of Santa Cruz	•				
Ruth Russell	Tucson Audubon					•
Richard Salas	City Managers Office, South Tucson	•				
Bill Schisler	Councilman, Town of Marana	•				
Carol Schumacher	Arizona Native Plant Society					•
Polly Seeger	Redington Neighborhood	•				
Enrique Serna	Manager, City of South Tucson	•				
Ed Severson	Southern Arizona Hiking Club					•
Roger Setlmeyer	Catalina #10 Neighborhood	•				
Dale Shewalter	Arizona Trails					•
Virginia Sonett	Federation of Pima Homeowners	•				
Mark Soronson	Tucson Transportation Department	•				
Tom Spalding	Arizona Game & Fish Department			•		
Rick Swats	Tucson/Pima Co. Bicycle Advisory Comm.					•
Gerald Sweeney	Pima Co. Dept. of Trans. & Flood Control	•				
Barbara Tellman	Arizona Native Plant Society					•
Ray Teran	Manager, Town of Marana	•				
Robert Tippeconnic	Coronado National Forest			•		
Art Tower	Bureau of Land Management			•		
Mvra Tuggle	City of Tucson Planning Department	•				
Dale Turner	Sierra Club					•

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Individual		Trails Affiliation					
		Property Owners/Neighborhood Group	County/Community Government	Development/Business Interest	Resource Agency/Professional	Conservation Organization	Trail User Group
Bill Vasko	City of Tucson Planning Department	●					
Peter Warren	Arizona Nature Conservancy					●	
Pat Whitmore	Tortolita Homeowners Association	●					
Paul Wichman	Arizona State Land Department				●		
Helen Wilson	Tucson Mountains Association	●					
Dave Yetwin	Catalina #10 Neighborhood	●					
Jeff Ziegler	Green Valley Recreation, Inc.						●

**TABLE 5-4. STEERING COMMITTEE AND ADVISORY COMMITTEE MEMBERSHIP**

**STEERING COMMITTEE**

<b>Member</b>	<b>Affiliation</b>
Barbara Bickel	Southern Arizona Hiking Club
Dottie Davis	Federation of Pima Homeowners
Dan Hofstadter	Sierra Club & Boy Scouts
Jan Nathanson (Wm. Bryce Lloyd, Alternate)	Pima Trails Association
Bill Olmstead	Citizen-at-large Representative
Paula Pulaski	Tucson/Pima County Bicycle Advisory Committee
Bruce Rubin	Tucson Board of Realtors
Jean Russell (Judy Frazer, Alternate)	Citizen-at-large Representative
Jim Strong (Art Flagg and Paul Bowen, Alternates)	Southern Arizona Home Builders Association

**ADVISORY COMMITTEE**

<b>Member</b>	<b>Affiliation</b>
Ben Baker	Town of Oro Valley Planning & Zoning Commission
Diana Barnes-Freshwater	Natural Resources Consultant
Mike Block	Pima Association of Governments
Arlan Colton	Arizona State Land Department
Mike Deeter	Landscape Resources, University of Arizona
Glenn Dixon	City of Tucson Parks & Recreation Department
Ricardo Gastelum	Pascua Yaqui Tribe
Allen Jaten/Steve Plevel	Catalina District, Coronado National Forest
Jan Johnson	Catalina Village Council
Kelly McLearn	Division of Developmental Disabilities
Larry Mutter	Arizona State Parks
Bill Paleck	Saguaro National Monument
James Pate	Pima Community College
Geno Patriarca	Davis Monthan Air Force Base
Richard Ramirez	Tohono O'odham Nation
John Schilling	Central Arizona Project, Bureau of Reclamation
Bill Schisler	Town Council, Town of Marana
Enrique Serna	City Manager, City of South Tucson
Dave Smutzer/Julia Fonseca	Pima Co. Transportation & Flood Control Department
Tom Spalding/Rick Gerhart	Arizona Game & Fish Department
Art Tower	Bureau of Land Management
Myra Tuggle/Roger Schneider	City of Tucson Planning Department

**TABLE 5-5. MEETINGS OF THE STEERING AND ADVISORY COMMITTEES**

DATE	MEETING DESCRIPTION
December 7	Combined Meeting of Steering Committee and Advisory Committee. Project overview; review of Public Involvement Plan; work session on trail evaluation criteria.
December 21	Workshop on development of evaluation methods and criteria.
January 19	Review of several decision-making models for trail priority setting; review of trail categories.
February 15	Review of final ranking process (county-wide for primary system; by subregions for connector and local trails).
March 30	Combined Meeting of Steering Committee and Advisory Committee. Review of subregional panel process and proposed trail priorities.
May 25	Combined Meeting of Steering Committee and Advisory Committee. Review and discussion of design goals and concepts; review of final report outline.
July 27	(Scheduled) Review of final report.

## TABLE 5-6. MEMBERSHIP OF SUBREGIONAL PANELS

### Subregion 1: West and South Tucson Mountains

Rob Emmett (Chair)	Otis Bronson
Sharon Bronson	Jerry Raebig

### Subregion 2: Eastern Tucson Mountain Foothills

Judy Frazer (Chair)	Tom Vincent
Beryl Baker	Sharon Welch
Dana Dornier	Helen Wilson
Becky Hiser	Mary Henderson (resource person)
Jean Russell	

### Subregion 3: Tortolita Foothills and Northwest Catalinas

Joan Eerkes (Chair)	Jan Johnson
Ben Baker	Ken Johnson
Zeke Browning	Velma Beard (resource person)
Scottie Bidegain	Bill Schisler (resource person)

### Subregion 4: Catalina and Rincon Foothills

Anne Britt (Chair)	Mary Karrels
Barbara Bickel	Doug Koppinger
Dottie Davis	Amy Potter
Sue Clark	Donna Locke
Sheila Enos	Sharon Urban

### Subregion 5: San Pedro Valley

Sandy Smith (Chair)	Paul Hughes
Merry Austin	Andy Laurenzi (resource person)

### Subregion 6: Rincon Valley and Northeast Santa Rita Mountains

Linda Koss (Chair)	Art Kelly
Al Begley	Patty Kelly
Ron Bernee	Jan Nathanson
Diane Hanna	Bill Olmstead
Richard Henry	Debbie Suppes

### Subregion 7: Upper Santa Cruz Valley

William Fritz (Chair)	Laurie Poppino
Alana Baker	Mary Ann Rowley (resource person)
Mike Blocker	Barbara Bennett (resource person)
Vince Morrison	

### Subregion 8: Metropolitan Tucson

Dan Hofstadter (Chair)	Judy Edison
Steve Bell	John Leonard
Jeanne Broome	Bryce Lloyd
Dick Edison	Richard Tucker

## **CHAPTER 6**

# **TRAIL INVENTORY AND PRIORITY RANKING PROCESS**

### **6.1 Trail Inventory Process**

The purpose of the trail inventory was to catalogue and map existing trails, and public land access points in Eastern Pima County. The inventory excluded trails in the major public preserves and the Indian reservations. The trail survey area included approximately 1750 square miles. The inventory period began November 1988 with the collection and review of existing trail maps and information and extended through June 1989 when the last field verifications were made.

By county directive, the inventory was limited to trails with some preexisting history of recreational use. Only non-motorized trail uses were considered with horse and foot trails by far the most common. Some trails were also suitable for mountain bike use. There was no emphasis on identifying bikeways or streets suitable for road bikes, as thorough information on these routes is already available for the Tucson metropolitan area in "Tucson Bikeways and Bikeable Streets," a free 1989 map distributed by the Pima Association of Governments. Some roads outside of the metropolitan area were noted in the inventory in part because of their value for road bicycle use. No specifications were established as to the width or length of trails.

Most of the trails inventoried follow natural corridors and are used by pedestrians or equestrians. Washes, the

most prevalent trail corridors, generally provide the path of least resistance through metropolitan areas as well as in the natural desert. In addition, wash riparian communities are attractive to the trail user. Upland, cross-country trails running between washes, along ridges, and across desert plains also occur, but at a much lower frequency. Horse and foot use is again the most common, although some mountain bike use occurs as well.

Because washes are unsuitable for development they tend to endure as trails even in the metropolitan complex. Road crossings that involve either impassable culverts or dangerous traffic flows are, however, a significant hindrance to the use of wash trails, particularly by equestrians. Natural cross-country trails are more directly in the path of development and are often locked or obscured in urban settings.

Trails in road rights-of-way are also common in the inventory. These roadside trails are often the only routes available to pedestrians or equestrians in urban areas and are important feeder routes into more natural trails.

Utility rights-of-way are important trail corridors in many locations, especially through urban areas. Foot, horse, and mountain bike use occurs.

#### **6.1.1 Trail Definitions and Characteristics**

The trails in the survey area tend to form an interconnected network, reflecting their locations within either the natural drainage system or road grid. All of the trails inventoried were consequently classified according to three broad types related to their location and function within this network. These three types are primary trails, connector trails, and local trails.

Trail access points were also classified according to three general types:

established boundary access points, candidate boundary access points, and trail entry points. Definitions of these trail and trail access point types follow.

### **Primary Trails**

Primary trails form the backbone of the network by establishing the main cross-basin routes that will link surrounding public lands together. These trails include the major watercourses in Eastern Pima County, the Central Arizona Project right-of-way, and the Flato/Franco Wash system south of Tucson International Airport. Planned and existing linear park development along some of the major watercourses of the primary trail network will provide paved pathways for bicyclists and whole access users as well as equestrian and pedestrian paths. Developed linear parks are associated with major wash segments that are soil cemented as a flood control measure. Other major washes are to be left in an undisturbed, natural condition. Trails in these washes will accordingly be limited principally to horse and foot use. Examples of primary trails include the Santa Cruz River, Rillito River, Pantano Wash, and Central Arizona Project right-of-way.

### **Connector Trails**

Connector trails form linkages between public lands and the primary trail network or, in some cases, between two public land areas. Many of these trails are found in secondary watercourses that form the main drainages flowing from mountainous public land areas to the major watercourses. Some connector routes are found in upland, cross-country locations or road and utility rights-of-way. Connector routes in washes and cross-country locations are expected to remain in a natural, undeveloped condition. Horses or foot use will be appropriate in these settings. Road or utility connector trails may require some design features, but are also anticipated to accommodate principally horse and foot

use with some mountain bicycling. Examples of connector trails include:

- Pima Wash -- connects Coronado National Forest with the Rillito River;
- Roger Wash -- connects Tucson Mountain Park with the Santa Cruz River; and
- Picture Rocks Road -- connects Saguaro National Monument West with the Central Arizona Project right-of-way.

### **Local Trails**

Local trails are generally wash, cross-country, road or utility routes that feed into the primary and connector trail network or, in some cases, directly to public lands. Horse and foot use is common on these trails. Some mountain bike use also occurs. Local trails often form trail loops in combination with each other or with primary or connector trails. Examples of local trails include:

- Campbell Wash in the Catalina foothills;
- Peña Wash in the southern Tucson Mountain foothills; and
- Arroyo Chico in central Tucson.

### **Established Boundary Access Points**

Established boundary access points are publicly owned locations or rights-of-way where legal public access to trails in public lands is ensured. Boundary access points can be reached either by road or proposed public trail. Parking is usually available. Examples of established boundary access points include Starr Pass West trailhead at Tucson Mountain Park, and Finger Rock trailhead at the end of Alvernon Way at Coronado National Forest.

### **Candidate Boundary Access Points**

These locations are generally the same as the established sites except that the access point land is not publicly owned and legal public use can occur only with the permission of the property owner. Sites are proposed for public acquisition. Examples of candidate boundary access points include Pima Canyon at the Coronado National Forest boundary and Madrona Ranger Station at the Saguaro National Monument boundary.

### **Trail Entry Points**

Trail entry points are locations at public land boundaries that are accessible by trail only. There are no public roads to these sites, nor are any proposed or desirable. Trail entry points will allow trail users to extend their hikes or rides into public lands. All of these sites have a proposed status since none of the county trails extending into public lands have been established yet.

Examples of trail entry points include Agua Caliente Wash where it enters the Coronado National Forest, and Cienega Creek where it enters the Cienega Creek Natural Preserve.

### **Trail Network Characteristics**

A number of trail characteristics and features of trail access points were identified during the inventory. This information provides basic descriptions of the various trails and access points and was useful during the priority ranking process. Identified trail characteristics include:

- Trail type (primary, connector, or local);
- Trail length;
- Description of the trail route;
- Lowest and highest trail elevations;

- Trail location (wash, cross-country, road or utility right-of-way); and
- Recreational uses (whole access, foot, horse, mountain bicycle, road bicycle).

Identified access point characteristics include:

- Legal description of location;
- Names of connecting county and public land trails;
- Name of any access road;
- Name of public land accessed;
- Elevation;
- Status (established, candidate, or entry point only); and
- Recreational uses on public lands.

### **6.1.2 Trail Inventory Research**

Information about trails and trail access points was obtained from four types of sources: trail users and trail-user associations, subregional panels, published maps and aerial photos, management agencies, and Dames & Moore staff field surveys and aerial reconnaissances.

### **Trail Users, User Groups, and Subregional Panels**

Since the purpose of the inventory was to identify existing recreational trails, individual trail-users and their associations were among the most important sources of survey information. Individual trail users were contacted via the Steering Committee, public meetings, open house information days, trail user associations, subregional panels, and personal knowledge of Dames & Moore staff. Trails identified by these individuals were recorded on topographic

maps and aerial photos, and trail data entered on tables.

The core of the equestrian trail information was provided by the Pima Trails Association. This organization, through the efforts of its members and its contacts with other equestrian groups, generated a compilation of equestrian trails in the northern half of the survey area. Their results were recorded on the county 15-minute series base map and on 1 inch to 1000 feet aerial photographs provided by Pima County.

The subregional panels represented considerable cumulative knowledge about trails in diverse areas of the county. The value of these panels was their ability to not only share their collective expertise, but also to organize and complete field surveys on trails and access points in their areas. Maps, aerial photos, and survey forms were provided to the panels to facilitate their field work.

### **Published Maps and Aerial Photos**

An extensive array of individual maps and aerial photos were used as survey tools. Included in this list are:

- Aerial Photo Guide of Tucson and Vicinity, 1986;
- Aerial Photography (1 inch equals 1000 feet) of northeastern Pima County;
- Metropolitan and Eastern Pima County Street Atlas, 1988;
- Pima County Department of Transportation and Flood Control District:
  - Regional Land Status of NE and SE Pima County, 1987;
  - Subdivision Atlas of Pima County, 1988;
- Pima County Parks and Recreation Department's Interim Official

Regional Trails and River Park System, 1988; and

- U. S. Geological Survey's 7.5-Minute Series Topographic Maps.

### **Dames & Moore Field Work**

The Dames & Moore staff conducted more than 50 field surveys to identify or verify trail information. Two aerial reconnaissances of two hours each, in light aircraft were also made to confirm ground observations and examine remote trail locations.

## **6.2 Trail Priority Ranking Process**

As the backbone of the proposed trail network, nearly all of the primary trails were predetermined to be of first priority status. Only the San Pedro River, which does not interconnect with the rest of the network and is in a sparsely populated location, was ranked as a second priority among primary trails.

### **6.2.1 Subregional Panels**

Acquisition priorities remained to be established among connector and local trails. The first step in identifying these priorities was to segregate traditional trails, those in wash and cross-country locations, from trails in road and utility rights-of-way. Road and utility trails were subsequently removed from the priority setting process. Roads were removed because existing public ownership eliminates the need for acquisition. Utilities were removed because the methods generally required to implement trails would seldom involve decisions that would benefit from established priority rankings.

The second step in the priority setting process was to divide Eastern Pima County into eight trail subregions based on drainage basins and public boundaries

(Map 2). Each resulting subregion had its own general continuity based on topography, demography, and trail resources. The subregions were identified as a basis for setting acquisition priorities that would be geographically balanced in Eastern Pima County and that would give local trail users a stronger voice in selecting priorities that were representative of conditions in their area. These purposes were accomplished by establishing eight subregional panels of local trail users that would select trail priorities for their respective subregions using a standardized methodology. Each panel was assigned a quota for first and second priority traditional connector and local trails. The quota was based on the approximate total number of candidate trails and on local trail patterns in each subregion. The quotas were fairly evenly distributed, however (Table 6-1). Any trail not ranked as a first or second priority was assigned a third priority ranking. The panels ranked the trails and assigned the acquisition priorities using, as a guide, rating criteria developed with the assistance of the Steering Committee (Tables 6-2 and 6-3). The panels were asked to arrive at consensus decisions on their final priority rankings.

Acquisition priorities were assigned to proposed boundary access points and trail entry points in each subregion in a similar manner. The panels were asked to differentiate only between first and second priority access points. No differentiations were made between proposed boundary access points and proposed trail only entry points for the purposes of priority setting. A set of rating criteria specific to access point characteristics provided to the panels for this process (Table 6-4).

As outlined in Chapter 5, the subregional panels took from four to six weeks to make their final priority selections. Their deliberations typically included trail reconnaissances and discussions of the significance of various criteria to their subregion. Only two panels elected to use a special rating criterion. Subregion

6 elected to give special consideration to trails that provided linkages to the proposed Arizona Trail route through their area and Subregion 8 assigned special significance to trails that linked activity centers such as schools and parks.

### **6.2.2 Implementation Methods**

After the subregional panels completed their work, an assessment was made to determine appropriate methods for implementing the first priority traditional connector and local trails and public land access points. A description of implementation methods is presented in Chapter 8. The application of these methods to the first priority trails and access points is presented in Chapter 9. Also included in Chapter 9 is an examination of the proposed implementation of the first priority primary trails as well as trails in selected road and utility rights-of-way using these same methods.

# TABLE 6-1: TRAIL PRIORITY QUOTAS

Trail Priority Quotas By Subregion			
	1st Priority	2nd Priority	3rd Priority
<b>1 West/South Tucson Mts</b>			
Connector Trails	2	2	NL*
Local Trails	4	4	NL
<b>2 East Tucson Mts</b>			
Connector Trails	3	3	NL
Local Trails	4	6	NL
<b>3 Tortolita/NW Catalina Mts</b>			
Connector Trails	3	3	NL
Local Trails	4	4	NL
<b>4 Catalina/Rincon Foothills</b>			
Connector Trails	3	3	NL
Local Trails	4	6	NL
<b>5 San Pedro River Valley</b>			
Connector Trails	1	1	NL
Local Trails	NI*	NI	NI
<b>6 Rincon Valley/NE Santa Rita Mts</b>			
Connector Trails	3	3	NL
Local Trails	4	4	NL
<b>7 Upper Santa Cruz River Valley</b>			
Connector Trails	2	2	NL
Local Trails	4	4	NL
<b>8 Tucson Metropolitan Area</b>			
Connector Trails	NI	NI	NI
Local Trails	4	4	NL
<b>Eastern Pima County-Wide Totals</b>			
Connector Trails	17	17	NL
Local Trails	32	36	NL

\* NL = No Limit    \* NI = No Trails in this Category Identified







## CHAPTER 7

# TRAIL INVENTORY AND PRIORITY RANKING RESULTS

As discussed in Chapter 6, trails were inventoried and evaluated on a subregional basis. This chapter presents information on each of the subregions. Each section begins with an overview of the natural setting, cultural resources, trail issues, and trail-use patterns in a particular subregion. The primary, connector, and local trails in each subregion that were identified by the subregional panels are described, followed by a discussion of the subregional panel priority selections.

This subregion-by-subregion analysis of the trail universe led to the identification of the county-wide, integrated trail network. The network is comprised of 9 primary trails (totalling 200 miles) that are the major arteries of the network, 86 connector trails (totalling 513 miles) that link the primary trails with each other or with public lands, and 274 local trails (totaling 804 miles) that join local communities and neighborhoods with major trails in the network (Table 7-1, Pocket Map 1). The process of identifying and assigning priorities to trails also resulted in an inventory and categorization of 104 boundary access points.

The result is a comprehensive system of more than 1500 miles of trails that provides recreational opportunities for a variety of trail users, and, in addition, protects natural resource and scenic values for all of the residents of the county.

## 7.1 Subregion 1: West and South Tucson Mountains

### 7.1.1 Subregion Overview

#### Synopsis

The principal trail-use concern in Subregion 1, West and South Tucson Mountains, is to gain access to Saguaro National Monument West and Tucson Mountain Park. Most of the traditional trails in the subregion have been established for this purpose.

A second major trail interest in the subregion is the Central Arizona Project aqueduct, which roughly parallels the Tucson Mountains and runs nearly the length of the subregion. The federal government and Pima County have agreed to develop horse, foot and bicycle trails the length of the aqueduct. Thirty-three of this 56-mile loop lie within this subregion and could provide ready trail access to many locations within Saguaro National Monument and Tucson Mountain Park as well as link the northern and southern portions of the subregion.

#### Natural Setting

**Location.** Subregion 1 lies north, west, and south of Saguaro National Monument West and Tucson Mountain Park (Map 2). The Santa Cruz River and the San Xavier District of the Tohono O'odham Indian Reservation form the subregion's northern and southern boundaries respectively. The western boundary is the Anway Road alignment (approximately Range 10 East in the Avra Valley). The subregion is divided into northern and southern areas by an arm of the Tohono O'odham Indian Reservation that extends east to the U.S. Bureau of Reclamation Wildlife corridor (Range 11 East and Township 14 South, Sections 2,

10, 11, 14, and 15) and Tucson Mountain Park.

**Size.** Subregion 1 is approximately 280 square miles in area. From north to south the area is about 30 miles long and varies in width, east to west, from 5 to 19 miles. Saguaro National Monument West and Tucson Mountain Park present a combined public land boundary of approximately 33 miles in length on the east side of the subregion.

**Topography.** The Tucson Mountains are the dominant topographic feature and trail-use attraction in the subregion area. The only portions of this mountain range that actually lie within the Subregion 1 study area are, however, outlying peaks and foothills on the northern and southern ends of this northwest-southeast oriented range. Important Tucson Mountain peaks include Wasson Peak (4687 feet above sea level) within Saguaro National Monument, and Golden Gate and Cat mountains (4288 and 3852 feet above sea level respectively) within Tucson Mountain Park. While only Wasson Peak has a trail to the top, other trails wind around Golden Gate and Cat mountains and these mountains dominate the landscape vistas in the subregion.

Most of the subregion area can be characterized as portions of the long bajadas that slope gradually away from the rugged and abruptly rising Tucson Mountains or as part of the broad alluvial plain of Avra Valley. Typical elevations in the northern parts of the subregion vary from 2000 feet in the western areas to 2500 feet near the Tucson Mountains. Elevations in the southern area range from 2300 feet to the west and south to 2700 feet near the mountain slopes.

Brawley Wash and its major tributary Black Wash form the principal drainage system of Subregion 1. These washes collect surface water flows from the western slopes of the Tucson Mountains and much of Avra Valley. Drainage from Brawley Wash eventually empties into the

Santa Cruz River west of the Town of Marana.

The northeastern and southeastern corners of the subregion drain to the Santa Cruz River via channels that are separate from the Black-Brawley system. The northeastern area is drained by a few small washes that lead to the Santa Cruz River east of or through Marana. The southeastern corner is topographically divided from the western regions by the southernmost extensions of the Tucson Mountains. This corner of the subregion is drained by several eastern-flowing washes that link to the West Branch of the Santa Cruz River, which empties into the mainstem of the Santa Cruz River near "A" Mountain.

There is no perennial surface water in any of the drainages of Subregion 1. The washes flow only in response to seasonal storm events.

**Natural Habitat.** Three general types of native plant communities occur in Subregion 1. First, upland areas, particularly on rocky upper bajada slopes, are commonly characterized by paloverde, saguaro and mixed cacti associations. Good examples of this vegetation occur on the upland areas of Saguaro National Monument West.

Second, upland valley areas with sandy alluvial soils and lower slopes tend to be dominated by creosote bush and white bursage. This community has few plant species. Areas south of Ryan Airfield provide good examples of this native desert vegetation type.

Third, desert riparian vegetation communities dominated principally by mesquite or ironwood trees with some associated paloverde are found in relatively dense, linear patterns in and along wash channels. Few large areas containing riparian plant communities remain. Remnants of the unique ironwood association are located along parts of Brawley and Black Washes. Mixed riparian associations are found

along more extensive reaches of these washes. A few small mesquite bosques are also found along portions of the West Branch of the Santa Cruz River and Black Wash.

Extensive areas of Subregion 1 to the north of Snyder Hill road and west of Sandario Road stretching to Marana have been converted to agriculture. Natural washes as well as native upland vegetation areas have been obliterated in most of the converted areas.

**Cultural Resources.** The Tucson Mountains and Avra Valley have been used by people since at least Archaic times (about 9,500 years before present to about A.D. 300). Prehistoric sites that have been recorded on or near trails include Archaic and Hohokam period sites where desert resources were processed, Hohokam villages and farmsteads, and enigmatic sites with circles made of rock. The rock circles are often found on or near hill tops, and could represent small campsites where desert resources were processed, or they might have had some sort of ceremonial function. Many isolated artifacts --- pottery sherds, arrow points, pieces of flaked stone tools --- have also been found.

One site in the vicinity of the Black and Brawley Wash Trail may contain evidence of Paleo-Indian use. Called the Werner site (AA:16:39), it is an extensive scatter of stone tools and debris (lithics), with hearths and roasting pits. Roasting pits were used to cook or process foods such as agave.

Except for the village of Bac (the community at San Xavier), no historic sites have been recorded in the vicinity of Subregion 1 trails. Mines and prospect holes are common in the area, however, and there are undoubtedly historic Tohono O'odham saguaro collecting camps and a few homesteads in the vicinity of trails. Starr Pass and Robles Pass, historic routes to the mining district of Quijotoa, are part of Subregion 1.

## **Development Patterns**

**Land Ownership.** The land ownership pattern in Subregion 1 presents a mosaic dominated by private and state trust lands. Rough estimates place state trust lands at approximately 30 percent with the remaining land being principally in private ownership. Federal lands in this subregion include a few scattered parcels and the Central Arizona Project aqueduct. Existing and planned county parks and public schools that may contribute as trailheads, parking areas, water stops, or equestrian staging areas include: Avra Valley Road at the CAP aqueduct, Emigh Park, Lawrence Elementary School, Marana High School, Moore Road District Park, Saginaw Hill Park, Manzanita Park, Vahalla Park and Vesey Elementary School Park.

**Population Patterns.** Concentrations of population are found in both the northern and southern parts of Subregion 1. The Town of Marana is the principal population center in the northern sector. Subdivisions and scattered residences extend west, south and east of the town proper. Local trail interests in this sector, particularly from the Picture Rocks and Orange Grove Road areas, focus on Saguaro National Monument West.

Residential development in the southern sector is concentrated in a triangle formed roughly by the Santa Cruz River, Ajo Way and the San Xavier District and in the wedge of land extending east of Ryan Airfield between Tucson Mountain Park and Ajo Way. Subdivisions also are found along Sandario and Sierrita Mountain Roads and in the Robles Junction Area. Residents in the southern sector commonly use trails in Tucson Mountain Park.

**Road System.** With the exceptions of the northeastern and southeastern corners, Subregion 1 is physically separated from the Tucson metropolitan area by the Tucson Mountains. Roadways that link Tucson and the subregion reflect this topographic

division. In the southern sector, Mission Road provides access to the southeastern corner. Valencia Road and Ajo Way are the only thoroughfares in this area that cross the Tucson Mountain divide to the western parts of the subregion. Road access to the northern sector of the subregion is via Silverbell and Twin Peaks roads or through Marana. Vehicle passage through the Tucson Mountains is possible only on Picture Rocks Road in Saguaro National Monument and on Gates Pass Road in Tucson Mountain Park.

Sandario Road is the only north-south thoroughfare in the subregion. Coupled with Ajo Way, Twin Peaks Road, or Avra Valley Road, Sandario Road is critical as a bicycle route. Kinney and Gates Pass Roads are also important bicycle routes that connect with Ajo Way and Sandario Road.

**Central Arizona Project Aqueduct.** The Central Arizona Project aqueduct, which is nearing completion, slices through Subregion 1 just west of Saguaro National Monument West and Tucson Mountain Park. The aqueduct presents difficulties for trail users as well as an important and unique opportunity.

On the positive side, an agreement between the county and the federal government specifies that a public recreation trail can be built within a 20-foot-wide portion of the approximately 44-mile-long aqueduct right-of-way that is located in Pima County. This trail would be built through federal and county cost sharing and would be managed by the county. The proposed trail could provide an excellent and safe north-south route for the subregion and link many east-west trails into Saguaro National Monument West and Tucson Mountain Park.

On the negative side, the aqueduct is an effective barrier that precludes trail crossings except at planned roadway bridges or possibly wildlife crossings. Without adequate road crossing designs,

these locations could become choke-points that would make trail use difficult or hazardous.

**Future Trends.** Continued residential and commercial development in portions of Subregion 1 is anticipated at rates that will be slow compared to most other areas of Eastern Pima County. Development in the northern sector will likely center on the Marana area. Southern development will probably focus on the area between Tucson Mountain Park and the San Xavier District and east of Ryan Airfield. The airfield area may also receive attention as a location for commercial or industrial development. A considerable amount of farmland has been purchased and retired by the City of Tucson in the central portions of the subregion in order to secure groundwater reserves for future purposes. The degree to which these lands will be developed is unknown.

### **7.1.2 Subregion 1 Trail Inventory, Patterns, and Issues**

#### **Trail Inventory**

**Primary Trails.** Subregion 1 contains parts of two primary trails: the Santa Cruz River and the Central Arizona Project right-of-way. (Tables 7-1, 7-2, and 7-4) Subregion 1 shares a 4-mile segment of the Santa Cruz River along its southeastern boundary with Subregion 8 and a 22-mile segment along its northeastern boundary with Subregion 3. Approximately three miles of the southern segment is scheduled for linear park development sometime after 1992. The river has been of only peripheral interest to trail users in Subregion 1. Linear park development on portions of the river may increase interest in its use.

The CAP right-of-way in Subregion 1 has the potential to support a trail that could become a major recreational asset in Eastern Pima County. The agreement between the county and the Bureau of

Reclamation, the federal agency constructing the aqueduct, permits the development of a multi-purpose trail including a paved surface along the entire length of the federal right-of-way in Pima County. The alignment of the trail in Subregion 1 is such that it would link the northern and southern population centers. The trail could provide an excellent long-distance route for bicyclists. One hundred kilometer (about 61 miles) and longer bicycle tours and races (for example, El Tour de Tucson and the Hunger 100) have become increasingly popular in the Tucson area and have included routes that encircle the Tucson Mountains.

The CAP trail could also be an excellent linkage for equestrian or pedestrian users wishing access to Tucson Mountain Park and Saguaro National Monument West.

At this time, an approximately 27-mile segment of the CAP aqueduct from the Santa Cruz River just east of Marana to the Tucson water treatment plant at Ajo Way and Tucson Estates Parkway is nearing completion. An underground tunnel will carry CAP water from the treatment beneath Starr Pass to the east side of the Tucson Mountains. The first 2.7 miles of the tunnel right-of-way will also serve to extend the CAP primary trail to the Tucson Mountain Park boundary. An additional 3.3 miles of CAP aqueduct is proposed as a southern extension to the Tohono O'odham Indian Reservation. This extension would provide primary trail service to Saginaw Hill Park and the reservation, if desired.

**Connector Trails.** Fourteen connector trails were identified in Subregion 1. Nine of these trails are within road rights-of-way or utility easements; only four are traditional trails (Tables 7-1 to 7-4). One of the connector trails, Black Wash, is a tributary to another, Brawley Wash. Their combined length (24 miles) accounts for most of the traditional connector trail mileage in the subregion. They do not, however, connect directly to

any major public lands and presently receive less interest from trail users than does the much shorter (4.3 miles) Saginaw Hill Trail which links Saginaw Hill park with Tucson Mountain Park.

**Local Trails.** Identified local trails in Subregion 1 include six traditional trails, twenty within road rights-of-way, and one within a utility easement (Tables 7-1 to 7-4). There are relatively few traditional local (or connector) trails in this subregion, probably because few long, well-defined drainages exist. As an alternative in Subregion 1, there has been reliance on road rights-of-way for trail corridors.

**Boundary Access Points.** Identified boundary access points in Subregion 1 include six that are established and seven that are proposed (Table 7-5). Most of the seven proposed sites are currently being used but without official recognition or established access across private lands. All but one of the access points identified in the subregion have road access.

### **Trail-use Patterns and Issues**

**Patterns.** With a few important exceptions, traditional trails in Subregion 1 have developed as access routes to Saguaro National Monument West and Tucson Mountain Park. This pattern seems to be the result of factors including the following:

- The lands within Saguaro National Monument West and Tucson Mountain Park are generally much more attractive for trail-use than the adjoining Subregion 1 lands. Much of the subregion is an unremarkable flat valley plain. This contrasts with the more diverse and mountainous monument and park areas.
- Because of the nature of the topography and drainage pattern, the subregion does not have long washes that form natural trail corridors and extend from distant residential areas

into the public lands. In other subregions, such as the eastern side of the Tucson Mountains and the Catalina Mountain foothills, washes are ideal natural approaches to public lands.

- Many local trail-users live in residential areas along the northern and western boundaries of Saguaro National Monument West and the southern boundary of Tucson Mountain Park making these public lands both convenient as well as attractive for trail recreation.

In the foothills and peaks of the Tucson Mountains south of Tucson Mountain Park the varied terrain is attractive for trail-use. Here traditional trails follow washes and jeep roads with some tying into access routes to Tucson Mountain Park. Traditional trails in this area also provide equestrian and pedestrian access to Saginaw Hill and Manzanita Parks.

**Issues.** Trail issues within the subregion center around two concerns: access to public lands and crossing major transportation and utility corridors, especially Ajo Way and the Central Arizona Project.

Because urbanization is just beginning in this subregion, access has not become as serious a problem as it has in other areas, the Catalina and Rincon foothills, for example. However, as properties adjacent to the public lands develop, the problem can be guaranteed to increase.

Crossing Ajo Way is necessary to gain access to Tucson Mountain Park from the south. This road is used by high-speed traffic and will require design modifications to insure safe crossings at a few critical points. Safe crossing locations along the Central Arizona Project and Sandario Road are also essential.

### 7.1.3 Subregion 1 Trail Priorities

#### Primary Trails

Three of the four miles of the southern segment of the *Santa Cruz River* in Subregion 1 are already slated for linear park development. Construction is planned for 1992-1993. The northern segment of the Santa Cruz River is approximately 22 miles long and extends from Pima Farms Road to the Pinal County line. The six-mile reach between Pima Farms Road and the CAP aqueduct will eventually tie the CAP trail into the primary trails and linear parks of the Tucson Basin. The 14.5 miles of the Santa Cruz River downstream from the CAP aqueduct to the Pinal County line may eventually be developed as a river park, but no plans are scheduled.

The *CAP trail* has the potential to become the most important trail artery in Subregion 1 and an attraction to trail users from elsewhere in Pima County. The land for this extensive railway is already publicly owned and one-half of the trail development cost will be provided by the federal government. Because of its availability and potential, the planning and development of the CAP trail was ranked as a first priority in Subregion 1 (Table 7-6, Pocket Map 1).

#### Connector Trails

Three first priorities were assigned to connector trails in Subregion 1 (Table 7-6, Pocket Map 1). *Black and Brawley Washes* are the longest and most significant continuous drainage system in the subregion and were selected as first priority principally for their riparian habitat, wildlife, and open space values. The wash system parallels much of the length of the Central Arizona Project Trail, but will not provide the developed facilities of that trail. Although it may not be as much of an attraction as the Central Arizona Project Trail, those users desiring a natural trail experience may

prefer Black and Brawley Washes. This may be especially true of equestrians living on the western and southern sides of the Central Arizona Project aqueduct, since the Central Arizona Project Trail is planned for the eastern and northern sides of the aqueduct.

The *Saginaw Hill Trail* is the other first priority connector in Subregion 6. This equestrian trail is a critical link between Tucson Mountain Park and Saginaw Hill Park. This trail is also potentially attractive to hikers and mountain bicyclists.

Second priority connector trails in Subregion 1 include the *West Branch of the Santa Cruz River* and *Prospector Extension*. The West Branch can be linked with the Black Wash Trail across the top of the low topographic divide that separates these two drainages. This linkage presents the potential of completing a very long circuit joining with the Santa Cruz River both north and south of the Tucson Mountains. The value of the West Branch, however, has been degraded somewhat in Subregion 1 especially around the diversion aqueduct that has been inserted within its central reach.

The Prospector Extension is simply a boundary-line trail running just outside of the Tucson Mountain Park fence from the Prospector Trail to the southwest corner of the park. The fence is inset 30 feet from the park boundary so the extension trail could be easily implemented on public land to connect with San Joaquin Road.

### **Local Trails**

Three first priority local trails, *Aldon Road East and West Forks*, *Cardinal Trail*, and *Peña Wash*, were identified in Subregion 1 (Table 7-6, Pocket Map 1). The Aldon Road Trail, which is a two-forked extension of the Aldon Road right-of-way, is an important access route into Tucson Mountain Park for the many equestrians and hikers that live in the

neighborhoods along Bopp Road. A proposed extension of the park boundary would bring much of this trail into public ownership.

The Cardinal Trail is a similarly important access route to Tucson Mountain Park for equestrians and hikers in the neighborhoods along Cardinal Avenue. The importance of this trail also lies in the linkage it would provide between Manzanita Park at its southern terminus and Tucson Mountain Park at its northern end. A trail within the Cardinal Avenue right-of-way would extend the usefulness of this linkage several additional miles to the south.

The function of the Cardinal Trail and a Cardinal Avenue right-of-way trail also could be provided by a trail within a north-south gas pipeline that runs along the east side of Manzanita Park and in Tucson Mountain Park. However, the Cardinal Trail would be preferable because it has a more favorable slope and more attractive setting for the trail user. Both the Cardinal and pipeline trails are interrupted by at-grade crossings of Ajo Way just prior to their entry into Tucson Mountain Park. This busy highway is a significant hazard for trail users.

Peña Wash is a short local trail that was rated as a first priority because it completes a circuit with the Cardinal and Saginaw Hill Trails and is in an attractive wash and upland setting.

*Beehive Trail* and *Dakota Wash* were selected as second priority local trails. The Beehive Trail is a short half loop route around the base of Beehive Peak. This trail is of local interest to walkers and mountain bicyclists. Dakota Wash serves equestrians and hikers along Irvington Road and connects to Manzanita Park and the Tucson Mountain Park via the Cardinal Trail.

## Boundary Access Points

First priority candidate boundary access points in Subregion 1 include *Aldon Road*, *Naomi Road Wash*, and *Prospector* (Table 7-7, Pocket Map 1). All of these access points provide equestrian and hiker entry to Tucson Mountain Park along its southern boundary west of Kinney Road. Second priority boundary access points include *Central Arizona Project/San Joaquin*, *Fort Lowell Road*, *Manville Road*, and *Picture Rocks Road*. These access points were identified as contingencies for possible future consideration. The Central Arizona Project/San Joaquin site is proposed as an alternative to Calle Anasazi should development at that location cause access problems. The Fort Lowell and Manville Road sites could become important if an alternative routing for traffic on Sandario Road is developed to circumvent the necessity of passing through Saguaro National Monument West. In that event, the National Park Service could elect to discontinue the Sandario Road easement through the Monument and close the road to all traffic. The Fort Lowell and Manville Road access points could then be important trail entries linking the monument with the Central Arizona Project Trail.

The Picture Rocks boundary access point is also a contingency for a possible future road closure. Picture Rocks and Golden Gate Roads within Saguaro National Monument West may receive future consideration for closure and abandonment in order to consolidate wilderness units for more effective management. In this event, the Picture Rocks boundary access point would be critical for trail access.

## 7.2 Subregion 2: Eastern Tucson Mountain Foothills

### 7.2.1 Subregion Overview

#### Synopsis

Several factors combine to make Subregion 2, Eastern Tucson Mountain Foothills, particularly attractive for implementing a public trail network. These include outstanding scenic values, largely unsubdivided land bordering Tucson Mountain Park and Saguaro National Monument West, a long tradition of trail use, and two umbrella homeowner associations with long-term interest in trail-related issues representing the entire area. In addition, the topography of the subregion, which includes parallel washes flowing in well-defined channels crossed by a gas pipeline right-of-way, lends itself to a trail network.

#### Natural Setting

**Location.** Subregion 2 is located within the eastern foothills and bajada of the Tucson Mountains. On the west it is bounded by Tucson Mountain Park and Saguaro National Monument West, on the north by Pima Farms Road, on the east by the Santa Cruz River, and on the south by Ajo Way (Map 2).

**Size.** This subregion is the smallest of the eight identified in the plan area and covers about 56 square miles, including approximately 7 miles that border the national monument and 16 miles that border Tucson Mountain Park.

**Topography.** The western edge of this subregion includes a small portion of the ridgeline of the Tucson Mountains, with the steep ridges and isolated hills of the eastern Tucson Mountains extending a mile or more into the subregion. To the east is the more gently sloping bajada,

and finally the floodplain of the Santa Cruz River.

The Santa Cruz River is, of course, the major watercourse of the Tucson Basin. It is now a deeply entrenched channel that flows only after major storm events. Because of the infrequent flow and the lowered water table, deciduous trees, such as cottonwood and willow, are no longer common along its banks. At present the common species are paloverde, tamarisk, and shrubs such as desert broom.

The highest elevations in the subregion occur within the Trail's End area where the ridgeline of the Tucson Mountains rises to 3985 feet; the lowest elevation, 2130 feet, is along the Santa Cruz River at Pima Farms Road. It should be noted that, if the existing trail to Wasson Peak (elevation 4687 feet) is considered, elevation differences along a single trail could be as much as 2500 feet.

**Natural Habitat.** Throughout much of the subregion the paloverde-cacti vegetation community prevails, with the undeveloped slopes in the western portion supporting spectacular stands of saguaro and ocotillo. Along the washes are huge specimens of blue paloverde and mesquite. Ironwood trees grow in a band along Camino del Oeste Wash. This species is not tolerant of freezing temperatures and, within the Tucson Basin, grows only in two locations -- here and in the foothills of the Tortolita Mountains. The lower bajada supports the less varied creosote-bursage community, with desert saltbush growing in the remaining natural portions of the floodplain.

Wildlife is still abundant in the western portion of the subregion. A few mountain lions still call the Tucson Mountains home; occasionally they are encountered on the Wasson Peak trail. Bobcat and deer are relatively common; javelina and coyote have adapted well to the human populations in the low density areas.

**Cultural Resources.** Prehistoric sites found in this subregion include bedrock mortars where desert resources were gathered and processed, areas with piles of rock where the Hohokam practiced dry farming, petroglyph panels, and habitation sites. Villages are generally found closer to or on the floodplain of the Santa Cruz River, with dry farming features and resource procurement sites on the slopes of the Tucson Mountains. Some extensive lithic scatters (areas where stone tools and manufacturing debris are found) dating to the Archaic period, a few thousand years ago, have been found in the subregion. These sites may have buried remains, as indicated by a site at the base of Sentinel Peak ("A" Mountain), which was recently excavated by the Institute for American Research.

Recorded historic sites include houses, a trash dump, and a mine. There are farm and ranch complexes in the subregion, as well as mines and lime kilns. There are numerous historic sites along the Santa Cruz River, the focus for the historic settlement of Tucson.

### **Development Patterns**

**Land Ownership.** Land ownership within the subregion is largely private. The Bureau of Land Management still retains one parcel adjacent to Saguaro National Monument West (the southeast one-quarter of Section 9 in T13S, R12E). There are a few parcels of state trust lands adjacent to or within the monument as well as a parcel managed by the Desert Laboratory of the University of Arizona (Tumamoc Hill). Of particular interest is a state trust parcel in Section 16, through which a small piece of Wild Horse Wash extends, and a parcel in Sections 28 and 33, through which Roger Wash Extension extends.

Four of the city-owned parks within the subregion could be usefully incorporated into a trail system: Kennedy Park, which is planned to incorporate an equestrian area; Greasewood Park, which includes Anklam Wash, part of the Greasewood

Loop; and Northwest Park, which includes a downstream portion of Anklam Wash. Three trail corridors, Sweetwater Wash, Roger Wash, and Trail's End Wash all terminate in Silverbell Regional Park, a city-owned park that would also be a suitable site for an equestrian center (see Santa Cruz Riverpark Masterplan Update (3)).

**Population Patterns.** Much of this subregion still retains a rural-suburban character. In the north and west considerable unpopulated land remains, with existing development usually occurring on one- or multi-acre parcels. A few guest ranches remain, although several others have gone out of business in recent years. In the southern portion, especially along the major thoroughfares, urban densities now prevail. The residential pattern there is a mix of older, well-established single family neighborhoods, mobile home subdivisions, and larger residential lots with vestiges of farming along the Santa Cruz River and the West Branch. Fortunately, only a few of the developments west of Silverbell and Mission roads have interfered with the major natural drainages that would form the backbone of this subregion's trail system.

Two umbrella homeowner associations, Tucson Mountains Association and the West Side Neighborhoods Coalition, represent neighborhood interests in the subregion. This gives the subregion a cohesiveness that should aid in the implementation of a trail system.

**Road System.** From a trail user perspective, the most serious road-related problem is the recent and on-going widening of Silverbell and Mission Roads. These projects were undertaken with little consideration given to pedestrian or equestrian concerns and now present major obstacles. Many of the east-west roads within the northern half of the subregion are not yet major thoroughfares and could incorporate at-grade trail crossings. In a few cases,

such as the Anklam Road and Greasewood Road crossings of Anklam Wash, the culverts are sufficiently large for pedestrian and probably equestrian use.

**Future Trends.** The major trends in this subregion will likely be associated with the aggressive development and annexation policies of the Town of Marana. Recently approved development near the northern border of this subregion has placed high density urban uses near Saguaro National Monument West. In addition, no provisions have been made for public trail corridors. This presents a major contrast to the traditional lifestyle of the area.

Within the southern part of this subregion, the trend will undoubtedly be toward infill at similar or somewhat higher densities. Here, the incorporation of trails into development plans should be relatively straightforward and should prevent major losses of trail opportunities.

## **7.2.2 Subregion 2 Trail Inventory, Patterns, and Issues**

### **Trail Inventory**

**Primary Trails.** A 14-mile reach of the Santa Cruz River is the only primary trail in the subregion (Tables 7-1, 7-2). In this area the river is in both private and public hands. The City of Tucson and Pima County Department of Transportation and Flood Control District own rights-of way along several miles. These include portions through Silverbell Regional Park, a two-mile section north of the confluence with the Cañada del Oro, and several miles south of Grant Road, including the Santa Cruz River Park. The county will continue to acquire additional rights-of-way for flood control purposes.

As bank stabilization projects are completed, linear parks will be

developed. Presently, the Santa Cruz River Park covers approximately 2.5 miles, from St. Mary's Road south to Mission Lane. Current facilities include a pedestrian/bicycle/equestrian path, an exercise course between Congress Street and St. Mary's Road, a playground and a Frisbee Par course off Riverview Drive. Three additional river park projects now under design are slated for construction during the next several years. These projects are St. Mary's Road to Grant Road (construction planned for 1989-90); Mission to Ajo (1990-91); and Ajo to Irvington (beyond 1992-93). Eventually the Santa Cruz River Park will provide multi-use and whole access trail opportunities throughout the region. This trail will link the major west-east trending washes and will connect to the larger county-wide system.

**Connector Trails.** Five trails have been identified as traditional connector trails, totalling 23 miles (Tables 7-1 to 7-4). They are distributed equitably from north to south in the subregion: two trails serve the northern part of the subregion, connecting Saguaro National Monument West to the Santa Cruz River, north of Ina Road; two trails serve mid-region residents, connecting the monument to the Santa Cruz via Silverbell Park; and one connector trail loop is located south of Silverlake Road, linking the Santa Cruz and its West Branch with Tucson Mountain Park.

All of the connectors are washes or, in the case of the West Branch of the Santa Cruz, a river tributary. All have potential for equestrians, pedestrians, and, in some cases, mountain bicyclists.

**Local Trails.** There are 20 local trails in the subregion, totalling 52 miles (Tables 7-1 to 7-4). Like the connector trails, they are generally washes that drain the Tucson Mountains, flowing west to east to the Santa Cruz. Four of these (Cholla, Painted Hills, San Juan, and Silvercroft) were included for their preservation merit rather than for their current or potential trail use. In several

cases, local wash trails link to road rights-of-way trails or to the El Paso/Southwest gas pipeline.

Seventeen candidate road rights-of-way trails and two utility rights-of-way trails, totalling an additional 61 miles, were inventoried. The gas pipeline is an important component in the local trail network because it runs nearly perpendicular to the wash trails, thereby creating opportunities for local trail loops. Like the connector trails, these trails can be used by equestrians, pedestrians, and mountain bicyclists and are distributed fairly evenly throughout the subregion.

**Boundary Access Points.** Fifteen access points were identified as linking the county trail network to the Saguaro National Monument West (eight points) or Tucson Mountain Park (seven points). Two are established access points, five are candidate access points, and eight are designated as trail entry points only (Table 7-1, 7-5).

### **Trail Use Patterns and Issues**

**Patterns.** A very strong tradition of trail use exists in the subregion. Because of the overall low-density of residential development, a rural/suburban lifestyle dominates. Residents of the Tucson Mountain foothills use washes and undeveloped lands adjoining washes to access the monument and county park.

Trail users throughout most of the region typically look west to the public lands rather than east to the Santa Cruz River primary trail. Once the linear park is complete along the Santa Cruz, however, this trail use pattern may change. Commuter and recreational bicycle use likely will increase. As more people move into new subdivisions like Continental Ranch, pedestrian trail use will likely increase along the river and in the lower reaches of washes, if development can occur without completely destroying the natural resource and amenity features of these washes.

In the southern part of the subregion, there is presently pedestrian, bicycle and equestrian use of the Santa Cruz River Park as well as considerable interest in increasing trail opportunities along the Santa Cruz and the West Branch. Tucson Mountain Park is popular with local residents, but as adjacent lands have been developed, the park is not as accessible as it once was.

**Issues.** In the northern part of the subregion the principal issue relating to trail use is the threat of large-scale developments that interfere with traditional uses. In addition, there is no established access to Saguaro National Monument West. The 1976 Trail Access Plan recommended that access be secured at the Sweetwater trailhead or at the west end of El Camino del Cerro Road, but this has not occurred.

In the southern part of the subregion a principal concern is loss of access to the Santa Cruz River because of bank stabilization projects that have not included frequent entry points. Also, the threat of loss along the West Branch is of considerable concern. In addition, major road projects such as those along Mission Road have created a barrier to trail use and safe pedestrian/equestrian circulation.

### **7.2.3 Subregion 2 Trail Priorities**

#### **Primary Trail**

The *Santa Cruz River*, the only primary trail in the subregion, has first priority status because of its importance in the county-wide trail network (Table 7-6, Pocket Map 1). The City of Tucson's Santa Cruz Riverpark Masterplan, prepared in 1976 and updated in 1982, discusses the river's potential as a recreational amenity. The County Department of Transportation and Flood Control District has developed a multi-phased plan for right-of-way acquisition along the Santa Cruz. Their goal is to provide a linear park along the Santa Cruz

that will extend from the Town of Marana, through the City of Tucson, to the San Xavier District of the Tohono O'odham Indian Reservation.

The existing 2.5 mile reach of the developed linear park will be augmented by additional river park projects already noted in the subregion inventory section. Since the linear park will be intersected by major east-west streets, including bike routes and bikeable streets, this primary trail will facilitate trail loops and bicycle and pedestrian linkages between major activity centers in west Tucson, such as Pima College and St. Mary's Hospital, with the downtown and the University of Arizona.

#### **Connector Trails**

The subregional citizens' panel identified three first priority connector trails: *Enchanted Hills/West Branch of the Santa Cruz; Sweetwater Wash; and Wild Horse Wash* (formerly Forest Wash) (Table 7-6, Pocket Map 1). The first of these is especially important to residents of the southern part of the region. The east-west trending portion of the connector links the Santa Cruz River, via its West Branch, to Tucson Mountain Park. The West Branch portion of the connector has high natural resource value. Along with other typical riparian vegetation, it has one of the few remaining mesquite bosques in the city.

The remaining two first priority connector trails, Sweetwater Wash and Wild Horse Wash, access Saguaro National Monument West. They were chosen as first priorities because of a combination of high natural resource value and recreation use. Except in small portions of its lower reach, where private property uses encroach into the wash (for example, horse corrals, an informal dump, and sand and gravel works), Sweetwater Wash has retained high scenic value, vegetative integrity and geologic interest. The wash is used in its entirety by pedestrians and equestrians, except in a few steep, narrow and rocky

portions of the upper wash where horse travel is difficult. Mountain bicyclists use some sections. Sweetwater Wash accesses the monument at a trail entry point that is without parking or other facilities. However, once in the monument, a short bushwhack or cross-country ride would bring the hiker or equestrian to the Sweetwater (Wasson Peak) Trail. Parking and associated services are available at Silverbell Park at the eastern end of the trail.

Wild Horse Wash was given high priority because of its special value to equestrians in the northern portion of the subregion as well as its outstanding scenic and natural resource values. It enters the monument at a trail entry point (presently a horse gate). Because it crosses the gas pipeline and Yuma Mine local trail, it helps to knit together the trail system in the northern portion of the Tucson Mountain foothills.

The two second priority connector trails are *Picture Rocks Wash* and *Roger Wash/Roger Extension*. Picture Rocks Wash serves the northern part of the subregion, linking the Santa Cruz River with Saguaro National Monument West. It intersects the gas pipeline just south of Pima Farms Road, where it is joined by the Safford Peak local trail. Proposed access to the trail is at the west end of Ina Road and off Picture Rocks Road. Roger Wash connects the easternmost part of Tucson Mountain Park with the Santa Cruz River at Silverbell Park; the northwest/southeast-trending Roger Extension is a cross-country segment that connects the park with the monument.

### **Local Trails**

The panel designated four first priority trails: *Greasewood Loop*, *South Branches of the East Idle Hour Wash*, *36th Street Extension*, and *Yuma Mine Trail* (Table 7-6, Pocket Map 1). The southern part of the Greasewood Loop, via Anklam Wash, connects Tucson Mountain Park with Greasewood Park, where parking, water, and picnic shelters

are available. This park also contains a short, hard-surfaced, whole access trail. The northern part of the loop, Camino de Oeste Wash, is connected to the southern part by the gas pipeline and the Greasewood Road right-of-way trail. The west ends of the loop enter Tucson Mountain Park at El Camino del Oeste and Starr Pass East, both established access points.

The Thirty-sixth Street Extension serves the southern part of the subregion and joins the Enchanted Hills connector trail for access to Tucson Mountain Park. Both the Southern Branches of the East Idle Hour Wash and Yuma Mine Trail are especially important to equestrians in the northern part of the subregion. The Southern Branches join Sweetwater Wash and thus, connect with Silverbell Park.

The three second priority local trails are *Belmont Loop*, *Middle Branch of East Idle Hour Wash*, and *Sweetwater Trail Road*; all three of these are used primarily by equestrians at present. The portions of Belmont Loop within washes and the Middle Branch of East Idle Hour Wash have excellent potential for hikers. Belmont Loop, in the northern part of the subregion, uses the gas pipeline to provide a loop between Wild Horse Wash and Yuma Mine Trail. The Middle Branch of East Idle Hour has been identified because of especially scenic portions including large natural pools within the wash and historic-period house remains adjacent to the wash. The Sweetwater Trail Road provides non-vehicular access to the monument at its eastern end; it enters the monument only a short distance from the Roger Extension and Sweetwater Wash.

There are 12 third priority local trails. Four of these trails have been identified because they have value for preservation rather than for recreational trail use. They are *Cholla Wash*; *Painted Hills Wash*; *San Juan Wash*; and *Silvercroft Wash*. The remaining third priority local trails are *Anklam Local* (from the gas pipeline

to the Santa Cruz; *North and South Forks of Roger Wash*; *Safford Wash*; *South Sweetwater Wash*; *Speedway Wash*; *Trails End Wash*, and *West Idle Hour Wash*.

Of the remaining eight, two deserve special mention. Anklam Local provides access to the Santa Cruz River primarily by means of short road rights-of-way, thus providing residents of the near west side of the city with access to the river park. This trail also links Northwest and Riverview Parks. Combined with Greasewood Loop it connects to Greasewood Park and Tucson Mountain Park. Trails End Wash connects Tucson Mountain Park with Silverbell Park and has the potential for parking at both ends.

### Boundary Access Points

Fifteen boundary access points were identified (Table 7-7, Pocket Map 1). They include two established access points to Tucson Mountain Park: *El Camino del Oeste* and *Starr Pass East*. (Starr Pass East is not presently open to the public because of construction activities associated with a CAP storage facility.)

First priority access points to Saguaro National Monument West are *Box Canyon*, *Sweetwater Trailhead*, and *Yuma Mine*. Box Canyon and Sweetwater Trailhead provide road access via Picture Rocks Road and El Camino del Cerro, respectively, to the monument as well as link to established or proposed trails within the monument. Yuma Mine is a trail entry point only and is associated with both Yuma Mine Trail and Picture Rocks Wash. The only first priority access point to Tucson Mountain Park is *Enchanted Hills Wash*, which is a trail entry point only. The nearest road access is Thirty-sixth Street.

Second priority access points to Saguaro National Monument are *El Camino del Cerro*, *Ina Road*, *Roger Extension*, *Scenic Drive*, and *Sweetwater Wash*. With the exception of El Camino del

Cerro, which is a proposed boundary access point, all second priority access points are trail entry points only.

Second priority access points to Tucson Mountain Park are *Greasewood Road*, *Roger Wash*, *Roger Extension*, and *Trails End Wash*. Greasewood Road and Trails End Wash have been proposed because they have public road access and they link with established trails in the mountain park. Roger Extension and Roger Wash access points are trail entry points only.

## 7.3 Subregion 3: Tortolita Foothills and Northwest Catalinas

### 7.3.1 Subregion Overview

#### Synopsis

The Tortolita Foothills and Northwest Catalinas, Subregion 3, is undergoing a transition from a sparsely populated, predominantly rural area to a patchwork of higher density suburbs and planned communities. This growth is irregular and characterized by social and economic diversity: it encompasses medium-density family-oriented subdivisions, upscale exclusive communities, and low-density horse properties. Existing or planned resorts add another element to the changing economy of the area.

Increased suburbanization and development could irreparably damage the subregion's unique natural and recreational resources. A major issue in Subregion 3 is how to balance the increased demand for recreational opportunities brought by new growth with the need to protect and manage the subregion's natural and cultural resources. Access to adjacent public lands (Coronado National Forest, Catalina State Park, Tortolita Mountain Park) and threats to the continued use of trails in unprotected areas are also important trail issues.

## **Natural Setting**

**Location.** The Tortolita Foothills and Northwest Catalinas Subregion is the northernmost subregion in the project area (Map 2). It is a triangular shaped area, with its apex pointed south, toward the Tucson metropolitan area. Its northern edge is the Pinal County line and the southern edge is the proposed boundaries of Tortolita Mountain Park. The subregion's western flank is the Santa Cruz River its eastern border is an irregular line defined by the Cañada del Oro between the Santa Cruz River and Catalina State Park, the state park's western boundary, and the western boundary of the Coronado National Forest.

**Size.** Subregion 3 is approximately 158 square miles in area, and includes 13 miles of boundaries with Coronado National Forest and Catalina State Parks. In addition, about 29 miles would border the expanded Tortolita Mountain Park as it is currently conceived.

**Topography.** Subregion 3 ranges from the bottom lands of the Santa Cruz River to the foothills of the Tortolita and Catalina mountains. The lowest elevations include: the Santa Cruz River, the lower reaches of the Cañada del Oro and other major washes such as Sutherland Wash, Big Wash, and Honey Bee Wash, and the fertile floodplains. Above these bottomlands are gentle slopes, cut by a number of smaller, braided washes that drain the mountain foothills. At higher elevations are steep, rocky canyons. The surface flow of these drainages is ephemeral and depends upon rain somewhere in the watershed.

Lying at the base of the Tortolitas is a broad alluvial fan, subject to sheetflow flooding. It also figures in the subsurface hydrology of the area. A significant amount of ground water is recharged throughout the Tortolita area through the percolation of stormwater run-off. The other major sources of aquifer recharge

are the channels of Big Wash and the Cañada del Oro.

Elevations within the subregion range from 1960 feet on the Santa Cruz River, to 3320 feet at the national forest boundary north of Catalina State Park, to 3600 feet in the eastern Tortolitas.

**Natural Habitat.** In this subregion the creosote-bursage community is found at lower elevations and the paloverde-saguaro community is prevalent in the bajadas and mid-elevation areas. Desert grassland areas are also common, with associated grama grasses and cacti. In addition, desert scrub riparian vegetation characterized by dense scrubby mesquite is common in the major washes.

This subregion also has two rare vegetation types: deciduous desert riparian woodland, and the ironwood-paloverde-saguaro community. The deciduous riparian woodland type includes a cottonwood forest and mesquite bosques along a stretch of Honey Bee Canyon. The ironwood association provides diverse plant and animal life and is found on the Tortolita fan.

**Cultural Resources.** The bajadas and foothills of the Tortolita Mountains and the northwestern Santa Catalina Mountains were well-used by the Hohokam and probably by Protohistoric groups (the immediate predecessors of the Piman-speaking groups encountered by the Spanish). The slopes of the Tortolitas were the focus for Hohokam settlement, including village sites with ballcourts, areas of irrigation, dry farming, ak-chin or floodwater farming, and numerous sites where resources were procured and processed (24, 25). Agave was grown in the rockpile fields in this area (26). The area is also well-known for its petroglyphs.

Evidence for Protohistoric use is tenuous, but a few sites with Papago pottery have been found. Archaic materials also have

been found, often in association with later artifacts.

Historic homesteads and ranches occur in the area. Some large tracts of land that are now being developed or considered for development were once ranches. Historic sites recorded in the vicinity of trails include homesteads, corrals, trash dumps, and dams.

### **Development Patterns**

**Land Ownership.** Land in the subregion is both in state and private ownership. State land accounts for approximately 42 square miles or 27 percent of the subregion; the remaining land in private ownership is approximately 116 square miles or 73 percent of the total. State land holdings are concentrated in the western Tortolita foothills and in the northeast portion of the region, between the Tortolitas and the community of Catalina. The majority of these lands are presently leased for cattle grazing. Private holdings include large parcels owned by investors and developers. Several of these holdings, such as the Wolfswinkel Group's Rancho Vistoso and Del Webb's Sun City Vistoso, are being developed as residential/retirement/resort communities. Rancho Vistoso is comprised of approximately 7,800 acres, of which Sun City Vistoso's 1,000 acre parcel is the first to be developed. Another large landholder in the Tortolita foothills is Westinghouse Communities.

Privately owned land is under the jurisdiction of either the towns of Marana and Oro Valley or Pima County.

These three political jurisdictions also have small landholdings in the subregion for public services and infrastructure, including lands owned by Pima County Department of Transportation and Flood Control District. Current holdings include reaches of the Cañada del Oro (La Cholla Boulevard to La Cañada Drive, acquired through dedication by the Estes Company) and the Santa Cruz River

(north from the confluence with the Cañada del Oro approximately 1.4 miles). The county will continue to acquire ownership rights or flood control easements to the Santa Cruz and its major tributaries as these areas are planned for development. In addition, other secondary washes in the subregion are slated for county acquisition. The county is presently in the process of acquiring, through dedication from Rancho Vistoso, portions of Big Wash and Honey Bee Wash. These reaches are specifically earmarked for trails and open space.

Another trail corridor through state land, Catalina Park/Flat Rock Trail, located north of Catalina State Park between the Cañada del Oro and the national forest, is presently in the process of being negotiated as a long-term (50-year) right-of-way trail by the Arizona State Parks Department.

**Population Patterns.** The majority of the subregion is sparsely populated although there are large pockets of medium-density housing and plans for future accelerated development in the Tortolita foothills. Development has taken place within all three jurisdictions (Marana, Oro Valley, unincorporated Pima County), at different rates and with different characteristics.

The variety of new development includes upscale exclusive communities (such as La Reserve in Oro Valley), resort/retirement planned medium-density communities (such as Sun City Vistoso), upper to middle income low-density homesites on the Tortolita fan, medium density single-family housing on the terraces overlooking the Cañada del Oro, and lower cost family housing in the southern portion of the subregion. In addition, destination resorts will continue to be developed. Much of this new development contrasts sharply with older, lower-density ranch and farming development in Marana and the Tortolita foothills.

In spite of these contrasts, the residents of the subregion share an enthusiasm for trails and outdoor recreation. Sun City Vistoso has a current population of approximately 1,000 residents. Contacts with representatives from this community indicate that hiking and walking are popular activities. A high proportion of the new and older low-density properties are zoned for horses. Trail-users, especially equestrians, live in the Tortolita/Catalina foothills because of their love of open spaces and a rural, Western lifestyle.

**Road System.** Interstate 10 and U.S. Highway 89 are the major high-volume routes in the subregion. As the population of the area increases, major arterials are being developed. In the Marana/Tortolita foothills area, east-west secondary routes are upgraded section line roads that connect to the freeway. Tangerine Road is planned as a major outer loop highway for the Tucson area. It and other east-west secondaries, such as Ina Road, Cortaro Farms Road, and Avra Valley Road already have I-10 interchanges and will carry high traffic volumes. In the eastern Tortolitas, Rancho Vistoso Boulevard/First Avenue will accommodate more traffic as the community increases in size. La Cholla Boulevard and Thornydale Road are key north-south arterials.

Hundreds of miles of local paved and unpaved county roads feed into the secondary-arterial system. Several of these roads are presently used by equestrians for access to public lands. In addition, several unmaintained former jeep roads in the foothills are used as horse and foot trails.

**Future Trends.** In spite of a temporary hiatus in development and construction throughout Arizona and much of the Southwest, the long range forecast calls for increased development and population growth. The picture for the Tortolita foothills and northwest Catalinas shows a continuation of the development patterns of the past few years: a patchwork of

medium-density planned communities, with or without destination resorts; suburban-type subdivisions; and low-density housing designed for middle and upper income buyers. Demand for infrastructure and related community services provided by the towns of Marana and Oro Valley and by Pima County will also increase.

### **7.3.2 Subregion 3 Trail Inventory, Patterns, and Issues**

#### **Trail Inventory**

**Primary Trails.** There are three primary trails in Subregion 3: a 22-mile reach of the Santa Cruz River; a 9-mile section of the Central Arizona Project (inventoried as a utility easement/right-of-way and divided into two segments based on priority status); and 14 miles of the Cañada del Oro (Tables 7-1, 7-2, and 7-4).

The part of the Santa Cruz River south from the Town of Marana is planned for development as a linear park in part as mitigation for habitat and recreation loss because of engineered flood control improvements. This primary trail will provide the spine for an integrated trail system.

The development of the CAP trail corridor will join trails in the western Tortolitas with the Santa Cruz primary trail and, further southwest, with the network of trails west of the Tucson Mountains. The creation of this long-distance trail loop was the impetus behind the Bureau of Reclamation/Pima County trails corridor agreement. This primary trail will be especially important to bicyclists and equestrians.

The Cañada del Oro, the major tributary wash of the Santa Cruz in the Catalina Mountains/north Tucson area, will provide a crucial route in the trail system for the county. It forms a route from which a network of connector and local

trails radiate into nearby public recreation areas.

Many of these trail-users currently drive to Catalina State Park or to the nearest vehicular access point to enter public lands. Bicyclists who ride on U.S. Highway 89 with the state park as a destination frequently contend with heavy traffic. Once the Cañada del Oro is developed as a multi-use primary trail, it will be favored by long-distance equestrians and bicyclists to approach adjacent recreation lands.

The Cañada del Oro primary trail will also help link communities in the north Tucson/Oro Valley/Catalina area. For example, equestrians who live in Oro Valley, near Linda Vista Road will be able to access the Cañada del Oro via local trails identified in Subregion 4, and, from various points along the Cañada del Oro, branch off to major connector trails to the eastern Tortolitas (for example, Honey Bee Canyon). Long distance riders could travel to or through Catalina State Park, and link up with trails north of the state park that, in turn, access the national forest. Others who live along the Cañada del Oro could use it as a local trail, in much the same way that the Rillito River Park is used by people who live nearby.

**Connector Trails.** Approximately 39 miles are tabulated as traditional connector trails in the subregion (Tables 7-1 and 7-2). Connector trails in the Tortolita foothills are generally very long. With only one exception, the western "leg" of the La Cholla-Honey Bee Loop, they follow the major washes that drain the Tortolitas. The three western connectors link the Central Arizona Project with the western Tortolitas; the eastern Tortolitas connector loop joins the Cañada del Oro to the Tortolita foothills trail. Equestrians and possibly mountain bicyclists would be the most frequent users of these long-distance connectors, except for the upper reaches of Honey Bee and Wild Burro washes, which are now frequently used by hikers.

Connector trails in the northwest Catalinas portion of the subregion are predictably much shorter since the distance between public land boundaries and the primary trail is, in most cases, only a few miles. These connectors are currently used by equestrians, hikers, and mountain bicyclists.

Several road rights-of-way segments were identified as connectors or as segments of traditional connector trails because they join public lands with the primary system (Table 7-3). These trails add 13 more miles to the connector category.

**Local Trails.** There are approximately 78 miles inventoried as local traditional trails in the subregion (Table 7-2). These trails include a number of minor washes, an old jeep road at the foot of the Tortolitas, and many neighborhood routes that skirt washes and roads. In addition, 46 miles of road and utility rights-of-way and easements have been inventoried as local trails (Tables 7-3 and 7-4).

**Boundary Access Points.** Sixteen access points were identified for the subregion (Tables 7-1 and 7-5). They provide access to Catalina State Park, the proposed boundaries of Tortolita Mountain Park, and Coronado National Forest. Twelve are associated with connector trails; two are access points into Catalina State Park from the Cañada del Oro primary trail; and five are associated with local trails.

The majority of these boundary access points are considered trail entry points because there are no public roads or facilities at the end of associated county trails. In the Tortolitas all roads on private or state trust lands are unpaved. In the Catalinas, access points are approved by the forest service as entry points, but there are no facilities or forest service trails at these entry points. With the exception of Sutherland Trail, there are no public land trails that intersect with trails in the subregion trails planning area.

## Trail Use Patterns and Issues

**Patterns.** Equestrian trail use is very common throughout the subregion, primarily because of the large horse population, the low-density of development, and the traditional rural/ranch lifestyle. Riders in the Tortolita foothills use long-distance wash trails and road rights-of-way. East of the Cañada del Oro, trails that serve the local community criss-cross the area north of Catalina State Park to access the national forest. In addition, the equestrian center in the park attracts horseback riders from outside the immediate neighborhood. In addition to riding in major washes, equestrians throughout the subregion use road rights-of way.

Mountain bicycle use appears to be increasing in popularity. Many of the long distance trails, especially those outside of the sandy wash bottoms, attract these trail-users.

Hikers use shorter trails that access public lands (Sutherland Wash in the Catalinas) or portions of long wash/trail systems. For example, upper Honey Bee and Wild Burro Canyons are favored destinations for Southern Arizona Hiking Club members. As people move to Rancho Vistoso and Sun City Vistoso, more hikers and walkers will use trails in the subregion.

**Issues.** Major issues identified by trail-users from the subregion are:

- Access to the national forest, Catalina State Park, and Tortolita Mountain Park;
- Unobstructed use of traditional trails, especially the Cañada del Oro and major washes; and
- Natural and cultural resource protection and management. Trail-users expressed concern about negative impacts on ground water recharge because of development near

washes; degradation of the landscape by unregulated off-road vehicle use; and threats to petroglyphs and other cultural resources because of uncontrolled and unmanaged access.

## 7.3.3 Subregion 3 Trail Priorities

### Primary Trails

All three of the primary trails are considered first priority. Table 7-6 summarizes trail priorities in the subregion.

The *Cañada del Oro* is a first priority trail because of its importance in linking a number of ancillary trails throughout the northern Tucson Basin.

The southern segment of the *Central Arizona Project* (5.3 miles), is a first priority trail, except for the section north of its junction with Cottonwood Wash. The northern segment of the *Central Arizona Project* (3.8 miles), which extends to the Pinal County Line, is a second priority because it does not have any other traditional trails that connect to it.

The *Santa Cruz River* is a first priority trail from its confluence with the Cañada del Oro to the Pinal County line (about 20 miles). The goal of the Pima County Flood Control District is to have a linear park system extend from the Town of Marana south to the northern boundary of the San Xavier District.

### Connector Trails

Three first priority connector trails were identified: *Catalina Park/Flat Rock*, *La Cholla/Honey Bee Loop*, and *Wild Burro Wash*. (Table 7-6, Pocket Map 1). *Catalina Park/Flat Rock*, traverses state lands to link Catalina State Park to the Coronado National Forest. It has outstanding natural resource and recreation features and is currently under negotiation as a long-term (50-year) right-

of-way trail by the Arizona State Parks Department.

La Cholla/Honey Bee Loop is an important traditional connector trail from the Cañada del Oro to the Tortolita foothills. Portions of the trail have very high resource value because of vegetation and geology. The trail is primarily a wash and upland trail, except for several road rights-of-way in the western leg of the circuit. Part of the eastern leg of the trail (the Honey Bee leg) is in Rancho Vistoso and, according to the Rancho Vistoso Development Plan, is designated as an equestrian/hiking trail. At its northern end this connector loop joins an old jeep trail at the base of the Tortolitas.

Wild Burro Wash was given first priority status because it provides access to a very important canyon in the Tortolitas, Wild Burro Canyon, which goes into the heart of the Tortolitas and contains the only two developed hiking trails in the area. The natural resources of the canyon include springs and a waterfall. The wash itself is very wide and braided in its lower portions. It has been designated as an open space zone in the Marana General Plan and is considered to be excellent wildlife habitat (15). It will be an important connector from the Central Arizona Project, once that trail corridor is developed and, in addition, it intersects with the transmission line/powerline road that runs northeast of the Central Arizona Project, providing yet another opportunity for linkage with other trails to the Tortolitas.

The two second priority connector trails designated by the panel are *Cottonwood Wash* and *Big Wash/Hawser/to Catalina Park/Flat Rock Trail*. The first of these trails is valuable to equestrians and hikers in the western Tortolitas/Marana area. Like Wild Burro Wash, this trail intersects with the Tucson Electric Power overhead power lines and the CAP, and has open space and wildlife habitat values. The trail features large paloverde and ironwood trees.

The Big Wash/Hawser/to Catalina Park/Flat Rock Trail is the only direct connector trail between Big Wash and the Coronado National Forest and, because of this, was given priority status. It is especially important to equestrians, although mountain bicyclists and hikers also use this route.

Trails with third priority status are *Cochie Wash*, in the western Tortolitas, *Sausalito Wash*, in the eastern Tortolitas, and *Sutherland Wash* in the northwest Catalinas. The first two of these trails are on state lands; the latter is primarily on private land. These three trails serve recreation and natural resource/open space needs and complement the higher priority trails.

### Local Trails

The panel designated four first priority local trails: *Tortolita Foothills Trail*, *Big Wash*, *Cedar Breaks*, and *Golder Ranch Loop to Little Cottonwoods* (Table 7-6, Pocket Map 1). The first of these trails is a critical east-west linkage across the base of the Tortolitas. Several short access trails branch off from this trail to meet the proposed southern boundary of Tortolita Mountain Park. Big Wash was given first priority status because of its natural resource values (aquifer recharge, wildlife habitat and movement) and its recreational/trail linkage to the Tortolitas, via Honey Bee Wash, and to the Cañada del Oro primary trail. Both Cedar Breaks and Golder Ranch Loop link the communities of Catalina and Oro Valley with the national forest. In addition, they create local loops with other trails in the network.

The five second priority local trails are: *Hardy Wash*, *Shannon Extension*, *Prospect Wash*, *Little Cottonwood Link*, and *South Lago Link*. The first three of these trails serve the southern Tortolitas/Marana areas and most frequently are used by local equestrians. Hardy Wash links the Santa Cruz River with the Cañada del Oro. It crosses Arthur Pack Park where there is potential

for parking and, possibly, equestrian staging. Shannon Extension provides a link to the La Cholla/Honey Bee connector trail and other road rights-of-way trails. Prospect Wash is valuable for local recreational use as well as for open space and wildlife habitat. Both Little Cottonwood Link and South Lago Link are important local routes for the communities of Oro Valley and Catalina. They create local loops that access the national forest and the primary or connector trail system.

Local third priority trails are: *La Cholla East*, *Scottie's Loop*, *El Camino de Mañana Wash*, and *Twenty-Seven Wash*. *La Cholla East* is primarily a wash trail, with a small portion on a road right-of-way. It links to the Cañada del Oro and is valuable to equestrians in both subregions 3 and 4 as a local trail. *Scottie's Loop* and *El Camino de Mañana Wash* provide long distance loops in the area to the east of I-10. *Twenty-Seven Wash* is on State and private land. Because it drains into Big Wash and crosses the Big Wash/Hawser connector trail, it feeds into the larger trail system and serves as part of a long distance trail. It also is used by hikers and equestrians in the Catalina area as a short distance trail.

### Boundary Access Points

Of the 16 boundary access points/trail entry points, 13 were assigned first priority status, primarily on the basis of the importance of their associated trails, and 3 boundary access points were given second priority status (Table 7-7, Pocket Map 1). The majority of these access points are considered to be trail entry points only because there are no public roads or facilities at the end of associated county trails or approved facilities or trailheads on forest service lands.

Boundary access point priorities were based on strong concerns about future access to the national forest and the proposed expansion of Tortolita Mountain Park. The question of accessibility to the county park was

especially important to the panel because the county has not finalized its boundaries or completed a master plan for the park. As development continues in the subregion, public concern about potential limitations of access to existing and proposed recreation areas is likely to grow.

## 7.4 Subregion 4: Catalina and Rincon Foothills

### 7.4.1 Subregion Overview

#### Synopsis

Subregion 4, Catalina and Rincon Mountains, contains some of the best trail opportunities as well as some of the most serious trail constraints in eastern Pima County. The major drainages provide important remnants of riparian habitat; many also provide significant trail corridors, as well as access to popular national forest trails. However, the high land costs and property-owner concerns that may be difficult to overcome are constraints to the establishment of trails in this subregion.

#### Natural Setting

**Location.** Subregion 4 is bounded on the west by the Cañada del Oro Wash; on the south by the Rillito River and Pantano Wash; and on the north and east by the boundaries of the Santa Catalina District of the Coronado National Forest and the Saguaro National Monument (Map 2). The western portion of the national forest contains the Pusch Ridge Wilderness, created in part to protect bighorn sheep habitat.

**Size.** Subregion 4 covers about 130 square miles with about 40 miles bordering public lands. Of these, 30 border the Coronado National Forest and 10 border Saguaro National Monument.

**Topography.** There are two major topographic components: the southern and some of the western foothills of the Santa Catalina Mountains, and the lowermost foothills of the Rincon Mountains.

The landscape ranges from flat to gently rolling at the lowest elevations, and includes fairly steep-sided foothill ridges at the upper elevations. The canyons of the subregion vary from a few that are deeply incised with floors several hundred feet across to narrow ones defined only by sandy bottoms and banks a few feet high.

The Rillito River is the largest tributary of the Santa Cruz River and, although it flows only in response to storm events, it is a major source of groundwater recharge within the Tucson Basin. Agua Caliente Wash and Tanque Verde Wash flow out of a region sometimes referred to as the Tanque Verde Mountains, where the Santa Catalina and Rincon mountains merge. Both washes are ephemeral streams, although within the Coronado National Forest both support perennial pools that are popular recreation spots. Within the national forest, the Tanque Verde drainage also contains waterfalls that are both popular and dangerous. Pantano Wash, which is known as Cienega Creek at its head, flows only occasionally in its downstream reaches.

Elevations within the subregion range from a low point of 2200 feet at the confluence of the Rillito and Santa Cruz Rivers to high points of 3500 to 4000 feet on small peaks and ridges near the national forest boundary. Because numerous trails that originate within the subregion lead to elevations as high as 9000 feet within the national forest and monument, elevation differences over a single trail may be as much as 6800 feet.

**Natural Habitat.** Foothills paloverde and saguaro cacti are the predominant species of the native foothill vegetation in Subregion 4. A wide variety of smaller shrubs and cacti such as triangle-leaf

bursage, brittlebush, jojoba, cholla, prickly pear, and barrel cacti present an interesting and varied experience for a trail-user in the subregion.

True deciduous riparian woodlands consisting primarily of huge cottonwoods, sycamores, and willows still exist in a few locations including parts of Tanque Verde Wash, the upper reaches of Agua Caliente Wash, and along much of Sabino Creek. These gallery forests represent less than ten percent of that which existed about 100 years ago and deserve protection at all costs, as do a few remnant mesquite bosques that occur along these same three streams. The canyons and smaller washes of the subregion all support desert riparian species such as mesquite, catclaw, and hackberry.

Because of heavy development in recent years, much wildlife habitat has been destroyed and wildlife numbers are greatly reduced. On the other hand, the undeveloped major washes still provide important habitat for numerous species. The only remaining herd of bighorn sheep in the mountains around Tucson inhabits the Pusch Ridge Wilderness in the western end of the Santa Catalina Mountains.

**Cultural Resources.** Prehistoric sites found in this area are much like those found in Subregion 3. Roasting pits and rock piles are evidence of dry farming--probably agave cultivation--by the Hohokam. Village sites can also be found on the finger-like ridges above the Rillito, and at the base of the mountains, in well-watered areas such as Agua Caliente Creek and Tanque Verde Wash. Archaic sites--surface scatters of artifacts and buried sites--also occur in the subregion (27).

Historically, the area was used primarily for ranching and farming. Sites can be expected to date from the late 1800s. The Mormon community of Binghampton, which dates to around 1900, is in this subregion.

## **Development Patterns**

**Land Ownership.** There are no state and federal lands within Subregion 4, although as was stated earlier, Coronado National Forest and Saguaro National Monument are adjacent to the subregion on the north and east. The vast majority of the land is privately owned. Several of the city and county public parks within the subregion have the potential to be important nodes in a trail system.

Foothills Park on the north side of the Rillito River near Alvernon Way, Agua Caliente Park, Lee Memorial Park, and perhaps the City of Tucson properties on East Broadway Boulevard and at the Deep Well Ranch could serve as trailheads with parking areas and, in some cases, equestrian staging areas.

**Population Patterns.** Within the last ten years, the foothills' population has increased dramatically with a relatively low density settlement pattern being replaced by high density housing, commercial development, and resorts. These changes have had two principal impacts on trail use: many traditional trails that crossed undeveloped, private land are now inaccessible because of development, and washes have been impacted by either channelization or direct encroachment from construction. The wash impacts frequently create choke points that cut trails or make them so unpleasant that they basically become unusable.

**Road System.** In conjunction with the development changes discussed above, major modifications in the streets and routes system have had serious negative impacts on trails. These include substantial road widenings (Oracle Road, Swan Road, and Houghton Road to name a few) and the creation of major new transportation arteries (Sunrise Drive). In nearly all cases these and other major arteries have been constructed or improved without provisions for trail crossings.

**Future Trends.** Much of this subregion has now been developed and only a few large vacant parcels remain. Future development will probably continue to follow the patterns of recent years: high density housing, commercial development, and resorts. Unless provisions are made for trail use, these kinds of developments and associated road and wash modifications are likely to preclude the creation of any future trails.

## **7.4.2 Subregion 4 Trail Inventory, Patterns, and Issues**

### **Trail Inventory**

**Primary Trails.** This subregion is bounded by four primary trails: the entire Rillito River (12 miles), 12 miles of the Pantano Wash, 1 mile of the Santa Cruz River and 10 miles of the Cañada del Oro. Two additional primary trails, the Agua Caliente Wash (6 miles) and the Tanque Verde Wash (13 miles) are entirely contained within the subregion (Tables 7-1 and 7-2). All or most of the Rillito, Pantano, Santa Cruz, and Cañada del Oro are expected to be developed with multi-use linear parks related to bank stabilization projects. The Agua Caliente and Tanque Verde are expected to remain largely natural. Public ownership of these washes could help preserve their significant natural resources as well as provide excellent trail opportunities for equestrians and pedestrians in the wash bottoms.

**Connector Trails.** Ten connector traditional trails were identified in this subregion, all of which follow washes for virtually their entire length. Combined, they total about 44 miles. For individual mileages see Table 7-2.

Generally, in their lower reaches these washes are broad and sandy-bottomed with occasional vegetated bench-areas within the floodways. In their upper reaches, most become narrow and rocky. All support desert riparian vegetation;

Sabino Creek, because of its perennial flow, supports a true deciduous riparian woodland.

Access to existing national forest trails is provided by Pima Wash, Finger Rock Wash, and Ventana Canyon. The eastern tributary of Esperero Wash intersects a national forest trail; the established Esperero trailhead, however, is located within the national forest at the Sabino Canyon Recreation Area.

Three connector road rights-of-way are identified. Two of these (small portions of Roger Road and Palo Verde Boulevard) serve to provide a connection between lower portions of Finger Rock Wash. The third is Old Spanish Trail, with its associated bike path extending from Broadway Boulevard to Saguaro National Monument East.

**Local Trails.** Most of the candidate local trails follow washes or road rights-of-way, although to a lesser degree cross-country routes and utility corridors are used. Thirty-two traditional local trails were identified for this subregion; they total about 90 miles (Table 7-2). Forty-two road segments have been designated as having value in a trail system; these total about 64 miles (Table 7-3). Some are very short and serve either to tie together other trail components, such as washes, or to provide access from neighborhoods to the trail system.

Longer segments adjacent to major arterials, such as Houghton Road or La Cañada Drive, may be difficult to engineer but could provide real benefits for long-distance trail users, especially bicyclists and equestrians. Eight short utility easement segments have been identified for this subregion; they total just over nine miles (Table 7-4). An agreement to allow dedication of one of these (Linda Vista) has been reached between the developer, the Town of Oro Valley, and Pima County. The Linda Vista trail connects Linda Vista Boulevard with the Cañada del Oro Wash and is

considered essential by equestrians in that area.

**Boundary Access Points.** Nineteen candidate boundary access points were evaluated for this subregion (Table 7-5). Thirteen border the Coronado National Forest and six border Saguaro National Monument. Ten of these are established, with five providing access to the national forest and five providing access to Saguaro National Monument. Two of the candidate boundary access points (Tanque Verde Wash and Canyon del Salto) are being designated as trail entry points only. That is, the National Forest Service has no objections to entry at these locations, but does not favor road access or parking facilities.

The Houghton Road access point identified by the subregional panel is not acceptable to the National Forest Service at this time because it does not lead to a designated trail. It is included in the inventory for possible future consideration.

### **Trail-use Patterns and Issues**

**Patterns.** Equestrians in Subregion 4 have traditionally used several-mile-long loops combining washes, dirt roads, and trails that cross undeveloped land. Because of the rough terrain, few horseback riders venture far into the national forest; however, Saguaro National Monument, where the terrain is gentler, is a popular riding area. Riders have also traditionally used the major stream corridors, although their usefulness as trails has been reduced in recent years by access problems and flood-control structures within the streambeds.

Although hiking in the major washes was relatively common in the past when less land was developed, at present, pedestrian use seems to be restricted to short walks by local residents.

Road bicyclists enjoy the challenge of some of the bike lanes on the foothill

roads such as Swan Road, Sunrise Drive, and Sabino Canyon Road. At present most of these routes do not extend far enough to serve as effective commuter routes. This subregion is not popular with mountain bicyclists. The washes are largely unsuitable for these users. Some dirt roads, Redington Road being a good example, can be expected to see increased mountain bike use in the future.

**Issues.** The significant issues of Subregion 4 can be summarized as follows:

- A long-standing concern regarding the need for public access to the public recreation lands with trailhead parking at key points;
- The desire that trail crossings be incorporated (by means of box culverts of sufficient size or well-signed, at-grade crossings) into future road improvements; and
- The desire that major washes be left in their natural state so they can serve as trail corridors as well as provide remnants of natural habitat.

### 7.4.3 Subregion 4 Trail Priorities

#### Primary Trails

All of the primary trails in this subregion have been assigned first priority status (Table 7-6). All will be essential components of a comprehensive trail system. The initial three-mile section of the linear park along the *Rillito* is enormously popular and its completion is considered very important by the subregion citizens' panel. The acquisition of *Agua Caliente* and *Tanque Verde* washes are also critical both as wildlife habitat and as trail corridors.

#### Connector Trails

Four connector trails were given first priority designation: *Finger Rock Wash*,

*Pima Wash*, *Ventana Canyon Wash*, and the *Shurban Loop* (Table 7-6, Pocket Map 1). The first three are significant for their riparian habitat and as major pedestrian and equestrian corridors into the Coronado National Forest. The fourth, *Shurban Loop*, utilizes two small washes to provide an equestrian trail from the *Pantano Wash* into *Saguaro National Monument East* with access into the monument at the *Old Spanish trailhead*.

Although the first three trails listed above connect to public trails within *Coronado National Forest*, established public access and parking is associated with only one. Existing parking at the north end of *Alvernon Way* serves the *Mt. Kimball Trail* (*Finger Rock Canyon*) within the *Coronado National Forest*. Appropriate locations for additional parking for *Finger Rock Wash* could be at *Northside Park* (south of the *Rillito River* on *Cactus Boulevard*), or at *Foothills Park* (north of the *Rillito* near *Alvernon Way*).

Access and parking for the south end of *Pima Wash* should be part of the design of that section of the *Rillito Linear Park*. The parking problem at the north end of *Pima Wash* must also be addressed; possible locations for a facility include the north end of *Skyline Drive*; east of the east end of *Magee Road*; or a location near the intersection of *Ina Road* and *Pima Wash*.

At the north end of *Ventana Canyon Wash*, not only will improved parking be necessary, but some arrangements with private property owners will have to be made to provide access into the *Coronado National Forest*.

The *Shurban Loop* will be especially attractive to equestrians, many of whom may choose to ride from nearby commercial stables or from their own private property, thereby somewhat reducing the necessity for parking. However, an appropriate location for a parking facility would be near the *Old*

Spanish trailhead and the Saguaro National Monument East boundary.

Two second priority connector trails were selected: *Pine Tree Wash* and *Sabino Creek* (Table 7-6, Pocket Map 1). *Pine Tree Wash* is not greatly used at present, but has significant potential as both a pedestrian and equestrian trail, which by means of Snyder Road, could link to *Agua Caliente Wash*. *Sabino Creek* has the most significant habitat values of any of the connector washes in the Santa Catalina foothills; the subregion panel also believed it to be valuable as a trail, especially for equestrian use.

McDonald Park could accommodate small amounts of parking for users of *Pine Tree Wash*. It is expected, however, that this trail as well as *Sabino Creek* would primarily serve local needs and would not require parking facilities.

### Local Trails

Four first priority and six second priority local trails were identified (Table 7-6, Pocket Map 1). The first priority selections are: *Campbell/Camino Real*, *Casas Adobes Loops*, *Escalante Wash*, and *Freeman/Del Este Wash*. The second priority selections are: *Agua Caliente Wash/Tanque Verde Wash Link*, *Cloud Wash and Ridge*, *Friendly Village/Via Entrada*, *Orange Avenue/Tomahawk*, *Pontatoc/Valley View/Flecha Caida*, and *Tanuri/Craycroft*. It is important to note that, in several instances, these trails provide linkage to connector trails and into the primary system, thereby providing long-distance trail loops.

Parking and equestrian staging should not be a necessary component of most of these local trails. However, the City of Tucson property on East Broadway Boulevard could provide such facilities for the *Freeman/Del Este* trail as well as for users of *Tanque Verde Wash* and other nearby trails. *Foothills Park* on *Alvernon Way* could directly serve *Pontatoc/Valley View/Flecha Caida* and,

by means of the *Rillito Linear Park*, several of the other local trails north of the *Rillito*.

### Boundary Access Points

Four first priority boundary access points were selected for this subregion: *Agua Caliente Canyon*, *Old Spanish*, *Pima Canyon*, and *Ventana Canyon* (Table 7-7, Pocket Map 1). From the point of view of the trail-using public, two of these, *Pima Canyon* and *Ventana Canyon*, rank among the most important boundary access points in Eastern Pima County. These two points were considered vital at the time of the 1976 access plan (*A Trail Access Plan for the Tucson Metropolitan Area*) (2). At present, problems associated with both of them have not been resolved, although resolution of the *Pima Canyon* access problem may be imminent.

Only slightly less important is *Agua Caliente Canyon*. It is a long-recognized trailhead for both *Agua Caliente* and *Milagrosa* canyons and was included in the 1976 plan. An additional access point along the western boundary of *Saguaro National Monument East* was also recognized as important by the subregional panel. The Monument and the subregional panel are in agreement that the *Old Spanish* trailhead would be the most suitable location for both pedestrian and equestrian needs.

The second priority boundary access points are *Agua Caliente Hill North*, and *Agua Caliente Hill South*. *Agua Caliente Hill North* and *South* will provide access to a loop especially useful to equestrians as well as opening up for public use the entire *Agua Caliente Hill* region of the *Coronado National Forest*.

Finally, one of the established access points, *Campbell Avenue*, was of concern to the subregional panel. The narrowness of the corridor (about 10 feet), its route that pays no regard to topography, and its limited maintenance

were all cited as problems to be avoided in future trail acquisition.

## **7.5 Subregion 5: San Pedro Valley**

### **7.5.1 Subregion Overview**

#### **Synopsis**

Subregion 5, the San Pedro Valley, can be viewed as a natural resource and recreational reserve. With careful planning, Pima County can avoid access restrictions to public land and trail user/property owner conflicts that have caused such concern in more developed parts of the county. Although the subregion is little-used at present, from the point of view of the physically fit and adventurous trail-user, it offers exciting opportunities.

#### **Natural Setting**

**Location.** Subregion 5 is bounded on the west and south by the Santa Catalina District of the Coronado National Forest which includes the Santa Catalina and Rincon mountains; on the north by the Pinal County line, and on the east by the Graham and Cochise county lines (Map 2).

**Size.** This subregion includes about 140 square miles with 31 miles bordering public lands, all of which are under National Forest Service management.

**Topography.** The San Pedro River flows south to north through the subregion, draining the canyons of the Santa Catalina and Rincon mountains to the west and south, and the Galiuro Mountains to the east. The country is generally rugged with relatively narrow canyons separated by steep-sided ridges and occasional mesas. The major canyons support ephemeral streams and some contain pools and short stretches that are perennial or nearly so. The San Pedro itself is an intermittent stream, with

surface flow reduced to a trickle in the late spring and non-existent for parts of the summer and fall. As shown by the riparian vegetation adjacent to the stream, the underground water table is high.

Elevations in the subregion range from about 2800 feet near Redington to about 3500 to 4200 feet at the national forest boundaries. It is important to note, however, that from a trail-user perspective, elevation differences may be considerably greater. Likely trailheads outside the subregion on Mt. Lemmon and the Rincon Mountains are located at 7000 to 8000 feet, thus conceivably producing elevation differences over the length of a single trail of as much as 5000 feet.

**Natural Habitat.** The vegetation communities vary considerably, ranging from riparian woodland in the San Pedro Valley, where huge mesquite bosques are common, to desert scrub communities of shrubs and grasses mixed with cacti and succulents, and at higher elevations, oak woodlands. Immediately adjacent to the river, agricultural fields share the floodplain with enormous cottonwood and willow trees.

Wildlife in this subregion is still bountiful and a quiet trail-user may be rewarded by glimpses not only of coyote, rabbit, javelina, and deer, but also of more elusive species such as fox and bobcat. Ravens, several species of hawks including the relatively rare Mexican black hawk, vultures, and occasionally eagles, soar overhead.

**Cultural Resources.** Few of the archaeological resources of the San Pedro Valley have been studied by archaeologists. Archaic sites occur in the valley, and Paleo-Indian points and the remains of mammoth (not associated with each other) have been found near the river. Hohokam villages and resource procurement sites are known to exist on the slopes of the mountains, on the ridges on either side of the river, and on the floodplain of the San Pedro River. In

addition to Hohokam sites, Salado ruins and farming areas have been found in this area (28). The Salado were a group of people who built pueblo-like, stone structures and farmed in an area from the San Pedro Valley north into the Tonto Basin. It is not known if the Salado migrated into the San Pedro Valley, superceding the Hohokam habitation, or if the Hohokam in the San Pedro adopted the puebloan traits of the Salado and were thus absorbed into that culture. The Salado culture dates from about A.D. 1250 to 1450 (29).

Protohistoric Sobaipuri sites and historic Apache sites have been found in the San Pedro. Coronado may have passed through the San Pedro Valley in 1540. Several occupied Sobaipuri villages were visited by Father Kino on his trip down the San Pedro to the Gila (30).

Historic use of the area is similar to the modern uses; ranching and mining predominate.

### **Development Patterns**

**Land Ownership.** The great majority of Subregion 5, approximately 100 square miles, consists of state land. The remaining land, approximately 40 square miles, is privately owned. Most of the land in private ownership is located in the floodplain along the San Pedro River. Much of Edgar Canyon and Buehman Canyon are also privately owned, with a few additional parcels of privately owned land scattered throughout the subregion.

**Population Patterns.** Few people live within the subregion, with the principal exceptions being a few scattered homesites near the river. Within the river bottom the land is used almost exclusively for agricultural purposes. Cattle grazing is the principal use along the hillsides and in the canyons. Mineral deposits occur in the area and there is some on-going and proposed mining activity.

**Road System.** There are no paved roads within this subregion. Well-graded dirt roads follow both sides of the river with much poorer quality roads extending up some of the canyons and along some of the ridges. The Redington Road from Tucson over the Redington Pass is suitable only for sturdy four-wheel drive vehicles. Road access to much of the subregion is, therefore, quite limited.

**Future Trends.** The future of this subregion is difficult to assess. An infrastructure system of roads, sewers, and water would have to be in place before the population could increase significantly and this seems unlikely in the near future. It seems more likely, therefore, that for the foreseeable future the population will increase very slowly if at all. However, as Tucson grows and more of its residents "discover" the San Pedro Valley, recreation and trail uses in the subregion could increase significantly.

## **7.5.2 Subregion 5 Trail Inventory, Patterns and Issues**

### **Trail Inventory**

**Primary Trails.** The only primary trail in this subregion is the San Pedro River, 12 miles of which is in Pima County. (Tables 7-1 and 7-2). The river bottom has some potential as a trail corridor, especially during cool weather. It features a broad sandy channel with a narrow stream meandering down the center of the riverbed. However, the real significance of the river is in its intermittent flow and high water table that supports riparian vegetation and thus provides habitat, especially for migrating species.

**Connector Trails.** Five candidate connector trails were identified, four of which follow wash alignments for their entire length. Combined, these five trails total about 40 miles (Tables 7-1 and 7-2). In the case of Soza/Cañada

Atravesada-Saucito, a dirt road follows the wash alignment for most of its length. In two other instances (Edgar and Buehman), dirt roads roughly parallel the washes from the San Pedro River to the national forest boundary. All these roads cross private property at their lower ends near the river and are blocked by gates that may be locked (Table 7-2).

One of the candidate connector trails, Redington Road, serves two principal functions within the trail system. It provides vehicular access into the national forest and is suitable as a mountain bike route. Currently it provides access to the trails that lead to Tanque Verde Falls and Chivo Falls in the national forest as well as the Italian Ranch Trail to Mica Mountain in Saguaro National Monument. If trail opportunities increase in the Agua Caliente Hill area of the national forest (see discussion for Subregion 4 Santa Catalina/Rincon Foothills), Redington Road may help provide additional access.

**Local Trails.** No local trails were identified in Subregion 5. However, the upper reaches of all the washes identified as connector trails can be approached by roads, thus providing a potential for shorter distance, local trail use. For example, Espiritu Canyon can be reached by means of Redington Road and an unnamed dirt road, making it unnecessary to gain access from Soza Canyon.

**Boundary Access Points.** Five candidate access points were evaluated. All of these border the Coronado National Forest; three provide access to the Santa Catalina Mountains; two provide access to the Rincon Mountains. For specific characteristics see Table 7-5. Only one, Buehman Canyon North, provides access to an existing national forest trail. Two of the designated points (Buehman Canyon South and Soza/Espiritu Canyon) are being classified as trail entry points only. This implies that non-vehicular access at these points is acceptable, but the National Forest Services does not

consider these locations appropriate for road access or parking facilities.

### **Trail-Use Patterns and Issues**

**Patterns.** Current use in the subregion is so minimal that there are no definable trail-use patterns at present. Potential seems to exist for all three types of use (pedestrian, equestrian, and bicycle) although not all trails are suitable for all uses. The lower elevation canyon bottoms are especially suitable for equestrian use; dirt roads that follow some canyon bottoms and ridges could be used by mountain bicyclists; hikers would probably prefer the rockier but more scenic upper elevation canyons.

**Issues.** The significant issue of the future will probably revolve around securing road access at the Coronado National Forest boundary. This would allow trail-users to have the option of using upper elevation trails within the forest as well as lower elevation trails down to the river without having to travel the entire distance by foot, horse, or bicycle.

### **7.5.3 Subregion 5 Trail Priorities**

#### **Primary Trails**

The *San Pedro River* today looks much like the Santa Cruz River did about 100 years ago. It is a shallow, meandering stream, largely unentrenched with intermittent surface flow that supports healthy deciduous woodland vegetation. Because the trail potential of the river corridor is quite low, the river corridor is designated a second priority (Table 7-6). However, the San Pedro River is a priceless natural resource that has value beyond its use for trails. Development in the valley that allows for the retention of a high water table and maintenance of riparian conditions will help to protect the future of this outstanding resource.

### **Connector Trails**

Because this subregion has only minimal recreational trail-use at present, it is somewhat difficult to assign priorities. However, *Edgar Canyon* was identified as having the best trail opportunities and was given a first priority designation. In its lower reaches this canyon is very broad with a flat, sandy bottom and is primarily suitable for equestrian use. In combination with Forest Route 802, a loop trail approximately eight miles long could be created. Three trails within the Santa Catalina District of the national forest connect to Edgar Canyon at the forest boundary. None are currently maintained, but if the Davis Spring, Knagge, and Evans Mountain trails within the forest were opened, this canyon would provide a trail corridor about 17 miles long from Mt. Lemmon to the San Pedro River (Table 7-6, Pocket Map 1).

A second priority designation was given to *Soza/Espiritu Canyon*. As with Edgar Canyon, the lower reaches of this canyon are broad, flat, and sandy, thus being primarily suitable for equestrians. However, the principal use in the foreseeable future will probably be by hikers in the Espiritu Canyon portion of the route who travel there by means of Redington Road instead of the San Manuel-Benson Road.

### **Local Trails**

As no local trails were identified, no priorities were assigned.

### **Boundary Access Points**

Because of the large urban population in the Tucson Basin to the west of the San Pedro Valley and because of the poor quality of roads within this subregion, the potential of these boundary access points was evaluated with special consideration given to connection with existing national forest trails. Thus, the designated priorities do not correspond with the

priorities assigned to trails (Table 7-7, Pocket Map 1).

*Buehman Canyon North* was assigned the only first priority boundary access point designation. This point provides access to the recently cleared Brush Corral Trail in the Santa Catalina Mountains. The Brush Corral Trail begins near San Pedro Vista, connects to the Green Mountain Trail, and extends to the national forest boundary. Road access is from the San Manuel-Benson road along the San Pedro River by way of Forest Routes 654 and 32. To meet Forest Route 32, the existing Brush Corral trail might have to be extended one-half mile through private land.

Two second priority access points were selected: *Edgar Canyon* in the Santa Catalina Mountains and *Pelon Spring* in the Rincon Mountains. Access to the national forest at Edgar Canyon is by means of Forest Route 802. At present the Davis Spring, Knagge, and Evans Mountain trails within the forest are unmaintained and unusable. However, were they to be improved, they could provide trail opportunities from the top of Mt. Lemmon down to Edgar Canyon and the national forest boundary.

The Pelon Spring access in the Rincon Mountains is located at the point where the road just west of Saucito Canyon crosses the forest boundary. The existing road (unnumbered) continues about one-half mile within the forest to Pelon Spring. No trails within the forest connect to this access point so it has considerably less potential than the previous two.

## 7.6 Subregion 6: Rincon Valley and Northeast Santa Rita Mountains

### 7.6.1 Subregion Overview

#### Synopsis

Subregion 6, Rincon Valley and Northeast Santa Rita Mountains, extends roughly southeast from the Tucson metropolitan area and includes lands that are still predominantly rural. With a few major exceptions, the trail opportunities within this subregion are still relatively unthreatened by imminent urban development. The area is in transition, however. A number of large developments have been approved for construction or are in the advanced planning stages. Consequently, the principal trail concerns for this subregion are:

- Specifying public trail opportunities within the plans for the pending developments and establishing these trails;
- Establishing public access to the southern boundary of Saguaro National Monument East; and
- Protecting selected traditional trails with superlative natural resources.

#### Natural Setting

**Location.** Subregion 6 is partially ringed by public lands that are highly important for outdoor recreation (Map 2). Forming the northern boundary of the subregion are Saguaro National Monument East and the Rincon Mountains within the Coronado National Forest. At the southern boundary are the Santa Rita and Whetstone Mountains of the Coronado National Forest, the Empire-Cienega Resource Conservation Area and the proposed Empire Mountains

County Park. Also to the south is the Santa Rita Experimental Range, which is available for public-use only on a limited basis. The subregion extends east to the Cochise County line and west to Houghton and Wilmot Roads and Southeast Regional Park (the Pima County Fairgrounds). Colossal Cave Mountain Park and the Cienega Creek Natural Preserve, leased/owned by Pima County, are other important public lands that lie within the subregion.

**Size.** Subregion 6 is approximately 310 square miles in area and is 24 and 22 miles long along its greatest east-west and north-south dimensions, respectively. The total length of public land boundaries within or bordering this subregion is about 130 miles.

**Topography.** Subregion 6 occupies the valley lands lying between the Rincon Mountains to the north and the Santa Rita, Empire, and Whetstone mountains to the south. These mountain ranges are principally within protected public lands and are important recreation areas. Many traditional trails lead from the valley areas into upper mountain elevations that often exceed 7000 feet and are covered with coniferous forest.

The trail linkages to the mountain regions are mainly along the major drainages of the subregion. Pantano Wash and its major tributaries (Davidson Canyon, and Cienega, Agua Verde, Posta Quemada, and Rincon creeks) form the main drainage and traditional trail axes of the valley. These watercourses drain a rolling valley landscape with upper elevations above 4000 feet. Pantano Wash flows out of the subregion to the northwest at an elevation below 2800 feet.

**Natural Habitat.** Some of Pima County's best surviving riparian habitat occurs along the desert drainages of Subregion 6. Foremost among these is Cienega Creek, particularly the reach from Interstate 10 to its confluence with Pantano Wash. This portion of Cienega

Creek flows year-round; an extremely rare occurrence in desert lowlands. This perennial segment supports a lush remnant of Sonoran Desert cottonwood-willow gallery forest, the rarest forest type in North America. The significance of this riparian area as well as flood control needs have led to the establishment of the Cienega Creek Natural Preserve which will help conserve its natural qualities. This portion of Cienega Creek has the potential to become one of the most important trail areas in the county system.

Other notable riparian areas in Subregion 6 occur along Posta Quemada Creek, Upper Cienega Creek, Davidson Canyon, and portions of Agua Verde and Rincon Creeks. All of these stream reaches are of great interest as trail ways.

Relatively undisturbed segments of the saguaro cactus-paloverde plant community still occur in upland areas of the Rincon Valley portion of Subregion 6.

**Cultural Resources.** The prehistoric resources found in this subregion are similar to those found in the other mountain and foothill regions. Of great interest to archaeological researchers are the buried Archaic sites found along Cienega Creek. At those sites, intact deposits have the potential of answering many questions about the transition from hunting and gathering to agriculture in the Tucson region (19). Prehistoric sites found in Subregion 6 include Archaic lithic scatters and buried deposits; Hohokam villages, resource procurement and processing areas, agricultural terraces and rock alignments; and roasting pits and bedrock mortars of unknown cultural association.

Historic resources include ranching and mining, which date from the latter half of the nineteenth century to the present. The Butterfield Stage line and later stage routes passed through this region, along the base of the Rincon Mountains in the vicinity of Vail and Marsh Station. One

ranch, La Posta Quemada, was named for a stage station burned by the Apaches (31). The Southern Pacific Railroad was built along the stagecoach route in the 1880s.

Although not recorded in the Arizona State Museum records, there are numerous mines and prospect holes in the southern Rincon Mountains, the Empire Mountains and the northern Santa Rita Mountains. Total Wreck is one mining camp in the region (31). In the late 1800s and early 1900s, lime was extracted and processed in the Rincon Valley.

### **Development Patterns**

**Land Ownership.** The approximate land ownership breakdown for Subregion 6 is 63 percent state; 35 percent privately owned, 2 percent federal, and a scattering of small county and municipal parcels. Nearly all of the state and private lands outside of park and preserve areas are potentially available for some type of development. This amounts to over 90 percent of the subregion area.

**Population Patterns.** To date, development within most of Subregion 6 has been limited. Those developments that have occurred are widely scattered including, among others:

- Los Reales Road area
- Garrigan's Gulch area
- X-9 Ranch properties
- The Vail Community
- Properties along East Marsh Station Road
- Corona de Tucson
- New Tucson

In addition, scattered rural residences and ranches occur in many locations. Only a few thousand people reside in the subregion, corresponding to one of the

lowest population densities in Eastern Pima County. Low population and development densities coupled with the predominantly open land suggest that traditional trail use is likely to be unchallenged in the subregion for some time to come. The number of planned and approved developments indicate that active efforts will, however, be necessary to avoid closing these traditional trails. Developments currently in the active planning and design stage include the Rocking K properties in Rincon Valley and Vail Valley Ranch properties along the east side of Pantano Wash near Vail. If completed as planned, these developments would increase the population in the Rincon Valley and Vail areas to well over 100,000. Additional developments on private and state lands adjacent to these projects would obviously add to the population even more.

An area plan has been approved for Empirita Ranch, located south of Interstate 10 and east of Cienega Creek, and a specific plan has been approved for Santa Rita Ranch, located near Corona de Tucson. Plans for both of these developments include public trails. If completed as planned, these developments would increase the population in the southern part of Subregion 6 by about 50,000. To date, no construction has begun on the Santa Rita Ranch property, nor has a specific plan for the Empirita Ranch been initiated.

**Road System.** Subregion 6 is divided into north and south sections according to its road circulation patterns. Interstate 10 forms the dividing line between these two sections and provides each with one of its most important access routes. Old Spanish Trail and Colossal Cave Road are presently the only through routes in the northern Rincon Valley section. Old Spanish Trail is also one of the oldest and most popular long-distance bikeways in Eastern Pima County. This route provides access to Saguaro National Monument East, Colossal Cave Park,

Vail, and points south via Wentworth Road. Marsh Station Road provides access to the otherwise remote eastern portion of the subregion north of Interstate 10. This road is also important for access to the Cienega Creek Natural Preserve.

Wilmot, Houghton, and Wentworth roads and Arizona Highway 83 provide north-south access to the western half of the southern section of the subregion. Sahuarita Road is the only east-west link to the area. All of these routes are or will be important as bikeways. The shoulders of these roads are also used by equestrians. The only current access to the sizable area south of Interstate 10 and east of Highway 83 is via ranch and jeep roads or by trail.

**Arizona Trail.** The Arizona Trail is a proposed non-motorized pathway that will stretch from Mexico to Utah. The Kaibab National Forest and Arizona State Parks are coordinating the project. Because of interest in this trail on the part of the subregional panel, it was used as a special criterion in the trails evaluation process. Thus, trails connecting to the Arizona Trail were given greater priority.

Within the trails planning area, the proposed Arizona Trail route lies completely in Subregion 6. The trail extends from the south along Cienega Creek to Mescal Arroyo where a diversion to the east into Happy Valley of Cochise County is anticipated. The proposed route then re-enters Pima County to cross the Rincon Mountains, Redington Pass, and finally the Catalina Mountains before exiting the county to the north through the Town of Oracle, and extending on to the Boyce Thompson Arboretum. The Cienega Creek connection to the Arizona Trail will link the proposed Eastern Pima County trail system directly to this statewide route. Other county links to the Arizona Trail will be via National Forest and Monument trails that converge upon its alignment within these public lands. Segments of the trail are already open in

the Kaibab National Forest and in the Rincon and Catalina Mountains of the Coronado National Forest.

**Future Trends.** All signs suggest that urban development is imminent for substantial portions of Subregion 6. Significant levels of development will almost certainly occur in Subregion 6 and some activity may well begin within a year. When individual development projects will begin and how long they will take to complete is difficult to determine.

A positive side of development is that it could help open up new trail opportunities including the establishment of public access to Saguaro National Monument East from Rincon Valley for the first time in over two decades. Development can also limit trail use. In addition to closing lands to trail access, increasing vehicular traffic on roads used as trails, and degrading scenic vistas and air quality, development in Subregion 6 could:

- Change the present rural setting to a more suburban one which is less supportive of certain kinds of trail use; and
- Threaten riparian areas and the perennial flows of Cienega Creek as ground water is pumped to support the new populations.

As the local population increases in this subregion, the demand for trail recreation will also grow. The task for advocates of trail recreation will be to see that new development emphasizes the creation of additional trail opportunities rather than trail impairment or closure.

## **7.6.2 Subregion 6 Trail Inventory, Patterns, and Issues**

### **Trail Inventory**

**Primary Trails.** Segments of two primary trails, Pantano Wash and the Flato/Franco Wash system, are within Subregion 6 (Table 7-2). Pantano Wash is the most important of these primary trails as it provides a direct link to the Tucson metropolitan area, the planned linear park system, and the most extensive portions of the proposed county trail network. Additionally, several large commercial stables are located on the Pantano in the vicinity of Drexel and Irvington roads. Equestrians at these facilities use the Pantano for access to areas within Subregion 6. In the future, Pantano Wash could also link riders to Saguaro Monument East via the proposed Monument Boundary Trail and Rincon Creek.

Flato and Franco Washes arise in Subregion 6 near or within the County Southeast Regional Park and Fairgrounds and flow west cutting fairly deep arroyos before emptying into the Santa Cruz River. As trails, these parallel washes are generally unremarkable at this time and have probably received little use along their length within this subregion. The principal interest in this dual wash system has been as a potential open-space belt that could establish a southern edge to the Tucson metropolitan area. The area between the washes includes some fairly severely eroded badlands that may be more suited as open space than as sites for development. A recreational trail within such an open space belt would be a natural complement to that function and an amenity to communities that develop on either side of it.

**Connector Trails.** Eighteen connector trails have been identified in Subregion 6 (Table 7-1). Almost half are traditional trails and half are road rights-of-way and utility easements. Most are relatively

lengthy (they average over 7 miles in length) (Table 7-2). Most of the traditional connectors are in natural settings including some outstanding riparian areas (for example, Rincon and Cienega Creeks and Davidson Canyon) and upland foothill areas (for example, the Monument Boundary Trail).

The road rights-of-way that have been identified as connector trails in this subregion are all major transportation routes, but retain a distinctly rural character and are currently used as foot, bicycle and equestrian paths (Table 7-3). These rights-of-way connector trails will need designation in forthcoming development plans in order to preserve public access to the other trails in this subregion.

**Local Trails.** Forty-one local trails have been identified in Subregion 6 (Tables 7-1 and 7-2). A number of upland traditional trails, for example, the Mt. Fagan and Davidson Loops and Total Wreck Local, present opportunities for all types of trail users because they consist of jeep roads and follow varied terrain. The Gas and Powerline Loop trail could also be good for all-terrain bicycles. Some conflicts with motorized off-highway vehicles would have to be resolved in order to effectively manage these trails. As in many cases throughout the county, local trails identified in road rights-of-way are or could be used to provide neighborhood access to the more extensive regional trail system.

Important local traditional trails are found in the major washes as well as in a number of other wash beds and along routes that cross the often rolling uplands between the drainages. Outstanding examples include the Mount Fagan, Garrigan's Gulch, Gas and Powerline, Davidson Loop, Davidson Local and Total Wreck Local trails. These trails presently cross terrain that is predominantly natural desert upland and offer some excellent long-distant vistas of both the surrounding mountain and valley country.

**Boundary Access Points.** A total of 23 boundary access points were identified in Subregion 6 (Table 7-5). Eight of these sites are on the Saguaro National Monument boundary but only three, Hope Camp, Madrona, and Rocking K, are currently approved by the National Park Service for public entry. None of these sites can be reached by the public, however, because they are located on private lands presently closed to public entry. Another seven of the boundary access points provide entry locations to the southern end of the Rincon Mountains in the Coronado National Forest. Only two of these locations, Hidden Springs and Papago Springs, are approved for public use by the Forest Service. Three boundary access points (Davidson South, Houghton and Mulberry) provide access to the Santa Rita Mountains also in the Coronado National Forest. The Forest Service will permit access at these points. Three boundary access points to the Cienega Creek Natural Preserve were identified. Entry to this Pima County protected area is currently by permit only. The final two boundary access points, The Narrows and Total Wreck, are entry locations to the Empire-Cienega Resource Conservation Area and the proposed Empire Mountain County Park. The Bureau of Land Management is undecided about the advisability of public use of The Narrows location pending completion of their management plan for the resource conservation area.

#### **Trail-use Patterns and Issues**

**Patterns.** Equestrian use of trails in the subregion is popular. Of special interest to equestrians in the subregion are the opportunities to follow trails over much longer distances (that is, more than ten miles), than are generally available in the more urban regions of the county. The natural, unobstructed character of these trails is also an important attraction. Cienega Creek, Davidson Canyon, and the Mt. Fagan Loop trails are examples of generally unobstructed long distance routes.

**Issues.** Principal trail-use issues are access to public lands, protection of traditional trail environments, and preservation of road rights-of-way trails.

As noted above, Saguaro National Monument East cannot be reached by road or trail in this subregion. The trails and roads that lead to the monument are on private lands that have been closed to public entry since the mid-1960s. This closure was enacted because of property owners' concerns about security, vandalism, and privacy. Re-establishing public access to the monument is one of the most important trail issues in Subregion 6.

Proposals to channelize and soil-cement portions of Pantano Wash and possibly other drainages in the subregion is of considerable concern to trail users. Pantano Wash in Subregion 6 is not yet channelized or its banks protected to any significant degree. Trail users oppose these engineering solutions because of:

- The loss of access to the wash bottom at many traditional points;
- The greater risk of trapping people in flash floods because of faster flood flows and fewer escape routes;
- The loss of wildlife and wildlife habitat; and
- The degradation of the aesthetic appeal of the trail corridor.

As development evolves in this subregion, some of the major roads may be promoted as commercial thoroughfares, perhaps to become the equivalents of a Craycroft or Broadway in Tucson. The preference of trail users is to establish secure trail rights and facilities within these rights-of-way prior to development, thus preserving community and commercial amenities.

### **7.6.3 Subregion 6 Trail Priorities**

#### **Primary Trails**

*Pantano Wash* and the *Flato/Franco Wash system* are designated as first and second priorities, respectively, within the primary trail system (Table 7-6). The Pantano will serve as the trail gateway to the subregion and is the only direct link with the rest of the primary system. The value of the Flato/Franco system as a trail-way will depend on growth patterns in the area. If development expands north and south of these washes and threaten to merge, the value of these drainages as trails and open space in Subregion 6 will increase.

#### **Connector Trails**

*Davidson Canyon, Lower Agua Verde Creek and Power Line, and the Monument Boundary Trail* were selected as first priority connector trails in Subregion 6 (Table 7-6, Pocket Map 1). *Cienega Creek, Rincon Creek, and Total Wreck Wash and Trail* were chosen as second priority connector trails. Three additional connector trails received a third priority rating.

Davidson Canyon is of first importance for a number of reasons. Its position in the middle of the southern portion of the subregion is such that the canyon connects directly with nearly all of the main local trails in the area, thus forming an important axis for loop routes. The canyon also intersects Cienega Creek at a convenient midpoint in the Cienega Creek Natural Preserve, giving access up- and down-stream. Davidson Canyon is also accessible by road at a number of locations along Highway 83 and the Old Sonoita Highway, both of which parallel the canyon; and from Marsh Station Road at its Cienega Creek crossing. The Davidson Creek crossing under I-10 has great height and is not an obstruction even for mounted equestrians. The canyon itself possess lush riparian

segments, flowing water much of the year, abundant wildlife, and a sense of serenity and isolation. The canyon's length (more than 14 miles) provides the opportunity for long trail rides and hikes.

The importance of lower Agua Verde Creek is also enhanced by its tie-ins with public lands and other trails. This creek forms a very useful link between trails leading from the southern extremities of the Rincon Mountains and Cienega Creek and Pantano Wash. It also joins the Coronado National Forest and Colossal Cave Park with the Cienega Creek Natural Preserve. Extending eastward from lower Agua Verde Creek is a powerline jeep road that leads into Cochise County and intersects the proposed route of the Arizona Trail. This connection with the Arizona Trail contributes to the importance to trail users of lower Agua Verde Creek and the intersecting powerline jeep road.

The Monument Boundary Trail is significant as a trail access route to Saguaro National Monument. If implemented in full, this trail would provide hikers and equestrians with trail routes leading from the Pantano Wash to Madrona Ranger Station boundary. The Monument Boundary Trail also would be significant as part of a number of possible loop routes if the local trail system in Rincon Valley is fully implemented.

Cienega Creek (upstream from the Cienega Creek Natural Preserve) was rated as second priority principally because of its remote location from user populations and the proposed further acquisition of the creek properties by the Bureau of Land Management. The entire length of this creek is of special value as riparian habitat. The creek upstream of Mescal Arroyo is also proposed for inclusion in the Arizona Trail.

Rincon Creek was selected as a second priority trail because it links a number of the proposed local trails in Rincon Valley and for its riparian values, particularly in its upstream segments. As a tributary to

the Pantano Wash, this creek would be a vital route connecting Rincon Valley trails to the greater county system.

The Total Wreck Wash and Trail combines both wash and upland segments. The wash segment is a tributary of Cienega Creek and helps link two east-west utility lines to form a useful local loop trail. The upland segment connects to the county's proposed Empire Mountains Park.

Of the three third priority connector trails in Subregion 6, *Mescal Arroyo* is noteworthy as a possible segment in or link to the Arizona Trail. *Posta Quemada Wash* supports a lush desert riparian growth and forms a link between Agua Verde Creek and the Coronado National Forest. A sizable portion of this wash is included within the proposed expansion boundaries of Colossal Cave Park.

### **Local Trails**

Six first priority, five second priority, and seventeen third priority local trails were identified. The six local trails were selected from four separate areas of Subregion 6 (Table 7-6, Pocket Map 1). The *Agua Verde Link* is a short trail connecting Agua Verde Creek with the Coronado National Forest on the southern end of the Rincon Mountains. This trail provides users of the Agua Verde Creek with access to the National Forest. The *Davidson Loop Trail* connects the Old Sonoita Highway and a segment of Davidson Canyon in a 3.5 mile upland loop that should be of interest to equestrians, hikers, and mountain bicyclists. The *Mount Fagan East and West Loops* form a much longer double loop, more than 15 miles long. The *Rocking K Trail* is a local route within the Rincon Valley area. This north-south trending trail connects Old Spanish Trail, Rincon Creek, the Monument Boundary Trail, and a boundary access point leading to Saguaro National Monument. As a northwest-southeast oriented trail, *Total Wreck Local* takes advantage of old jeep roads to link lower Davidson

Canyon, via a powerline segment, with upper Cienega Creek. This long upland route (8.5 miles) is useful to equestrians and mountain bicyclists.

The five second priority trails selected in Subregion 6 include *Coyote Wash*, *Garrigan's Gulch Loop*, *Red Hill Ranch Road*, *Vail Loop*, and *Davidson Local*. Coyote Wash links the southeastern area of Rincon Valley to the more northern and central Rincon Creek. This linkage in turn provides access to Saguaro National Monument. The Garrigan's Gulch Loop provides a trail circuit that ties into the east side of Pantano Wash. The proposed circuit would be an asset to the present residents of the Garrigan's Gulch area and the future residents of the planned Vail Ranch and Rocking K developments. Red Hill Ranch Road is presently a jeep road that is used by equestrians. This proposed county trail would close a circuit that also includes Cienega and Agua Verde Creeks.

The Vail Loop trail takes advantage of pipeline and powerline easements, Pantano Wash, and two cross-country segments to form an equestrian or hiking circuit around the Vail area. Finally, the Davidson Local Trail joins the Davidson Loop and the Total Wreck Local. This linkage creates a long circuit utilizing either the Old Sonoita Highway or Davidson Canyon, Total Wreck Local, and Davidson Loop, and useful to equestrians or mountain bicyclists.

### **Boundary Access Points**

High on the list of boundary access point priorities in Subregion 6 are three out of nine proposed sites along the Saguaro National Monument boundary: *Hope Camp*, *Madrona*, and *Rocking K* (Table 7-7, Pocket Map 1). All these connect to the proposed Monument Boundary Trail. Hope Camp and Rocking K are proposed by Saguaro National Monument as foot-only entry points that would connect to a trail to be built by the National Park Service parallel to and just inside of the Saguaro National Monument boundary.

This Park Service boundary trail will be about four miles long from the Rocking K entry point to Madrona Ranger Station. The Madrona Station is the trailhead for the Manning Camp and Rincon Peak trails that lead into the interior of the monument.

Because of the expense of building and maintaining a suitable trail in the steep, rocky terrain inside the monument boundary, equestrian access to Madrona Ranger Station would be accommodated on the proposed Monument Boundary Trail outside of the monument. If the Rocking K development is completed as planned, the Hope Camp and Rocking K entry points would both be reachable by county trail and public road. A double boundary access point is shown at the Madrona location on the proposed system map to correspond to the county Monument Boundary Trail and the Pistol Hill Road access. Pistol Hill Road is presently closed to public use and access to the monument is not permitted via this route. An access point is shown for Pistol Hill Road to reflect its future potential.

Nine additional first and 12 second priority boundary access points were identified elsewhere in Subregion 6. These points would provide access to other Forest Service, Bureau of Land Management, and county parks lands. The priorities of these access points generally correspond to the priorities assigned to the trails leading to them. Almost all of these access points are well away from public roads and are accessible by trail alone. The exception is Cienega East which is accessible from Marsh Station Road.

### **Road Rights-of-Way and Utility Easements**

Although they were not evaluated as part of the priority-setting process, one potential road right-of-way and two utility easement trails are of particular importance in Subregion 6 (Tables 7-3 and 7-4). As noted earlier, Pistol Hill

Road is presently closed to public use. Because this road was never authorized by the State Land Department and crosses state trust land, the State Land Department considers it to be a trespass road. Should the status of this road change in the future to allow public entry, its alignment could be important as an access route to Madrona Ranger Station and as part of a long circuit around the entire Rincon Valley. This road is also an important link to the Papago Springs entry point to the Coronado National Forest.

The two utility easements of special note are an east-west gasline and powerline that are roughly parallel to each other and south of I-10. A series of local trail loops are formed by joining these utility easements in a north-south direction on the west end via Old Sonoita Highway and Davidson Canyon; in the middle by two smaller drainages that also pass under I-10 to enter the Cienega Creek Natural Preserve and a jeep road; and finally on the east end via Total Wreck Wash and Cienega Creek.

## **7.7 Subregion 7: Upper Santa Cruz Valley**

### **7.7.1 Subregion Overview**

#### **Synopsis**

The Santa Cruz River is the most distinctive natural feature of Subregion 7, the Upper Santa Cruz Valley. A network of major washes drains the rangeland and mountains that lie to the west and east into the Santa Cruz River. Diverse vegetative communities reflect the climactic and altitudinal variations within the subregion. The region's current lifestyle and economy are based on a composite of ranching, farming, mining, and recent land development. Older rural, low-density communities contrast with the urban/suburban densities of Green Valley.

The most important issue for trail users throughout the subregion is access to recreation lands in the Coronado National Forest and future proposed county parks. Continued use of traditional equestrian routes is important for those communities with a high proportion of low-density horse properties. The designation of foot trails and bike routes are high priorities for residents of Green Valley.

#### **Natural Setting**

**Location.** Subregion 7 is bounded on the north by Pima Mine Road, the San Xavier District of the Tohono O'odham Indian Reservation, and the Flato/Franco Wash system; and to south by the Santa Cruz County line. The eastern border consists of Wilmot Road, the Santa Rita Experimental Range, and the Coronado National Forest; the western boundary is the same as that of the project area (Map 2).

**Size.** The Upper Santa Cruz Valley is the largest of the eight subregions, and is approximately 500 square miles in area. There are approximately 44 miles of boundaries with Coronado National Forest and the Santa Rita Experimental Range. In addition, there are 19 miles of boundaries with the proposed Sierrita Mountain Park and 16 miles of boundaries with the proposed Cerro Colorado Mountain Park.

**Topography.** The Santa Cruz River flows south to north through the subregion, draining the canyons of the Sierrita and Cerro Colorado Mountains to the west and the Santa Rita Mountains to the east. The valley floor slopes gently, from an elevation of approximately 3050 feet at the southern end to approximately 2640 feet at the northern end. The majority of washes flowing into the Santa Cruz carry surface water only when it rains, although perennial springs and streams are found at higher elevations in the Santa Rita Mountains. Periodic flows support a variety of riparian habitat along portions of the river and its tributaries.

Within the subregion, elevation ranges from a low of approximately 2600 feet along the river bottom to 4600 feet at the proposed boundary for Sierrita Mountain Park. Peaks in the proposed county parks reach 6188 feet in the Sierrita Mountains (Keystone Peak) and 5319 feet in the Cerro Colorado Mountains (Colorado Peak). The transition from the river valley to these western peaks is gradual for most of the 10- to 12-mile distance, until the final mile or two of ascent.

At the subregion's eastern boundary adjoining the national forest lands, elevations range from 3600 feet to 4000 feet along Chino and Madera Canyons. Once outside of the subregion and on national forest lands, elevations increase dramatically at Mt. Wrightson (9433 feet) and Mt. Hopkins (8505 feet). These peaks create a spectacular panorama from the vantage point of the river valley and the gently sloping grassland of the Santa Rita Experimental Range.

Mining activity over many years has altered the hydrology and natural topography of vast expanses in the subregion. Historic and current mining operations have created artificial lakes and mesas that are prominent landscape features west of Sahuarita and Green Valley. A nine-square mile Caterpillar Proving Ground four miles west of Green Valley was recently approved. Plans specify that most of the land within the proving ground is to be undisturbed, but some modifications of the natural terrain, with impacts on vegetation and wildlife resources will occur.

**Natural Habitat.** The habitat of the subregion is characteristic of the lower and upper Sonoran life zones. The typical creosote-bursage community is found in low, flat areas and the paloverde-saguaro community in bajadas and mountain slopes above the creosote community. Desert grassland occurs above 3500 feet and desert riparian habitat occurs along washes. At higher elevations on the slopes of the Sierrita

Mountains, evergreen trees and shrubs such as scrub oak and manzanita are found. Bird habitat in these areas and in the riparian woodlands of the Santa Rita Mountains, for example, Madera Canyon, is very rich.

In the river valley itself, from Green Valley north to Sahuarita, are miles of pecan orchards, which not only are the major agricultural resource for the subregion, but also provide habitat for birds.

**Cultural Resources.** Buried Archaic sites (9,500 years before present to A.D. 300) are known from this area, but because little survey work has been done, the extent and nature of Archaic period sites are not known.

The Hohokam sites (A.D. 300 to 1450) recorded in the Upper Santa Cruz Valley have revealed a pattern of community settlement that is comparable to the area southwest of the Tortolita Mountains (Subregion 3). In the northern part of Subregion 7, in the vicinity of Punta de Agua, sites are clustered into one or more communities. Inhabitants of several small villages or farmsteads were associated with larger villages with community structures such as ballcourts. Resources on the Santa Cruz and on the bajadas and mountain slopes served as a focus for settlement and use of the area (25).

The settlement pattern and use of the southern part of Subregion 7 is not clear, primarily because of disturbance of the area during historic times. In the vicinity of Continental and Green Valley several Hohokam village sites have been recorded on the floodplain of the Santa Cruz River and above the floodplain on small ridges.

Historically, the area was first used by Spanish and Mexican colonizers, who farmed along the valley bottom and prospected in the Santa Rita, Sierrita, and Cerro Colorado mountains. The San Ignacio de la Canoa land grant (now in the vicinity of Green Valley) was

established in 1821, and was periodically inhabited and abandoned because of Apache raids. Ranching and mining continued after the area was acquired by the United States as part of the Gadsden Purchase, and they continue to be important occupations in the subregion (22).

In 1912, General L. H. Manning bought a ranch on the Canoa Grant and in 1914 began to experiment with growing guayule for rubber production. The town of Continental was established at that time to support the project. The most recent historical events in the area are the planting of pecan trees and cotton on the Santa Cruz floodplain in the 1960s and the development of Green Valley, which also dates to the 1960s (22).

### **Development Patterns**

**Land Ownership.** Within the subregion state lands comprise approximately 260 square miles or 52 percent of the total; federal (Bureau of Land Management) lands account for 15 square miles or 3 percent; and private holdings comprise approximately 225 square miles or 45 percent. Private lands include large mine and ranch holdings as well as large parcels along the Santa Cruz that are slated for residential development.

**Population Patterns.** Subregion 7 includes Green Valley, with a current population of 18,000, and other several smaller unincorporated communities including Sahuarita and Sahuarita Heights, Santo Tomas, Amado, and Elephant Head. These latter communities are growing significantly, as families preferring a small town or rural lifestyle leave Tucson for outlying areas.

Great expanses of the subregion are rangeland. The only evidence of human occupation is an occasional ranch house or mobile home and lines of barbed wire fencing that separate large ranch holdings.

**Road System.** The road system includes I-19 (the major north-south interstate located just west of the Santa Cruz River), and U.S. Highway 89 (the old Tucson-Nogales highway that runs parallel to I-19). These major roads, together with the north-south spur of the Southern Pacific Railroad and the Santa Cruz River itself, emphasize linear development along their edges and tend to bisect potential east-west trails in the subregion.

A number of paved and unpaved county roads feed these major routes, linking population centers such as Tucson, Green Valley and Nogales with farming and ranching communities in the outlying rangeland and mountain areas. Portions of Mission Road along with other major east-west routes such as Sahuarita Road/Helmet Peak Road; Duval Mine/Continental Road; and Esperanza Boulevard comprise trail and road right-of-way connector trails.

Ranching and mining during the last century caused the construction of service and access roads to the Sierrita, Cerro Colorado, and Santa Rita mountains, and to satellite communities such as Helvetia. Many of these roads are county-maintained and provide for trail use, especially equestrian use, or trail access. Roads such as Santa Rita Road, Madera Canyon Road, Elephant Head/Hawk Way are important access roads to the Santa Rita Mountains, while McGee Ranch Road is the major east-west route to the Sierrita Mountains.

Large-scale mining operations have accelerated road construction around mines and tailings. Some of these private roads are also used by walkers and equestrians in the Green Valley and Santo Tomas areas.

**Future Trends:** The Upper Santa Cruz Valley is likely to experience further population growth and development. Green Valley will continue to exert a significant influence in the area. The influx of health and exercise conscious

retirees, coupled with the relocation of families to low-density communities, will create a greater demand for outdoor recreation opportunities. Horseback riding will continue to be an important activity in the rural portions of the subregion. Walking, hiking, and bicycling will continue to be major out-of-door activities for senior citizens in Green Valley. This growing population will consider a trail system as a significant community amenity that suits their recreation needs.

### **7.7.2 Subregion 7 Trail Inventory, Patterns, and Issues**

#### **Trail Inventory**

**Primary Trails.** The Santa Cruz River is the only primary trail in Subregion 7 (Table 7-2). Its length in the subregion is 19.5 miles, although for purposes of establishing priorities, it is divided into two segments. Except for small portions owned by the county for flood control, it is privately owned.

The county intends to gradually convert the river into a linear park, through easements and flood control improvements. Once developed as a linear park, the river will provide multi-use recreational opportunities and complete accessibility, will integrate the network of long-distance trails (on connector washes and road and utility rights-of-way), and will provide a critical component of an urban trail system for Green Valley residents.

**Connector Trails.** There are eight connector trails, totalling 65 miles, in the subregion (Table 7-2). These eight trails were inventoried as traditional trails although they may include portions of road or utility rights-of-way. Connector trails in the subregion link existing public lands (such as the Coronado National Forest and the Santa Rita Experimental Range) and proposed county mountain parks (such as the Sierrita and Cerro

Colorado mountain parks) with the Santa Cruz River primary trail. The majority of these connectors are major washes that drain the canyons of the Sierrita, Cerro Colorado, and Santa Rita mountains.

Connector trails in the subregion are generally very long, because of the great distances between existing or proposed public lands and the primary trail. These long connector trails may be of more value to equestrians and mountain bike enthusiasts than to hikers, although portions of long distance connector trails in the Green Valley area are used by hikers and walkers as part of local loop trails. In addition to their recreational values, these trails have natural resource values, especially as wildlife habitat or wildlife corridors that are associated with long-distance trails.

Several road and utility rights-of-way were identified as connector trails because they join distant recreational resources in the subregion (Tables 7-3 and 7-4). There are ten road rights-of-way (an additional 48 miles) that qualify for connector designation.

**Local Trails.** Fourteen local traditional trails, totalling 37 miles, were inventoried (Table 7-2). These trails are located in clusters in the major trail-use areas of Green Valley, Sahuarita, Sahuarita Heights, Green Valley north/Santo Tomas, and Elephant Head. Each local trail cluster feeds into connector trails or connector rights-of-way trails and, in some cases, provides links to other local trails or local right-of-way trails. In this way, local trails help to refine an integrated trail network.

An additional 18 road rights-of-way and 6 utility rights-of-way or easements were inventoried as local trails, adding about 98 miles to the local category (Tables 7-3 and 7-4).

Local trails in the Green Valley area are used primarily by pedestrians, while local trails in the other communities are used primarily by equestrians.

**Boundary Access Points.** Thirteen boundary access points or trail entry points were identified as providing, or having the potential to provide, access to public lands (Table 7-5). They include three access points to the Coronado National Forest, including Madera Canyon Road, the only established boundary access point in the subregion; six access points to the proposed county Sierrita Mountain Park; two access points to the proposed county Cerro Colorado Mountain Park; and two access points to the Santa Rita Experimental Range from Sahuarita Heights. The ultimate management status and availability for public use of the experimental range is still in question.

#### **Trail-Use Patterns and Issues**

**Patterns.** Equestrian use is high in low density or sparsely populated parts of the subregion. Many traditional equestrian routes access the Santa Rita Experimental Range, the Coronado National Forest, or the Sierrita Mountains via McGee Ranch Road. In addition, equestrians ride in washes, road rights-of-way, utility easements, across rangeland, and in the Santa Cruz River itself for short distances.

Long distance hikers, many of whom are members of the Green Valley Recreation Hiking Club, participate in planned hikes to Keystone and Samaniego Peaks in the Sierrita Mountains (with access via McGee Ranch Road) and in the Cerro Colorado Mountains (with access by a dirt road north from Arivaca Road). Hikers access Chino Basin, Elephant Head, and Madera Canyon in the National Forest via county maintained roads.

Short-distance hikers in the Green Valley area follow road rights-of-way and arroyos from the heart of Green Valley west from La Cañada onto lands owned by the Cyprus Mining Company. Walkers keep to close-in washes or remain on city streets that link activity centers such as shopping and recreation

centers. They walk in or along side the Santa Cruz River for short distances only, since golf courses and pecan groves preclude easy access and long distance travel. Bicyclists and golf cart drivers currently use city streets with wide rights-of-way, such as La Cañada and Abrego Drive, as preferred routes.

**Issues.** Residents in the subregion are concerned that as population and development increases, natural resources and recreation amenities will be lost. This is reflected, in part, by the most important trail issues in the subregion:

- Establishment of the proposed county parks in the Sierrita and Cerro Colorado mountains;
- Maintenance of road access to hiking and equestrian trails in these mountain areas and in the Santa Rita Mountains;
- Establishment of an urban trails network in the Green Valley area that will include portions of the Santa Cruz River as a primary trail/linear park and a system of secondary walk and bikeways; and
- Designation of equestrian/bridle trails on selected road and utility rights-of-way.

#### **7.7.3 Subregion 7 Trail Priorities**

Priorities were set in Subregion 7 with three goals in mind:

- To provide geographic distribution of priority trails;
- To select an equitable number of priority trails for different types of users; and
- To recognize special natural resource trail features.

As a result, six first priority trails (two connector and four local) and eight second priority trails (three connector and

five local) were selected (Table 7-6, Pocket Map 1). The remainder of the inventoried trails were designated as third priority trails. All of the 12 candidate boundary access points or trail entry points were given first or second priority status (Table 7-7).

Several important road rights-of-way and utility easements, although not given priorities, were recognized as crucial for integrating the trail network (Tables 7-3 and 7-4). For example, the *Continental Combo Connector Right-of-way* (McGee Ranch Road/Mission Road/Duval Mine Road/Continental Road/Grant Boundary utility easement) is the most significant right-of-way connector east from the Sierrita Mountains to Green Valley and the primary trail. It joins with the first priority local trail, *Arroyo 17*, at the Grant Boundary line, to create the final link to the Santa Cruz River. Another right-of-way, *Dawson Road*, serves a similar function in linking the Santa Cruz River to trails east and south of Sahuarita.

### **Primary Trails**

The Santa Cruz River is the only primary trail in the subregion. *The Santa Cruz River Subregion 7 North Reach* (San Xavier District to Elephant Head Road) is a first priority trail for 18.5 miles. A developed river linear park on this first priority section has great potential for facilitating long distance travel between communities such as Sahuarita and Sahuarita Heights, Santo Tomas, Green Valley, and Elephant Head. This trail could serve commuter as well as recreational uses. In addition, a linear park along the five-mile reach of the river between Duval Mine Road and Continental Boulevard would become the spine of an urban trails network for Green Valley. Like all developed linear park trails, the Santa Cruz River trail would be multi-use and completely accessible.

One small 1.5-mile segment of the Santa Cruz, *Santa Cruz River South of Elephant Head Road Reach*, was

designated as a second priority primary trail.

### **Connector Trails**

The subregional citizens' panel identified two first priority connector trails: *Alvernon Extension* and *Madera Canyon Wash*. The first functions as both a local trail and a connector trail through its linkage via Dawson Road to the Santa Cruz River. It is of special value to equestrians. The latter is a broad wash which accesses forest service land leading to Chino Canyon on the western slopes of the Santa Rita Mountains. It has significant natural resource and recreational values and has been designated a "desert belt" in the report of the Pima County's Open Space Committee. There is road access to the wash trail at its crossings with Hawk Way, and parking and equestrian staging off Elephant Head Road or Hawk Way.

The subregional panel designated three second priority connector trails: *Dawson Road/Helvetia Wash/Jane's Wash Loop*; *Fresnal Wash*; and *Proctor Wash/Bob Brown Lateral*. The first of these trails serves the Sahuarita and Sahuarita Heights areas. It is comprised of road right-of-way, washes and cross-country segments. Although it is a multi-use trail, it has the most value to equestrians, hikers and mountain bicyclists.

Fresnal Wash is an important approach to the Sierrita Mountains from the communities of Diamond Bell and Three Points. It has multi-use recreational value for equestrians, pedestrians, and mountain bicyclists, as well as natural resource, habitat, and open space values. Proctor Wash/Bob Brown Lateral was given first priority status because it provides a linkage between proposed public lands and for wildlife movement and habitat. As a recreational resource, the combination of wash (Proctor) and cross-country (Bob Brown Lateral) would attract long-distance hikers and equestrians. This trail has spectacular

views from Proctor Wash north to the Sierrita Mountains.

The remaining third priority connector trails are *Ash Wash*, *Demetrie Wash*, and *Esperanza Wash/Tinaja Wash*. All have recreation and natural resource values, although portions of Demetrie and Esperanza washes have been heavily impacted by mining activities.

### Local Trails

The panel identified four first priority local trails: *Arroyo 17*, *Canoa West Loop*, *Tailings Pond Road*, and *Cattle Loop* (Table 7-6, Pocket Map 1). The first of these trails is the highest priority local trail for the Green Valley area. The upper portion between La Cañada Drive and the tailings pond is heavily used by walkers and hikers. The lower portion, from La Cañada Drive to the Santa Cruz River, has potential as a designed linear park link in an urban trail network, especially after the development of a linear park on the Santa Cruz. Most of the trail follows the arroyo, except for the portion on sidewalks under I-19 at Continental Road. The trail is close to two major activities center in Green Valley, the Social Center West and the Continental Mall and connects to the "Continental Combo" right-of-way connector trail at the land grant boundary line, creating the critical local link in a longer trail segment.

*Canoa West Loop* and the *Tailings Pond Road* are also high priority trails for Green Valley walkers and hikers. *Canoa West Loop* is presently the route of an organized hike by the Green Valley Recreation Hiking Club because of its outstanding vegetation (specimen cactus). *Tailings Pond Road*, a private dirt road on Cyprus Mining Company property, has potential for increased pedestrian and equestrian use if public access and equestrian staging could be negotiated with the mining company.

*Cattle Loop* has high value for equestrians in the Sahuarita and Sahuarita

Heights areas because it links with other connector and local trails.

Five second priority local trails were designated. They are *El Toro Road to Dawson Road*, *Head East Trail*, *Helmet Peak Loops*, *West Loop Green Valley/Arroyo 7*, and *West Toro*. The first two of these trails primarily serve equestrians in Sahuarita and Sahuarita Heights. The Helmet Peak Loops have high value for equestrians in the Santo Tomas and north Green Valley areas, since they are the only non-right-of-way equestrian trails identified for this area. *West Loop-Green Valley/Arroyo 7* is frequently used by Green Valley hikers and walkers and has potential for equestrian use. Much of the trail is comprised of utility and flood control easements. It would be an important part of an integrated system because it would connect with the primary system to serve residents of both north Green Valley and Santo Tomas. *West Toro* begins west of the Santa Cruz River and connects to the McGee Ranch Road primarily by means of utility easements and road rights-of-way. It is a local link trail for equestrians in the Santo Tomas area and in northern Green Valley.

Third priority local trails are primarily equestrian loops. They include three locals in the Sahuarita Heights area (*Landing Strip*, *Pig Farm*, and *Well Trail*) and two loops in the Elephant Head area (*Power Line Loop* and *West Madera Loop*). All are linked to the larger trail system and include road and utility rights-of-way or easements.

### Boundary Access Points

Boundary access points were designated first or second priority, generally on the basis of the priority designation of the associated county trail. Only one of the 13 inventoried boundary access points is established (*Madera Canyon Road*). The others are given candidate boundary access point status where road access, parking and equestrian staging are possible, or trail entry point status where

staging areas are not available (Table 7-7, Pocket Map 1).

The priorities for boundary access points were made primarily on the basis of geographic distribution and equity. As a result, one first priority access point was designated for each public land holding. The panel was also especially concerned that key road access routes that are currently used should be officially recognized and established. These first priority access routes are *McGee Ranch Road* (a county right-of-way), *Cerro Colorado South Access Road* (a dirt road on state and private lands) and *Chino Basin Road* (a county dirt road, extending southeasterly from Hawk Way).

## **7.8 Subregion 8: Metropolitan Tucson**

### **7.8.1 Subregion Overview**

#### **Synopsis**

Compared with other subregions, trail opportunities in Subregion 8, Metropolitan Tucson are limited. However, those that exist have the potential to be used by large numbers of people, to provide attractive neighborhood amenities, and, in some cases, to serve as useful bicycle commuter routes. The major constraints in the urban area are the street grid, which severely limits the usable length of most trails, and concerns about security. However, it is important to note that the City of Tucson owns most of the major washes and corridors of varying width along them. Thus, the city has already leaped the acquisition hurdle facing Pima County and should find trail implementation to be a fairly straightforward procedure.

#### **Natural Setting**

**Location.** This subregion is bounded on three sides by major Tucson Basin

streams: the Santa Cruz River on the west, the Rillito on the north, and Pantano Wash on the east. The southern edge is provided by the Flato/Franco Wash system; these two washes and other smaller ones flow west from the bajadas of the Santa Rita Mountains and drain into the Santa Cruz River (Map 2).

**Size.** Subregion 8 covers approximately 180 square miles. No major public lands are within or border upon the subregion.

**Topography.** The central Tucson Basin is nearly flat with only minor terrain undulations usually associated with divides between drainage basins, and the terraces above the drainages. Elevations range from about 2100 feet at the confluence of the Santa Cruz and Rillito rivers to about 3100 feet east of the Pima County Fairgrounds. Within this subregion there are no significant natural hills or other major topographic features. Much of the area is heavily urbanized with a rectilinear street grid imposed on the terrain. Only in the south and southeast is the land essentially undeveloped and largely free of development impact.

The dominant stream in the subregion and the Tucson Basin as a whole is the Santa Cruz River, which, until about 1890, was a shallow, meandering stream that flowed intermittently. Its course was marked by dense stands of mesquite and cottonwoods along its length. The Santa Cruz is now deeply entrenched and flows only after heavy rains. The lesser streams, the Rillito and Pantano, are also entrenched and no longer support much in the way of native vegetation along their lengths.

The Flato/Franco Wash system begins southeast of the subregion. Numerous tiny drainages flow off the lower bajadas of the Santa Rita Mountains and begin to collect into major channels west of the county fairgrounds. A few miles east of the Santa Cruz River these channels become entrenched to a depth of 15 feet

or more. Along their lower reaches, these streams support dense mesquite and white-thorn acacia thickets.

**Natural Habitat.** The natural habitats of the central Tucson Basin have been heavily impacted by development and now occur primarily along undeveloped washes and along the fringes of the subregion. The dominant vegetation community of the subregion is composed largely of creosote bush and bursage, with the desert saltbush community located adjacent to some of the downstream portions of the major streams. Desert broom and small paloverde trees occur along the tiny stream channels that are common in the undeveloped parts of the subregion. In areas where the land surface has been altered by grading or by overgrazing, as in the southern portions of the subregion, vegetation may be extremely sparse and limited to a few disturbance species such as Russian thistle (tumbleweed), burweed, and mustard.

Although native fauna have been greatly impacted by urban development, where remnants of habitat occur, some wildlife can still be found. Coyote, rabbit, and occasionally javelina occur in some of the remaining wash environments. Birds are especially common in a few of the reaches of urban washes, such as Alamo, where dense groves of trees and shrubs remain. However, native bird species such as curved-bill thrasher, Gila woodpecker, and cactus wren tend to be replaced by more urban species such as starling, pigeon, and sparrow.

**Cultural Resources.** Although some historic and prehistoric sites undoubtedly still exist in the Tucson Metropolitan area, most have been obscured or destroyed by later development. However, prehistoric sites can be expected along the rivers and washes that form the boundaries for the subregion. Numerous Hohokam sites occur on the Rillito and the Santa Cruz River. Archaic sites have been found on Airport Wash (22) and can be expected

along other washes as well as near the Rillito and Santa Cruz.

### **Development Patterns**

**Land Ownership.** Land within the northern and central parts of the subregion is almost entirely in private ownership with the major exception being Davis-Monthan Air Force Base which covers about 18 square miles. The central portion of a potentially significant trail corridor, Atterbury Wash, flows through the Davis-Monthan property. Smaller exceptions include school sites, park sites, and other facilities that provide municipal and governmental services. In addition, most of the major washes are owned by the city.

In the southern portion of the subregion, Tucson International Airport covers about 3.5 square miles, including a significant portion of Airport Wash. The state is a major landholder in the southern portion of the subregion, owning about 25 square miles including much of the property between I-10 and the Flato/Franco Wash system.

**Population Patterns.** The City of Tucson, which lies for the most part in Subregion 8, has a population of about 400,000. The small urban center occurs near the city's western edge. The development pattern in recent years has been one of strip commercial development along major arterials with activity centers scattered throughout the greater metropolitan area.

Until this century, the major streams in the subregion, especially the Santa Cruz and the Rillito, were focal points for population growth. The rivers provided water and arable land, and acted as transportation corridors. However, the twentieth-century growth patterns have largely ignored the washes, placing them underground or restraining them within concrete linings when they interfered with development.

The portions of the subregion containing urban development conform to the confines of a rectilinear street grid. Only the southern one-quarter of the subregion remains largely undeveloped. Within the undeveloped portion, the major washes are the Airport Wash, with multiple branches, and the Flato/Franco Wash system.

**Road System.** As was mentioned above, roads within the metropolitan area have had a significant negative effect on the creation of longer distance, relatively natural trails. In a sense, the sidewalks (both paved and unpaved) in the metropolitan area act as pedestrian "trails," thus forming an extensive, if local, urban walkway network.

**Future Trends.** At present, there appears to be a trend toward the consideration of washes as public-use corridors for a variety of purposes. Whether this trend continues in the long-term will undoubtedly depend on the implementation of the first few projects. If they are successful, especially by the standards of adjacent neighborhoods, then more trail corridors may be implemented.

## **7.8.2 Subregion 8 Trail Inventory, Patterns, and Issues**

### **Trail Inventory**

**Primary Trails.** The four washes that form the subregion boundaries are all primary trails. They include 14.5 miles of the Santa Cruz River, 12 miles of the Rillito River, 9 miles of Pantano Wash, and 9 miles of the Flato/Franco Wash system. The first three are expected to be developed with multi-use linear parks in connection with bank stabilization projects. The main value of the Flato/Franco system is probably as an undeveloped open space corridor providing a southern edge to the metropolitan region (Table 7-2).

**Connector Trails.** No connector trails were identified in this subregion.

**Local Trails.** Seventeen local trails were identified; they total about 54 miles (Table 7-1). For the most part, they follow wash alignments. The exceptions consist of one abandoned railroad right-of-way (Table 7-4) and three street rights-of-way (Table 7-3). The railroad corridor extends from 6th Street on the north to just past 36th Street on the south, and between I-10 on the west and 10th Avenue/Granada Avenue on the east. Two of the streets, Kroeger Lane and 18th Street, could serve to connect the railroad corridor with the Santa Cruz River. A river crossing at Mission Lane (see Subregion 2) could then extend the trail corridor west of the Santa Cruz River. The third right-of-way, Jackson Avenue, is a dirt street paralleling Christmas Wash. This street would be a more appropriate trail route than the wash bottom.

In addition to the seven standardized criteria used to evaluate trails in all subregions, an eighth special criterion (relation to activity centers) was used in the metropolitan Tucson subregion. Trail corridors that connect activity centers, especially parks, schools, and places of employment, are considered for higher priority designations.

**Boundary Access Points.** No boundary access points were identified for this subregion.

### **Trail-use Patterns and Issues**

**Patterns.** With the exceptions of the completed portions of the Santa Cruz and Rillito Linear Parks, no long-distance foot or equestrian trails exist within the metropolitan subregion. However, during the field inventory portion of this project, it became apparent that many washes, even though unmaintained for recreational purposes and not always appealing, are being used. Along the banks children ride their bicycles, joggers run, and mothers push strollers. In the

wash bottoms, there may be children playing, adults walking their dogs, and on occasion, a horseback rider. The bicycle route system is extensive and additions to the network are included in new roadway improvement projects. Unfortunately, many of the bicycle routes meet choke-points at narrow rights-of-way and thus, do not extend long distances.

**Issues.** Two major issues were identified by trail users within the metropolitan area. The first is a strongly held belief that washes are very suitable for public uses such as trail corridors, but whether they accommodate trails or not, they should remain natural. Their preference was for natural wash banks and wash bottoms as well as the retention of native vegetation or, if necessary, the restoration of native vegetation. Second, wherever a trail corridor is designated, it must be carefully designed to become a neighborhood amenity that enhances rather than detracts from adjacent neighborhoods.

### 7.8.3 Subregion 8 Trail Priorities

#### Primary Trails

All four of the primary trails bordering this subregion have been assigned first priority status. Three of these, the *Santa Cruz River*, the *Rillito*, and *Pantano Wash* have considerable value as metropolitan and regional trail corridors. All have been discussed in some detail previously and need not be discussed further here.

The fourth candidate, the *Flato/Franco Wash system*, is little-used and would not be appropriate as a developed linear park. The downstream reaches are deeply entrenched into highly erodible alluvium and much of the surrounding terrain is overgrazed, largely supporting vegetation that is unpalatable to cattle. However, this wash system, covering a distance of about 1.5 to 2.5 miles from north to

south and including Summit Wash, deserves serious consideration as part of an open space corridor. The southernmost wash, Flato Wash, when connected at the east end with a road and gas pipeline, has the potential, according to the report of the Pima County Open Space Committee, to "form a continuous belt of open desert south of the metropolitan area...connecting the Rincon Mountains with the Santa Cruz River" (26).

#### Connector Trails

No connector trails were identified for this subregion.

#### Local Trails

Four first priority local trails were identified for this subregion: *Alamo Wash*, *Arcadia Wash*, *Arroyo Chico*, and *Atterbury Wash* (Table 7-6, Pocket Map 1).

Both Alamo Wash and the Arroyo Chico have received considerable public attention and study. For example, see Alamo Wash Recreational and Aesthetic Corridor Study (5); Alamo Wash Drainage Improvement Study - Phase II: Alternatives and Recommendations Report (27); Arroyo Chico Basin-Management Study-Phase II Report: Basin Management Alternatives (28); Design of Urban Transportation: Report of the City of Tucson Transportation Design Advisory Committee (29). These two candidate trails have the greatest potential for long-distance use of any in this subregion.

The documents cited above that deal with proposed uses conclude that both drainages should be designed as linear parks that include trail corridors. Furthermore, those documents dealing principally with hydrological problems conclude that if flood control is necessary within these drainages, it should be non-intrusive. These recommendations were also supported by the Subregion 8 citizen's panel.

Arcadia and Atterbury washes have considerable potential for more local, short-distance uses. As was noted in the section on "Land Ownership," much of Atterbury Wash is within Davis-Monthan Air Force Base, thus limiting the high-priority corridor to the downstream reach.

The four second priority trails identified in this subregion are *Airport Wash*, *Christmas Wash*, *Rodeo Wash*, and *Rose Hill Wash* (Table 7-6, Pocket Map 1). Airport and Rodeo both have the potential to provide relatively long trail corridors with access to the Santa Cruz River, although Rodeo is severely channelized near the river and would be the more difficult to implement. It should be noted that Rodeo Wash Park, a small park along Liberty Avenue, is located adjacent to the wash. The park does not include a trail corridor, but does attempt to incorporate the wash in a positive way into the overall park design. The major significance of Christmas Wash is the potential to provide access into the Rillito. Rose Hill would provide a one-mile-long neighborhood walking path.

#### **Boundary Access Points**

No boundary access points were identified for this region.

**TABLE 7-1. CANDIDATE TRAIL INVENTORY SUMMARY**

TRAIL CATEGORY	NUMBERS OF TRAILS or BAPs				MILES OF TRAILS				Subregion Totals
	Wash & Cross Country Segments	As Road ROW	As Utility Easement or ROW	Total Numbers	As Traditional Trails	As Road ROW	As Utility Easement or ROW	Total Miles	
<i>SUBREGION 1 -- West and South Tucson Mountains</i>									
Primary Segments	2	0	2	4	26	0	33	59	Total # of Trails = 45 Total Miles = 216
Connector Trails	5	8	1	14	36	32	6	74	
Local Trails	6	20	1	27	10	69	4	83	
Boundary APs				13					
<i>SUBREGION 2 -- Eastern Tucson Mountain Foothills</i>									
Primary Segments	1	0	0	1	14	0	0	14	Total # of Trails = 45 Total Miles = 150
Connector Trails	5	0	0	5	23	0	0	23	
Local Trails	20	17	2	39	52	48	13	113	
Boundary APs				15					
<i>SUBREGION 3 -- Tortolita Foothills and Northwest Catalinas</i>									
Primary Segments	2	0	1	3	36	0	9	45	Total # of Trails = 45 Total Miles = 221
Connector Trails	8	4	0	12	39	13	0	52	
Local Trails	13	14	3	30	78	25	21	124	
Boundary APs				16					
<i>SUBREGION 4 -- Catalina and Rincon Foothills</i>									
Primary Segments	6	0	0	6	54	0	0	54	Total # of Trails = 99 Total Miles = 261
Connector Trails	10	1	0	11	37	7	0	44	
Local Trails	32	42	8	82	90	64	9	163	
Boundary APs				19					

**TABLE 7-1 CANDIDATE TRAIL INVENTORY SUMMARY**

TRAIL CATEGORY	NUMBERS OF TRAILS or BAPs				MILES OF TRAILS				Subregion Totals
	Wash & Cross Country Segments	As Road ROW	As Utility Easement or ROW	Total Numbers	As Traditional Trails	As Road ROW	As Utility Easement or ROW	Total Miles	
<b>SUBREGION 5 -- San Pedro Valley</b>									
Primary Segments	1	0	0	1	12	0	0	12	Total # of Trails = 6 Total Miles = 51
Connector Trails	4	1	0	5	29	10	0	39	
Local Trails	0	0	0	0	0	0	0	0	
Boundary APs				5					
<b>SUBREGION 6 -- Rincon Valley and Northeast Santa Rita Mountains</b>									
Primary Segments	2	1	1	4	16	5	4	25	Total # of Trails = 66 Total Miles = 325
Connector Trails	10	10	1	21	84	77	7	168	
Local Trails	28	6	7	41	81	15	36	132	
Boundary APs				23					
<b>SUBREGION 7 -- Upper Santa Cruz Valley</b>									
Primary Segments	1	0	0	1	20	0	0	20	Total # of Trails = 57 Total Miles = 268
Connector Trails	8	10	0	18	65	48	0	113	
Local Trails	14	18	6	38	37	85	13	135	
Boundary APs				13					
<b>SUBREGION 8 -- Metropolitan Tucson</b>									
Primary Segments	4	0	0	4	44	0	0	44	Total # of Trails = 21 Total Miles = 98
Connector Trails	0	0	0	0	0	0	0	0	
Local Trails	13	3	1	17	49	1	4	54	
Boundary APs				0					
<b>COUNTY-WIDE TOTALS</b>									
Primary Segments	8*	1*	1*	9*	144*	0	44*	188*	* These totals differ from the sum of the subregion totals because some trails are shared by two or more subregions.
Connector Trails	50	34	2	86	313	187	13	513	
Local Trails	126	120	28	274	397	307	100	804	
Boundary APs				104	Total Trail System = 1505 miles				

# KEY TO TABLES 7-2, 7-3, 7-4. CANDIDATE TRAIL INVENTORIES

## Trail Description

### Trail Map Code

Primary Trail = single digit code in a diamond 

Connector Trail = double digit code in a triangle 

Local Trail = triple digit code in a box 

### Trail Type

Primary Trail = P

Connector Trail = C

Local Trail = L

Trail Length: Approximate mileage

## Trail Elevation

**Lowest:** Lowest elevation on trail in feet above mean sea level

**Highest:** Highest elevation on trail in feet above mean sea level

**Trail Setting:** Traditional trails follow natural drainages or cross-country paths and may incorporate one or more of the following including roads, easements or linear parks

**Wash:** The trail or segments of the trail are in a natural wash

**Cross-country:** The trail or segments of the trail follow a traditional overland pathway

**Road Right-of-way:** The trail or segments of the trail are within a road right-of-way

**Utility Easement / ROW:** The trail or segments of the trail are within a utility easement or right-of-way

**Linear Park:** The trail or segments of the trail are within a linear park; the wash is channelized

**Recreational Uses:** One or more of the following trail uses occur

**Whole Access:** The trail or segments of the trail have access and facilities for whole access users

**Foot:** The trail is useful to walkers or hikers

**Horse:** The trail is useful to equestrians

**Mountain Bike:** The trail is useful to all-terrain bicyclists

**Road Bike:** The trail is paved and useful to road bicyclists

**Trail Route/Comments:** Description of the trail route and comments pertaining to the trail



# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 1 -- West and South Tucson Mountains

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation				Trail Setting				Recreational Uses				
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Wash	Cross-country	Road Right-of-way	Utility Easement / ROW	Linear Park	Whole Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS
Cardinal Trail	L	1.2	Old Ajo Way to Manzanita Park via Jeep Trail	2540	2600		X	X				X	X	X			
Dakota Wash	L	3.0	Saginaw Hill Trail at Irvington Rd. to Manzanita Park via Dakota Wash	2540	2650	X	X				X	X					Includes part of Irvington Rd. ROW
Ironwood Link	L	1.2	Bopp Rd. to proposed TMP boundary & to present TMP boundary	2440	2540	X					X	X					Leads to Ironwood Picnic area in TMP
Peña Wash	L	2.6	Saginaw Hill Trail at Lincoln St. to Cardinal Trail via Peña Wash	2560	2660	X					X	X					

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 2 -- Eastern Tucson Mountain Foothills

CANDIDATE TRAIL NAME	Trail Map Code			Trail Description			Trail Elevation			Trail Setting					Recreational Uses			COMMENTS
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Wash	Cross-county	Road Right-of-way	Utility Easement / ROW	Linear Park	Wide Access	Foot	Horse	Mountain Bike	Road Bike		
Santa Cruz River	8	P	13.5	Reach from Pima Farms Rd. to Ajo Way	2120	2400	X				X	X	X	X	X	X	Existing or proposed linear park	
Enchanted Hills/ West Branch of Santa Cruz River	24	C	6.0	From Santa Cruz/West Branch confluence So. on West Branch to approx. Irvington Rd. then loop east back to Santa Cruz	2360	2700	X				X	X					From TMP on Enchanted Hills Wash to West Branch	
Picture Rocks Wash	25	C	2.8	Northeasterly from SNMW to Santa Cruz River	2120	2420	X				X	X					Crosses Silverbell Rd.	
Roger Wash/Roger Extension	26	C	4.9	Northeasterly from TMP to Santa Cruz River. Portion east of Silverbell Rd. in Silverbell Park	3120	2240	X					X	X				Roger Extension joins TMP & SNMW	
Sweetwater Wash	27	C	4.5	Easterly from SNMW to Santa Cruz River. Portion east of Silverbell Rd. in Silverbell Park	2240	3160	X					X	X					
Wild Horse Wash	28	C	4.3	Northeasterly from SNMW at Camino del Cerro to Santa Cruz River	2160	2880	X					X					Formerly Forest Wash	

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 2 -- Eastern Tucson Mountain Foothills

CANDIDATE TRAIL NAME	Trail Map Code			Trail Description			Trail Elevation			Trail Setting					Recreational Uses			
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route			Lowest	Highest	Wash	Cross-country	Road Right-of-way	Linear Park	Whale Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS
				Trail Type	Trail Length (miles)	Trail Route												
Anklam Local	L	1.5		East from gas pipeline to edge of North-west Park then N. on Huachuca Ave., NE on El Rio Dr., N. on Navajo St., SE on Yavapai St., E. along the N. easement of River Park, N. on Riverview Blvd., E. on easement at Northern edge of Santa Cruz River Park	2320	2340	X		X				X	X				Includes 1.1 miles of road rights-of-way
Belmont Loop	L	4.0		Loop S. from inter-section of Wild Horse Wash with Gas pipeline then NE back to Gas pipeline.	2280	2440	X			X			X	X				Includes 1.1 miles of pipeline
Cholla Wash	L	2.0		N. of Silverlake Rd., west of West Branch Santa Cruz	2375	2480	X						X	X				Low priority for trail but preservation recommended
Greasewood Loop	L	9.0		Northeasterly from TMP; 2 legs of loop are Camino de Oeste Wash & Anklam Wash, joined by pipeline. Connects TMP to Greasewood Park (1.2 miles utility easement.)	2360	2830	X			X			X	X				Part of trail in Star Pass development may be on road
Middle Branch of East Idle Hr. Wash	L	2.0		From confluence with S. Branch, East Idle Hr. Wash Northeasterly to El Camino del Cerro Rd.	2380	2600	X						X	X				

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 2 -- Eastern Tucson Mountain Foothills

CANDIDATE TRAIL NAME	Trail Description			Trail Elevation			Trail Setting					Recreational Uses					
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Wash	Cross-country	Road Right-of-Way	Utility Basement / ROW	Linear Park	Whole Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS
					2370	2800	X										
North Fork Roger Wash	L	2.7		From TMP northeasterly to confluence with Roger Wash	2370	2800	X					X	X				
Painted Hills Wash	L	3.3		From Anklam Rd. northeasterly to Silverbell Rd.	2300	2620	X					X	X				Low priority for trail but preservation recommended.
Safford Peak	L	1.3		Northernmost trail in Subregion-From SNMW to confluence w/Picture Rocks Wash	2160	2280	X					X	X				One fork begins at Scenic Dr.
San Juan Wash	L	2.3		East from W. 36th St. (Sec. 20/29) to Mission Rd.	2390	2600	X					X	X				Low priority for trail but preservation recommended.
Shannon Wash	L	1.5		From Shannon Rd. west to TMP	2520	2740	X					X	X				No official TMP access at this time.
Silvercroft Wash	L	3.0		From 1 mile w. of Greasewood Rd. to Anklam Rd. This wash crosses U. of A. property & is recommended for preservation not for public trail use.	2370	2460	X					X	X				West of Greasewood Rd. suitable for local trail use.
South Branches of East Idle Hr. Wash	L	5.3		From TMP, So. of Sweetwater Wash, NE to Silverbell Rd. Crosses El Camino del Cerro & pipeline. Northern fork is tributary of Sweetwater Wash.	2210	2860	X					X	X				Meets Southernmost branch at El Camino del Cerro (1.3 miles on Tortolita Rd.)

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 2 -- Eastern Tucson Mountain Foothills

CANDIDATE TRAIL NAME	Trail Map Code			Trail Description			Trail Elevation			Trail Setting					Recreational Uses				
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route			Lowest	Highest	Wash	Cross-country	Road Right-of-way	Utility Easement / ROW	Linear Park	Whale Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS
				Trail Map Code	Trail Type	Trail Length (miles)													
South Fork Roger Wash	138	L	0.9	From TMP to confluence with Roger Wash	2420	2620	X							X	X				
South Sweetwater	139	L	2.3	So. tributary of Sweetwater Wash. Crosses Sweetwater Dr. Begins at TMP boundary	2520	3100	X							X	X				
Speedway Wash	140	L	2.3	From Camino de Oeste Wash (part of Greasewood Loop) NE to intersection w/pipeline	2380	2600	X							X	X				
Sweetwater Trail Rd.	141	L	1.3	Dirt access Rd. from Camino del Cerro Rd. to SNMW at Sweetwater Trailhead.	2620	3160			X					X	X				Sweetwater Trailhead (Wasson Peak Trailhead) Private dirt rd.
Thirty-sixth Street Extension	142	L	3.0	From Enchanted Hills Wash (1/2 mi. E. of TMP) to Mission Rd.	2380	2600			X					X	X				
Trails End Wash	143	L	4.8	From TMP boundary to Silverbell Rd.	2240	2900	X			X				X	X				0.3 mi. on Trails End Dr.)
West Idle Hour Wash	144	L	3.0	From S. part of Sec 15, NE across gas pipeline to confluence with East Idle Hr. Wash	2220	2600	X							X	X				
Yuma Mine Trail	145	L	3.5	From SNMW SE, then NE to Santa Cruz River	2160	2460	X							X	X				Intersects Belmont Loop Trail and pipeline

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

## SUBREGION # 3 -- Tortolita Foothills and Northwest Catalinas

CANDIDATE TRAIL NAME	Trail Map Code		Trail Type		Trail Length (miles)		Trail Route		Trail Description		Trail Elevation		Trail Setting				Recreational Uses		COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Trail Description	Trail Elevation	Trail Elevation	Trail Elevation	Trail Elevation	Trail Elevation	Trail Elevation	Trail Elevation	Trail Elevation	Trail Elevation	Trail Elevation	Trail Elevation	Trail Elevation	Trail Elevation		Trail Elevation
Cañada del Oro	P	14	2	From the Pinal Co. line SW to confluence with Santa Cruz River through Catalina State Park	2200	3000	X								X	X	X	X	X	* Northern extent undetermined.
Santa Cruz River	P	20	8	From the confluence w/the Cañada del Oro NW to the Pinal Co. line	1960	2190							X*	X	X	X	X	X	X	* Northern extent undetermined.
Catalina Park/Flat Rock	C	6.0	29	From north Catalina State Park, North and NE to the CNF	3000	3320	X	X							X	X	X			In process of negotiation as a legal trail right-of-way.
Big Wash/Hawser to Catalina Park/Flat Rock Trail	C	3.5	30	Approx. 1.8 mi. on Hawser ROW. W. 1/2 mi. trail link to Big Wash	3040	3320	X	X							X	X	X			E. portion of ROW links w/Catalina Park/Flat Rock Trail.
Cochie Wash	C	3.5	31	From Cochie Wash/TORTMP boundary in W. Tortolitas to CAP	2180	2800	X								X	X	X			Designated Open Space Corridor/1987 Marana General Plan
Cottonwood Wash	C	4.5	32	From W. Tortolitas - Cottonwood Canyon/ Mtn. Park boundary to CAP	2040	2340	X								X	X	X			Designated Open Space Corridor/1987 Marana General Plan
La Cholla/Honey Bee Loop	C	16	33	A U-shaped loop from the Cañada del Oro near La Cholla Blvd. to the foothills, then E. to Honey Bee Wash, then So. to the Cañada del Oro. Approx. 1 mi. on La Cholla Blvd. ROW.	2400	3400	X	X							X	X	X			(Cont.) 1.0 mi. on Como Dr. and 0.5 mi. on Lucero Rd. County ROW. A portion of Honey Bee Wash is in the process of dedication to the county.

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 3 -- Tortolita Foothills and Northwest Catalinas

CANDIDATE TRAIL NAME	Trail Map Code			Trail Description			Trail Elevation			Trail Setting					Recreational Uses			
	Trail Map Code	Trail Type	Trail Length (miles)	Lower	Highest	Wash	Cross-country	Road Right-of-way	Linear Park	Wide Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS			
															Designated Open Space Corridor/1987 Marana General Plan	A portion is being dedicated to the county	Intersects with Catalina Park/Flat Rock Trail	
Sausalito Wash	34	C	3.0	3040	3600	X					X	X						
Sutherland Wash	35	C	1.3	2960	3240	X					X	X						
Wild Burro Wash	36	C	5.3	2930	2820	X					X	X						Designated Open Space Corridor/1987 Marana General Plan
Big Wash	156	L	7.0	2840	3100	X						X						A portion is being dedicated to the county
Cedar Breaks	157	L	1.0	3200	3280							X						Intersects with Catalina Park/Flat Rock Trail
El Camino de Mariana Wash	158	L	5.3	2200	2820	X						X						
Golder Ranch Loop to Little Cottonwoods	159	L	4.8	2960	3080										X	X		Portion (approx. 1.8 miles) Rd. ROW



**TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS**

**SUBREGION # 3 -- Tortolita Foothills and Northwest Catalinas**

CANDIDATE TRAIL NAME	Trail Description			Trail Elevation		Trail Setting					Recreational Uses						
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Wash	Cross-country	Road Right-of-way	Utility Easement / ROW	Linear Park	Whole Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS
167 Tortolita Foothills Trail	L	16		East-west trending at base of Tortolitas. Portions former jeep trail. Links many trails and access points	2240	3320	X	X				X	X	X	X		Includes extensions into canyons in the Tortolitas
168 Twenty-Seven Wash	L	3.0		Southerly wash from Pinal Co. line to confluence with Big Wash	2920	3140	X					X	X				

**TABLE 7.2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS**

**SUBREGION # 4 -- Catalina and Rincon Foothills**

CANDIDATE TRAIL NAME	Trail Map Code	Trail Type	Trail Length (miles)	Trail Description		Trail Elevation		Trail Setting					Recreational Uses			COMMENTS			
				Trail Route	Trail Type	Lowest	Highest	Wash	Cross-County	Trail Right-of-Way	Utility Easement / ROW	Linear Park	Whole Access	Foot	Horse		Mountain Bike	Road Bike	
Agua Caliente Wash	1	P	6.0	CNF boundary to confluence with Tanque Verde Wash	2550	3000	X						X	X					
Cañada del Oro Wash	2	P	10.0	Catalina State Park boundary to confluence w/Santa Cruz River	2200	2640	X		X				X	X					Proposed linear park on most reaches
Pantano Wash	5	P	12.0	Drexel Rd. to confluence with Tanque Verde Wash	2440	2820	X		X				X	X					Proposed linear park on most reaches
Rillito River	6	P	11.5	Pantano Wash & Tanque Verde Wash to confluence with Santa Cruz River	2200	2440	X		X				X	X					Proposed linear park on most reaches
Santa Cruz River	8	P	1.0	Confluence w/Cañada del Oro to confluence with Rillito River	2200	2200	X						X	X					Proposed linear park
Tanque Verde Wash	9	P	7.0	CNF boundary to confluence with Pantano Wash	2440	2780	X							X					
Caliente Hill Wash	38	C	2.0	CNF boundary to confluence with Agua Caliente Wash	2660	2920	X							X					
Canyon del Salto	39	C	1.6	CNF boundary to confluence w/Tanque Verde Wash	2760	2920	X							X					
Esperero Wash	40	C	3.0	CNF boundary (2 tributaries) to confluence with Ventana Wash	2660	3600	X							X					

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 4 -- Catalina and Rincon Foothills

CANDIDATE TRAIL NAME	Trail Map Code	Trail Type	Trail Length (miles)	Trail Description		Trail Elevation		Trail Setting					Recreational Uses			
				Lowest	Highest	Wash	Cross-Country	Utility Right-of-Way	Linear Park	Wide Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS	
				3160	3160	X	X	X	X	X	X	X	X	X		X
Finger Rock Wash	C	5.5	a: CNF boundary via wash to Roger Rd. & Rillito River. b: CNF boundary at Alvernon Way, S. to Coronado Dr E. to wash. c: Roger Rd at Rillito River E. to Palo Verde Blvd., N. to end of rd., NE cross-country to wash	2240	3160	X	X	X	X	X	X	X	X	X	X	Connects with Finger Rock access point
Geronimo Wash	C	3.0	CNF boundary to confluence with Pima Wash	2480	3000	X				X	X					
Pima Wash	C	4.5	CNF boundary to confluence with Rillito River	2360	2960	X					X	X				Connects with Pima Canyon access point. SW of Ina Rd. route may have to leave wash to avoid conflicts.
Pine Tree Wash	C	4.5	Snyder Rd. at east tributary of wash to Sabino Creek	2540	2754	X					X	X				
Sabino Creek	C	4.0	CNF boundary to Tanque Verde Wash	2500	2660	X					X	X				
Shurban Loop	C	3.5	SNM E. along unnamed washes (w/cross-country connection) to Pantano Wash	2780	3020	X					X	X				Connects with Old Spanish access point at SNME.

**TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS**

**SUBREGION # 4 -- Catalina and Rincon Foothills**

CANDIDATE TRAIL NAME	Trail Map Code			Trail Type			Trail Length (miles)			Trail Description			Trail Elevation		Trail Setting					Recreational Uses			COMMENTS			
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route			Highest	Wash	Cross-County	Road Right-of-Way	Linear Park	Wildlife Access	Foot	Horse	Mountain Bike	Road Bike	X	X	X	X	X	X		X	X	
				Lower	Upper	Trail Elevation																				
Ventana Canyon Wash	47	C	5.0	CNF boundary to Tanque Verde Wash	2460	3220	X																		Connects w/ Ventana Canyon access point	
Agua Caliente/Tanque Verde Wash Link	181	L	1.5	Tanque Verde Wash along Conestoga Ave. alignment to Ft. Lowell Rd., W. to Calle de Valle, N. to Agua Caliente Wash	2600	2660	X	X	X																	
Campbell/Camino Real	182	L	8.0	a: Rillito River to River Rd., N. cross-country behind St. Phillips in the Hills to Campbell Wash N. to T13S, R14E S4; cross-country to Windy Point Drive (a private road), E. to Coronado Drive & Finger Rock Wash. b: Campbell Wash along Camino Los Vientos, Linda Vista Blvd. to La Cholla Blvd.	2280	3040	X	X	X																	(Cont.) cross-country to Camino Real Wash, S. in wash to point just N. of River Rd., SE along dirt Rd., across River Rd. SW to Rillito. c: Upper end of Campbell Wash in S4 W. cross-country to Geronimo Wash
Carmack Wash	183	L	3.5		2410	2600	X																			

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 4 -- Catalina and Rincon Foothills

CANDIDATE TRAIL NAME	Trail Map Code		Trail Description		Trail Elevation		Trail Setting					Recreational Uses						
	Trail Map Code	Trail Length (miles)	Trail Route	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Wash	Cross-Country	Road Right-of-Way	Linear Park	Whole Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS
Casas Adobes Loops	184	L	7.5	a: Nanini Wash from La Cañada Dr. to Orange Grove Rd., E. on utility easement, S. of Orange Grove Rd., N. on La Cañada Dr. to Nanini Wash. b: Casas Adobes Wash from La Cañada Drive to Rillito River, Casas Adobes Wash cross-country to Las Lomitas Rd., E. to La Cañada Dr.	2260	2440	X	X	X	X	X	X	X	X	X			(Cont.) c: W. on River Rd. from Pima Wash to utility line in S14, NW along utility line to La Cañada Dr., La Cañada Dr. from Orange Grove Rd. S. to point 1/4 mile S. of Sunset Rd., E. cross-country to utility line
Casas Adobes Wash	185	L	1.2	La Cañada Dr. to Oracle Rd.	2400	2520	X						X					
Cloud Wash & Ridge	186	L	2.2	Snyder Rd. S. up ridge, into wash & S. to Tanque Verde Wash	2495	2900		X	X				X	X				May be part County ROW
Coronado Ridge Wash	187	L	1.2	Melpomene Way to Broadway Blvd.	2750	2910	X						X					
Craycroft Wash	188	L	3.0	Craycroft Rd. S. to confluence with E. Craycroft Wash	2620	3200	X						X	X				
Escalante Wash	189	L	1.5	Melpomene Way W. to Pantano Wash	2790	2950	X						X					
Flecha Caída Wash	190	L	1.8	Calle Barril to Rillito River	2400	2680	X						X	X				



# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

## SUBREGION # 4 -- Catalina and Rincon Foothills

CANDIDATE TRAIL NAME	Trail Description			Trail Elevation			Trail Setting					Recreational Uses			
	Trail Map Code	Trail Length (miles)	Trail Route	Lowest	Highest	Wash	Cross-Country	Road Right-of-Way	Linear Park	Thru Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS
	L	3.5	Houghton Rd. to confluence with Tanque Verde Wash	2535	2850	X				X					
Hidden Hills Wash	L	3.5	Houghton Rd. to confluence with Tanque Verde Wash	2535	2850	X				X					
Las Lomitas Wash	L	2.0	Orange Grove Rd. to Rillito River	2260	2480	X				X					
Melpomene Loop	L	1.0	Cross-country loop NW of No. end of Melpomene Way	2820	3100		X			X					
Orange Ave./Tomahawk	L	5.5	a: N. from Agua Caliente Wash on Bonanza Ave., W. along N. side of Tanque Verde Rd., No. on Orange Ave. alignment to E. side Catalina Hwy., N. on E. side of Hwy. (existing trail) to unnamed wash, SE in wash and cross-country to Bonanza Ave., So. to Ft. Lowell Rd., E. to Tomahawk Trail, So. to unnamed wash, SW in wash to Tanque Verde Rd., W. on N. side of Tanque Verde Rd. to Bonanza Ave.	2540	2680	X	X	X		X					(Cont.) b: Tanque Verde Rd. S. to Tanque Verde Wash at Orange Ave. alignment. c: Catalina Hwy. N. to Pine Tree Wash on Harrison Rd. alignment - Note: Trail should cross Hwy. on Section line, not at Harrison Rd.
Pegler Wash	L	0.7	Ina Rd. to La Cholla Blvd.	2350	2410	X				X					

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 4 -- Catalina and Rincon Foothills

CANDIDATE TRAIL NAME	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Trail Description			Trail Elevation			Trail Setting					Recreational Uses		
					Highest	Lowest	Wash	Cross-Country	Road Right-of-Way	Utility Easement / ROW	Linear Park	Whole Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS	
Pontatoc/Valley View/Flecha Caida	201	L	6.7	a: Rillito River N. along Pontatoc Wash to W. extension of Calle del Pantera, E. to Valley View Wash, S. along Valley View Wash to confluence with Pontatoc Wash. b: Calle del Pantera and Valley View Wash NE cross-country to Salida del Sol Place, NE cross-country to E-W utility line, E. to Craycroft Rd. S. along W. side of Craycroft Rd. to Camino Francisco Soza to Flecha Caida Wash, S. across Calle Barril, SW Valley View Wash	2380	2840	X	X	X	X	X	X	X	X	X	X	X	(Cont.) c: Finger Rock Wash E. cross-country to Saranac Drive to Pontatoc Wash
Pontatoc Wash	202	L	0.5	Sunrise Dr. to W. extension of Calle del Pantera	2640	2720	X							X	X			
Race Track Wash	203	L	2.0	Orange Grove Rd. to Via Entrada Wash	2320	2620	X							X	X			
Reyes Wash	204	L	2.2	Melpomene Way to Tanque Verde Wash Note: 2 Tributaries	2580	2910	X							X	X			Note that Reyes may be an appropriate alternative for Del Este Wash in the Freeman/Del Este first priority local.

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 4 -- Catalina and Rincon Foothills

CANDIDATE TRAIL NAME	Trail Map Code		Trail Type		Trail Length (miles)		Trail Description			Trail Elevation			Trail Setting					Recreational Uses		
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route		Lowest	Highest	Wash	Cross-Country	Road Right-of-Way	Utility Easement / ROW	Linear Park	Whole Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS		
				Trail Description	Trail Elevation															
Robb Wash	L	4.0	22nd st. to confluence w/Tanque Verde Wash	2520	2690	X							X							
Rolling Hills Wash	L	1.5	Golf Links Rd. to Pantano Wash	2625	2750	X							X							
Spanish Trail Wash	L	2.0	Freeman Rd. to Houghton Rd.	2860	3060	X							X							
Tanuri/Craycroft	L	6.0	Rillito River N. via wash to E. fork of Craycroft Wash, E. fork of Craycroft Wash to utility easement So. of Sunrise Dr., E. to W. fork of Tanuri Wash, S. along Tanuri Wash to Rillito River	2440	2920	X			X				X					Craycroft Wash channelized in its lower reach		
Tanuri Wash - E. Tributary	L	1.8	Kolb Rd. to confluence with Tanuri Wash	2540	2800	X							X							
Valley View Wash	L	2.8	CNF boundary to Cerco de Corazon Circle	2640	3400	X							X							
Via Entrada Wash	L	2.2	Just No. of Ina Rd. alignment to Via Entrada Rd.	2480	3020	X							X							
Via Entrada Wash - E. Tributary	L	2.0	1/4 mile So. of Orange Grove to confluence w/Via Entrada Wash	2360	2685	X							X							



# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 6 -- Rincon Valley and Northeast Santa Rita Mountains

CANDIDATE TRAIL NAME	Trail Map Code		Trail Type		Trail Length (miles)		Trail Description		Trail Elevation		Trail Setting				Recreational Uses			
	Trail Code	Trail Type	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Wash	Cross-county	Road Right-of-way	Utility easement / ROW	Linear Park	Whole Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS
Flato/Franco Wash System	4	P	9		Wilnot Rd. to Pantano Wash	2830	3230	X	X	X			X	X				Includes gas pipeline & Colossal Cave/ Vail Rd.
Pantano Wash	5	P	10		Houghton Rd. to confluence with Cienega & Posta Quemada Creeks	2770	3230	X			X		X	X				Proposed linear park on some reaches
Chimenea Creek	54	C	1.5		Confluence w/ Rincon Creek to Madrona Ranger Station	3160	3760	X					X					
Cienega Creek	55	C	17		Confluence w/Pantano Wash & Posta Quemada Creek to BLM Empire-Cienega Resource Conservation Area	3230	4020	X					X					
Davidson Canyon	56	C	14		Confluence w/Cienega Creek to Coronado NF/ Includes Mulberry Canyon Fork	3320	4400	X					X					
Hidden Springs	57	C	1.0		Lower Agua Verde Creek to Coronado NF/ Jeep Rd.	3640	3800		X				X					
Lower Agua Verde Creek	58	C	9.2		Cienega Creek to Distillery Canyon at Coronado NF boundary	3230	3820	X					X					
Mescal Arroyo	59	C	8.0		Confluence w/Cienega Creek to Cochise Co. line	3560	4040	X					X					
Monument Boundary Trail	60	C	9.0		Rincon Creek to Madrona Ranger Station	2840	3760		X				X					

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 6 -- Rincon Valley and Northeast Santa Rita Mountains

CANDIDATE TRAIL NAME	Trail Map Code			Trail Description			Trail Elevation	Trail Setting					Recreational Uses				
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest		Wash	Cross-Country	Utility easement / ROW	Linear Park	Wade Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS
Posta Quemada	61	C	2.6	Confluence w/Pantano Wash & Cienega Creek to Coronado NF	3400	3620	X						X	X			
Rincon Creek	62	C	11	Confluence w/Pantano Wash to Saguaro NM East	2820	3280	X						X	X			
Total Wreck Wash and Trail	63	C	6.2	Confluence w/Cienega Creek to Coronado NF via wash & Old Mine Road	3600	4480	X	X					X	X			
Agua Verde Link	242	L	1.0	Agua Verde Creek to Coronado NF	3560	3720	X										
Agua Verde North Fork	243	L	1.0	Upper Agua Verde Creek to Coronado NF	3730	3920	X										
Ardrada Ranch Link	244	L	3.0	Old Sonoita Hwy. to Mt. Fagan Loop	3820	3920								X	X		Entire trail on jeep road
Arrowhead	245	L	1.0	Lower Agua Verde Creek to Coronado NF	3620	3760								X	X		Entire trail on jeep road
Coyote Wash	246	L	4.6	Confluence w/Rincon Creek to east of Pistol Hill Rd.	3000	3560	X							X	X		
Davidson Local	247	L	3.1	Davidson Loop to Total Wreck Local	3800	4000		X						X	X		

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 6 -- Rincon Valley and Northeast Santa Rita Mountains

CANDIDATE TRAIL NAME	Trail Map Code		Trail Length (miles)		Trail Route		Trail Description		Trail Elevation		Trail Setting				Recreational Uses		COMMENTS
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Wash	Cross-Country	Road Right-of-way	Linear Park	Whole Access	Foot	Horse	Mountain Bike	Road Bike		
Davidson Loop	248	L	3.5	Old Sonoita Hwy. to Davidson Local to Old Sonoita Hwy.	3700	3840	X				X	X	X				
Garrigans East	249	L	1.7	Old Spanish Trail So. then west to Garrigans Loop	3120	3130	X				X						
Garrigans Loop	250	L	4.6	Pantano Wash at Esmond Rd. east to Wentworth Rd., No. to Los Reales Rd. E. to Lazy R Ranch Rd. (W), So. to Garrigans Gulch, W. to Pantano Wash	2960	3120	X	X			X						
Gas - Power East	251	L	1.1	Easternmost local from El Paso Gas Pipeline to transmission line	3640	3800	X				X						Entire trail on jeep road
Gas - Power Middle	252	L	1.9	Drainage extending So. from Cienega Creek under I-10 to El Paso Gas Pipeline and transmission line	3480	3680	X				X						
Gas - Power West	253	L	2.3	N-S drainage between Cienega Creek to transmission line	3400	3720	X				X						
Hope Camp	254	L	1.3	Rincon Creek to Saguaro NM	3160	3240	X				X						

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 6 -- Rincon Valley and Northeast Santa Rita Mountains

CANDIDATE TRAIL NAME	Trail Map Code		Trail Type	Trail Length (miles)	Trail Route	Trail Description		Trail Elevation	Trail Setting					Recreational Uses						
	Trail Map Code	Trail Type				Lowest	Highest		Wash	Cross-Country	Road Right-of-Way	Utility Easement / ROW	Linear Park	Whole Access	Fork	Horse	Mountain Bike	Road Bike	COMMENTS	
Hope Camp East Loop	255	L	1.0		Hope Camp Trail to Monument Boundary Trail	3160	3240	X						X	X					
Mt. Fagan East Loop	256	L	9.6		Sahuarita & Davidson Rds. So. to Twin Tanks Trail, No. to Mt. Fagan West Loop, & return to origin	3680	4240	X						X	X					Parts of trail on jeep roads.
Mt. Fagan West Loop	257	L	6.0		Andrada Ranch Link to Sahuarita Link Trail, then N. & eastern loop to Mt. Fagan East Loop & origin	3680	4160	X						X	X					Parts of trail on jeep roads.
North Coyote	258	L	1.5		Drainage extending N. from confluence of Coyote & Rincon Creeks to Monument Boundary Trail	3000	3120		X					X						
Phoneline Link	259	L	1.2		Rincon Creek to Phoneline Trailhead at Saguaro NM	3220	3400							X	X					
Red Hill Ranch Rd.	260	L	3.7		Marsh Station (Pantano) Rd. to Lower Agua Verde Creek	3560	3640							X	X					Entire trail is on jeep roads.
Rincon Creek South Fork	261	L	1.0		Confluence w/Rincon Creek to Saguaro NM boundary	3200	3400		X					X	X					

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 6 -- Rincon Valley and Northeast Santa Rita Mountains

CANDIDATE TRAIL NAME	Trail Map Code	Trail Type	Trail Length (miles)	Trail Description			Trail Elevation			Trail Setting					Recreational Uses				
				Trail Route	Lowest	Highest	Wash	Cross-Country	Road Right-of-Way	Linear Park	Whole Access	Horse	Mountain Bike	Road Bike	COMMENTS				
Rincon - Madrona Link	262	L	1.3	Rincon Creek NE to Saguaro NM & Madrona Ranger Station	3120	3440	X	X				X	X						
Rocking K	263	L	2.5	Old Spanish Trail to Monument Boundary Trail & Saguaro NM access point	2960	3160	X	X				X	X						
Sahuarita - Mt. Fagan Link	264	L	5.0	Houghton Rd. SE to Mt. Fagan West Loop/Jeep Road	3220	4160	X	X				X	X						Parts of trail on jeep roads.
Thunderhead Trail	265	L	1.6	Rincon Creek to Monument Boundary Trail	2920	3080	X	X				X	X						
Total Wreck Local	266	L	8.5	Transmission line SE to Cienega Creek/Jeep Road	3700	4200	X	X				X	X						Entire trail on jeep roads.
Twin Tanks	267	L	2.5	Az. Hwy. 83 to Mt. Fagan East Loop/Jeep Road		4280		X				X	X						Entire trail on jeep roads.
Upper Agua Verde Creek	268	L	3.0	Lower Agua Verde Creek to eastern end		3920	X					X	X						
Vail Loop	269	L	2.5	Pantano Wash to Vail/Colossal Cave Rd. to Pantano Wash via pipeline rd. & transmission line		3300	X	X				X	X						

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

## SUBREGION # 7 -- Upper Santa Cruz Valley

CANDIDATE TRAIL NAME	Trail Map Code			Trail Description			Trail Elevation			Trail Setting						Recreational Uses		
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route			Lowest	Highest	Wash	Cross-Country	Unity Reservoir / ROW	Linear Park	Wide Access	Foot	Horse	Mountain Bike	Road Bike	COMMENTS
				Trail Type	Trail Length (miles)	Trail Route												
Santa Cruz River	8	P	19.5	Reach of Santa Cruz from southern boundary of San Xavier Res. S. to Santa Cruz Co. line	2660	3040	X											* Extent of developed linear park undetermined
Alvernon Extension	74	C	1.5	Dawson Rd. So. to Santa Rita Experimental Range; on Alvernon Way alignment	2826	2880		X										
Ash Wash	75	C	4.0	E-W wash between western edge of proposed Sierrita Min. Park and western boundary of project area	3100	4400	X											
Dawson Rd./Helvetia Wash/Jane's Wash Loop	76	C	12	Loop NW of Santa Rita Exp. Range on Jane's Wash/Alvernon Way/Helvetia Wash; via Dawson Rd. to Santa Cruz	2740	3040	X		X									Approx. 3.5 mi. on Road ROW
Demetrie Wash	77	C	14.3	E-SE trending wash from eastern edge of Sierritas. Skirts mine pits & tailings pond.	2920	4600	X											
Esperanza Wash (Tinaja Wash)	78	C	10.5	SE from eastern boundary of Sierritas (upper reach is Tinaja Wash); skirts mine pits, tailings, Caterpillar Proving Ground.	2920	4600	X											



# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 7 -- Upper Santa Cruz Valley

CANDIDATE TRAIL NAME	Trail Map Code		Trail Type		Trail Length (miles)		Trail Description		Trail Elevation		Trail Setting				Recreational Uses		COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Wash	Cross-Country	Utility Easement / ROW	Linear Park	Wide Access	Road	Horse	Mountain Bike	Road Bike			
Head East Trail	285	L	4.5	E-W route, w/western end at junction of Pig Farm & Well Trails	2710	2820	X	X	X			X	X	X				
Helmet Peak Loops	286	L	3.5	Loops between Helmet Peak Rd. & El Toro Rd. E & W of I-19; crosses several small washes	2760	2900	X	X	X			X	X					
Landing Strip	287	L	1.8	Along former landing strip in No. Sahuarita Heights	2710	2780		X				X	X					
Pig Farm	288	L	2.5	N-S route, So. end at intersection with Head East Trail, near Sahuarita & Delgado Rds.	2680	2730	X	X				X	X					
Power Line Loop	289	L	5.0	NE Powerline Trail from Madera Canyon Wash to intersection with NW trending wash, then NW to Santa Cruz River	2910	3200	X	X			X		X					Approximately 2 miles utility easement north of Madera Canyon Wash
Tailings Pond Rd.	290	L	4.0	At eastern & southern base of tailings pond; on Mining co. (private) rd.	3120	3200		X					X					
Well Trail	291	L	0.5	NW from Sahuarita Rd./Delgado Rd.	2710	2730		X					X					Links w/other Sahuarita trails.

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 7 -- Upper Santa Cruz Valley

CANDIDATE TRAIL NAME	Trail Description			Trail Elevation		Trail Setting					Recreational Uses					
	Trail Map Code	Trail Length (miles)	Trail Route	Highest	Lowest	Wash	Cross-Country	Road Right-of-way	Utility Easement / ROW	Linear Park	Whole Access	Foot	Horse	Mountain Bike	Read Bike	COMMENTS
West Loop - Green Valley/Arroyo #7	292	L	5.8	2820	3180	X	X	X	X	X	X	X	X	X		Approx. 0.3 mi. on rd. ROW; 1.3 mi. on flood control easement. Crosses bike routes.
West Madera Loop	293	L	4.5	3080	3360	X					X	X				
West Toro	294	L	10.5	2720	3780	X	X	X	X	X	X	X	X	X		All but 2.0 miles on candidate road rights-of-way or easements.

**TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS**

**SUBREGION # 8 -- Metropolitan Tucson**

CANDIDATE TRAIL NAME	Trail Map Code			Trail Description			Trail Elevation			Trail Setting					Recreational Uses		COMMENTS		
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Wash	Cross-Country	Udry Right-of-Way	Linear Park	Waste Access	Foot	Horse	Mountain Bike	Road Bike				
Flato/Franco Wash System	P	9.0		Eastern boundary of San Xavier District to western boundary of SE Regional Park & Fairgrounds	2570	3115	X				X	X							
Pantano Wash	P	9.0		Houghton Rd. to Rillito River	2440	2580	X		X		X	X	X			X			Proposed linear park on most reaches
Rillito River	P	11.5		Entire length	2200	2440	X		X		X	X	X			X			Proposed linear park on most reaches
Santa Cruz River	P	14.5		San Xavier District to Rillito River	2200	2480	X		X		X	X	X			X			Proposed linear park on most reaches
Airport Wash	L	15.4	308	Park Ave. to Santa Cruz River and Alvernon Way to Rita Rd. (No. Fork); Alvernon Way to Harrison Rd. (So. Fork)	2410	3010	X				X					X*			* Depends on design
Alamo Wash	L	6.0	309	Rillito Creek to Broadway Blvd. and Wilmot Rd. to Escalante Rd.	2350	2725	X				X					X			* Depends on design See Simons and Li 1989.
Arcadia Wash	L	3.3	310	Confluence w/Alamo Wash to 10th St. (1 blk No. of Broadway) & Craycroft to 22nd St.	2460	2590	X				X					X			* Depends on design

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 8 -- Metropolitan Tucson

CANDIDATE TRAIL NAME	Trail Description		Trail Elevation		Trail Setting				Recreational Uses		COMMENTS						
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Wash	Cross-County	Road Right-of-way	Utility Easement / ROW		Linear Park	Whole Access	Foot	Horse	Mountain Bike	Road Bike
Arroyo Chico	311	L	4.3	3rd Ave. to 1st Ave. & Park Ave. to Swan Rd.	2395	2545	X		X				X	X			See Simons & Li 1988 and City of Tucson Transportation Design Advisory Committee Demonstration Projects, 6 June 1988.
Atterbury Wash	312	L	1.2	Pantano Wash to Lincoln Park	2650	2715	X			X			X				
Christmas Wash	313	L	0.7	Rillito River to Prince Road	2360	2380	X			X			X				
Citation Wash	314	L	2.2	Confluence w/Arroyo Chico Wash to 32nd Street.	2450	2550	X					X					See Simons & Li 1988 for more details.
Earp Wash	315	L	1.8	Rodeo Wash Detention Basin to Los Reales Rd.	2650	2745	X					X					
High School Wash	316	L	1.0	Norton St. to 4th Ave.	2400	2440	X										Not suitable for trail, but vegetation deserves preservation.
Julian Wash	317	L	4.8	Palo Verde Rd. to Kolb	2580	2800	X					X		X	X*		* Depends on design

# TABLE 7-2. INVENTORY OF CANDIDATE TRADITIONAL TRAILS

SUBREGION # 8 -- Metropolitan Tucson

CANDIDATE TRAIL NAME	Trail Description			Trail Elevation		Trail Setting					Recreational Uses		COMMENTS			
	Trail Map Code	Trail Length (miles)	Trail Route	Lowest	Highest	Wash	Cross-Country	Road Right-of-way	Utility Easement / ROW	Linear Park	Whole Access	Foot		Horse	Mountain Bike	Road Bike
318 Kinnison Wash	L	2.2	Irvington Rd. to Atterbury Wash	2700	2745	X		X			X		X	X*	X*	* Depends on design
319 Rodeo Wash	L	5.5	Santa Cruz River to Avernon Way	2425	2635	X		X			X		X	X*	X*	* Depends on design
320 Rose Hill Wash	L	1.0	Speedway Blvd. to Broadway Blvd.	2540	2590	X		X			X					

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 1 -- South and West Tucson Mountains**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses				COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Ajo Way	15	C	13.5	Mission Rd. to Sandario Rd.	2426	2455					X	Bike lane existing from La Cholla to near Ryan Field
Avra Valley Rd.	16	C	4.0	Sandario Rd. to Santa Cruz River	2020	2060		X	X		X	
Fort Lowell	17	C	1.5	CAP Canal to Sandario Rd.	2210	2360		X	X			Access point to Saguaro NM West
Manville Rd.	18	C	1.5	CAP Canal to Sandario Rd.	2185	2335		X	X			Access point to Saguaro NM West
Orange Grove Rd.	19	C	1.3	Sanders Rd. West to CAP	2110	2160		X	X			
Picture Rocks Rd.	20	C	4.1	Sanders Rd. to Saguaro NMW	2145	2475		X	X			
San Joaquin Rd.	21	C	5.5	Ajo Way to TMP	2380	2470		X	X			
Sanders Rd.	22	C	0.5	Orange Grove to Picture Rocks Rd.	2145	2160		X	X		X	
Aldon Rd.	100	L	1.2	Snyder Hill Rd. to Northern end	2470	2525		X	X			Access point to TMP
Bilby Rd.	106	L	2.5	Cardinal Ave. to Mark Rd., including gap west of Rangeline Rd.	2525	2730		X	X			
Bopp Rd.	107	L	6.2	Kinney Rd. to western end	2390	2600		X	X		X	
Calle Anasazi	108	L	0.7	San Joaquin Rd. to TMP boundary	2410	2430		X	X			Access point to TMP
Cardinal Ave.	109	L	4.0	Hermans Rd. to Nebraska St.	2515	2550		X	X		X	
Carol Ave.	110	L	0.8	Bopp Rd. to Naomi Rd.	2545	2600		X	X			
Castle Dr.	111	L	0.2	Sandario Rd. to Chipewa Rd.	2870	2880		X	X		X	
Chipewa Rd.	112	L	0.8	Castle Rd. to Hilltop Rd.	2870	3020		X	X		X	
Deaver Rd.	113	L	1.0	Snyder R. to Bopp Rd.	2480	2535		X	X			
Hilltop Rd.	114	L	2.8	Chipewa Rd. to Sierrita Mtn. Rd.	2850	3020		X	X		X	
Irvington Rd.	115	L	3.2	CAP to Dakota Wash (Section 5)	2505	2565		X	X			
Michigan Street	116	L	1.5	Deaver Rd. to Hull Rd.	2505	2565		X	X			

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 1 -- West and South Tucson Mountains**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses				COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Naomi Rd.	117	L	0.8	Jamie Ave. to Kinney Rd.	2600	2640		X	X			Includes short link in wash to access point
Nebraska Rd.	118	L	.2	Cardinal Ave. to Manzanita Park	2500	2515		X	X			
Sandario Rd.	119	L	22.6	Avra Valley Rd. to Castle Drive	2020	2880		X	X		X	Connector route north of Ajo Way (19.3 mi.) Local route south of Ajo Way
Scenic Dr.	120	L	1.5	Silverbell Rd. to Saguaro NM West	2130	2270		X	X			Access point to Saguaro NMW
Sierrita Mtn. Rd.	121	L	10.5	Ajo Way South to Hunt Rd.	2850	3180		X	X		X	Link to proposed Sierrita MP via Fresnal Wash
Silverbell Rd.	122	L	1.7	Pima Farms Rd. to Twin Peaks Rd.	2090	2180					X	
Tucson Estates Parkway	123	L	1.8	Ajo Way to TMP access point	2525	2660		X	X		X	Includes gap between Bopp and Kinney Rd.
Twin Peaks Rd.	124	L	5.0	Silverbell Rd. to Sandario Rd.	2040	2180					X	

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 2 -- Eastern Tucson Mountain Foothills**

CANDIDATE TRAIL NAME	Trail Description			Trail Elevation		Recreational Uses				COMMENTS		
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse		Mountain Bike	Road Bike
Abington Rd.	127	L	0.5	Part of Belmont Loop	2380	2460						
Belmont Rd.	146	L	1.2	Silverbell Rd. west to gas pipeline - Links with Belmont Loop & Yuma Mine Trails	2200	2330		X	X	X		
Cottonwood Lane	147	L	1.6	From west branch of Santa Cruz So. to Ajo Way	2370	2400		X	X	X		
El Camino del Cerro	148	L	2.8	Southwesterly dirt rd. fork (starting in S23) to SNMW boundary	2385	2880		X	X	X		
El Rio Dr.	126	L	0.5	Between Northwest Park and Santa Cruz River	2300	2320		X	X	X	X	Part of Anklam Wash Local Trail
Greasewood Rd.	149	L	1.6	a: Speedway N. to pipeline. b: Silvercroft Wash So. to TMP	2380	2510		X	X	X		Utility easement for additional 0.25 miles
Huachuca Ave.	126	L	0.3	Between Northwest Park and Santa Cruz River	2320	2320		X	X	X	X	Part of Anklam Wash Local Trail
Ironwood Hill Dr.	150	L	1.5	Camino de Oeste Rd. to Painted Hill Rd.	2400	2550		X	X	X		
Mission Lane	151	L	0.3	From "A" Mtn. Park east to Santa Cruz River	2350	2360		X	X	X	X*	*Depends on design
Navajo St.	126	L	0.1	Between Northwest Park and Santa Cruz River	2320	2320		X	X	X	X	Part of Anklam Wash Local Trail
Riverview Blvd.	126	L	0.1	Between Northwest Park and Santa Cruz River	2315	2320		X	X	X	X	Part of Anklam Wash Local Trail
Silverbell/Congress/Grande/Mission	152	L	15	Pima Farms Rd. to Mission Rd.	2090	2425				X		
Sweetwater Drive	153	L	4.0	Roger Wash westerly to intersection w/Roger extension near TMP boundary	2310	2900		X	X	X		
Thirty-sixth St.	142	L	2.3	Mission Rd. west about 2-3 miles to end of rd. (Part of 36th St. Extension Trail)	2380	2600		X	X	X		

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 2 -- Eastern Tucson Mountain Foothills**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses				COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Tortolita Rd.	137	L	1.3	Part of S. Branch East Idle Hour Wash Trail (W. Fork) - goes southerly from Camino de lo Amapola to Paseo del Barranco	2320	2460		X	X	X		
Trails End Dr.	143	L	0.3	West of Golden Lane alignment approx. 0.3 miles	2800	2900		X	X			T13S, R12E, S2 Part of Trails End Wash Trail
Yavapai St.	126	L	0.1	Between Northwest Park and Santa Cruz River	2320	2320		X	X	X	X	Part of Anklam Wash Local Trail

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 3 -- Tortolita Foothills and Northwest Catalinas**

CANDIDATE TRAIL NAME	Trail Description			Trail Elevation		Recreational Uses				COMMENTS		
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse		Mountain Bike	Road Bike
Chalk Mine Rd./ Edwin Rd. alignment	37	C	8.75	Co. Line Rd./alignment (Lago Del Oro E. to CNF = 1.5 miles Co. R.O.W.)	3175	3600		X	X	X		Tortolitas-CNF connection incomplete
Como Dr.	33	C	1.0	Moore Rd. North & Northwesterly	2845	3000		X	X	X		Sec. 28 Co.ROW Part of La Cholla - Honey Bee Loop
Hawser St.	30	C	1.8	Highway 89 to just E. of Columbus	3080	3120		X	X			Part of Big Wash - Hawser Connector
La Cholla Blvd.	33	C	1.2	Moore to Tangerine; Lucero to Linda Vista	2780	2860		X	X	X	X	Part of La Cholla - Honey Bee Loop
Lucero Rd.	33	C	0.5	La Cholla to 1/2 mi. east	2400	2460		X	X	X		Part of La Cholla - Honey Bee Loop
Bowman Rd.	169	L	1.3	Schroeder Rd. south	2960	3060		X	X			
Cortaro Farms Rd./ Cortaro Rd.	160	L	1.2	Joplin Ln. east of I-10 to the Santa Cruz	2140	2152		X	X	X		Western portion of Hardy Wash Trail
Golder Ranch Dr.	159	L	1.8	Highway 89 E. to Catalina Park Trail	3080	3200		X	X			Part of Golder Ranch Loop
Joplin Lane	160	L	0.4	N. of Cortaro Farms Rd., east of I-10	2152	2160		X	X	X		Part of Hardy Wash Trail
Lambert Lane	170	L	0.8	Shannon to La Cholla/ Honey Bee Loop	2580	2600		X	X	X	X	Links to La Cholla - Honey Bee Loop
Lobo Rd.	160	L	0.5	Shannon to 1/2 mi. W.	2425	2450		X	X	X		Part of Hardy Wash Trail
Moore Rd. alignment	171	L	6.0	La Cañada (King Air Dr.) to Wild Burro Rd.	2494	2870		X	X	X	X	Camino de Oeste to Tortolita Rd. not developed Co. ROW
Potvin Rd.	172	L	2.5	Camino de la Tierra to Tortolita Rd.	2490	2590		X	X	X		Alignment only from Cm.de Oeste to Tortolita Rd.
Rollin Rd.	173	L	0.5	Hoot Owl Rd. to Bowman Rd.	3000	3005		X	X			
Shannon Rd.	174	L	2.0	Sahuaro Divide to Linda Vista Rd.; Hardy Rd. to Lobo Rd.	2440	2625		X	X	X		
Thomydale Rd.	175	L	2.5	Potvin north to Moore Rd.	2560	2760		X	X	X	X	Possible extension of ROW to Tortolita Foothills Trail

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 3 -- Tortolita Foothills and Northwest Catalinas**

CANDIDATE TRAIL NAME	Trail Description						Trail Elevation		Recreational Uses				COMMENTS
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike	Road Bike		
Tortolita Rd.	176	L	4.3	Potvin N. to Tortolita Foothills Trail	2540	2636		X	X	X	X	Tangerine to Moore is a Co. ROW. Potvin to Tangerine is undeveloped	
Twin Lakes	177	L	0.5	Wilds Rd. to Rollin Rd.	3000	3040		X	X				
Wild Burro Rd.	178	L	1.0	Moore Rd. N. 1 mile	2494	2590		X	X	X			

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 4 -- Catalina and Rincon Foothills**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses				COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Old Spanish Trail	48	C	7	Broadway Blvd. to Drexel Road	2640	2880		X	X	X	X	Provides access to SNME
Palo Verde Blvd.	41	C	0.3	Roger Rd. to N. end in T13S, R14E, S21	2280	2440		X	X			Part of Finger Rock Wash Trail
Roger Rd. alignment	41	C	0.6	Rillito River to Palo Verde Blvd.	2240	2360		X	X			Part of Finger Rock Wash Trail
29th St. alignment	192	L	0.7	W. end 29th St. east to Melpomene Way T14S, R15E, S24	2910	2950		X	X			Part of Freeman/Del Este Trail
Ave. del Conejo	213	L	0.5	Snyder Rd. to S. end in Center of S24	2730	2750		X	X			Part of Ave. del Conejo utility alignment
Bear Canyon Rd. alignment	214	L	2.0	Pine Tree Wash to CNF boundary	2560	2780		X	X	X		
Birch Way alignment	215	L	0.5	Cañada del Oro to Verch Way	2375	2383		X	X			
Bonanza Ave.	199	L	1.0	Tanque Verde Rd. to Wash & Kleindale to Ft. Lowell	2500	2580		X	X	X		Part of Orange Ave/Tomahawk Trail
Broadway Blvd.	216	L	2.0	Melpomene Way to Wentworth Rd.	2760	2820		X	X	X		
Calle Catalina	192	L	0.6	Entire length T14S, R16E, S19	2920	2950		X	X			Part of Freeman/Del Este Trail
Calle del Valle	181	L	0.2	Ft. Lowell Rd. to Calle del Rincon	2640	2640		X	X			Part of Agua Caliente/Tanque Verde Wash link
Calle Loma Linda alignment	217	L	2.0	Hardy Rd. to Linda Vista Blvd.	2440	2520		X	X	X		
Calle del Pantera	201	L	0.4	Pontatoc Wash to Swan Rd.	2640	2680		X	X			Part of Pontatoc/Valley View/Flecha Caida Trail
Camino Coronado/ Camino de Anza	218	L	1.7	Entire lengths T12S, R13E, S23	2530	2550		X	X			
Camino Francisco Soza	201	L	0.5	Entire length T13S, R14E, S14	2760	2800		X	X			Part of Pontatoc/Valley View/Flecha Caida Trail
Camino Los Vientos	182	L	0.7	Entire length T13S, R14E, S17	2500	2565		X	X			Part of Campbell/Camino Real Trail
Catalina Hwy-E. side	199	L	0.3	Orange Ave. alignment to unnamed wash	2580	2580		X	X			Part of Orange Ave./Tomahawk Trail
Conestoga Ave.	181	L	0.6	Entire length; N. end in T13S, R16E, S31; S. to end just N. of Tanque Verde Wash	2600	2640		X	X			Part of Agua Caliente/Tanque Verde Wash Link

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 4 -- Catalina and Rincon Foothills**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses				COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Fort Lowell Rd.	219	L	3.5	Bonanza Ave. to Wentworth Rd.	2640	2790		X	X	X		
Hardy Rd. alignment	220	L	1.0	Calle Loma Linda to Verch Way	2480	2500		X	X			
Harrison Rd. alignment	199	L	1.0	Catalina Hwy. to Pine Tree Wash	2600	2610		X	X			Part of Orange Ave./Tomahawk Trail
Houghton Rd.	221	L	3.7	Tanque Verde Wash to Harrison-Houghton Link Trail	2570	2722		X	X	X	X*	*Depends on design
Jeanette Ave.	222	L	0.3	Entire length T13S, R15E, S35	2560	2600		X	X			
Kleindale Rd.	223	L	0.5	Bonanza Ave. to Houghton Rd.	2620	2660		X	X			
La Cañada Dr.	224	L	6.0	Cañada del Oro Wash to Rillito River	2280	2520		X	X	X	X*	*Depends on design
La Oesta/Pine St./Morningview Dr.	225	L	1.1	Hardy Rd. to Magee Rd.	2500	2520		X	X			
Las Lomitas Rd.	184	L	0.5	West end to La Cañada Dr.	2310	2380		X	X			Part of Casas Adobes Loops
Linda Vista Blvd.	226	L	1.0	La Cañada Dr. to Carmack Wash	2420	2580		X	X			
Melpomene Way	227	L	2.9	Agua Caliente Wash N. to loop trail just S. of CNF boundary	2600	2800		X	X	X	X*	*Depends on design
Melpomene Way alignment	228	L	5.7	Pantano Wash to Tanque Verde Wash	2590	2978		X	X	X		
Montebella Rd.	229	L	0.5	Rudasill Rd. to Orange Grove Road	2340	2340		X	X			
Orange Grove Rd.	184	L	0.8	Nanini Wash to La Cañada Dr. So. side	2340	2410		X	X			Part of Casas Adobes Loops
Prince Rd.	230	L	0.5	Bonanza Ave. to Houghton Rd.	2620	2664		X	X			
Redington Rd.	231	L	3.5	Wentworth Rd. to CNF boundary	2699	3000		X	X	X		
Roger Rd. alignment	232	L	1.2	Agua Caliente Wash to Wentworth Rd.	2700	2840		X	X			
Roger Rd.	233	L	0.5	From utility line along Ave. del Conejo alignment to Melpomene Way	2700	2720		X	X			

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 4 -- Catalina and Rincon Foothills**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses				COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Salida del Sol Place	201	L	0.1	Entire length T13S, R14E, S14	2720	2800		X	X			Part of Pontatoc/Valley View/Flecha Caida Trail
Saranac Dr.	201	L	0.3	Finger Rock Wash to Pontatoc Wash	2480	2510		X	X			Part of Pontatoc/Valley View/Flecha Caida Trail
Snyder Rd. alignment	234	L	7.3	Tanuri Wash to E. end at Agua Caliente Wash	2600	2800		X	X	X	X*	* Depends on design
Tanque Verde Rd.	235	L	1.7	Woodland Rd. E. end to Houghton Rd.	2560	2591		X	X			
Tomahawk Trail	199	L	1.0	Ft. Lowell Rd. to Tanque Verde Rd.	2590	2630		X	X			Part of Orange Ave./Tomahawk Trail
Verch Way	236	L	0.3	Hardy Rd. alignment to Birch Way	2390	2430		X	X			
Via Entrada	193	L	0.7	1st Ave. to Via Entrada Wash	2440	2520		X	X			Part of Friendly Village/Via Entrada Trail. Median is used as trail.
Wentworth Rd. alignment	237	L	4.0	Broadway Blvd. to Roger Rd.	2660	2810		X	X			
Woodland Rd. east end alignment	238	L	0.5	Tanque Verde Rd. to Tanque Verde Wash	2535	2560		X	X			

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 5 -- San Pedro Valley**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses			COMMENTS		
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse		Mountain Bike	Road Bike
Redington Rd.		C	10	San Pedro River to CNF boundary	2880	4200		X	X	X		

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 6 -- Rincon Valley and Northeast Santa Rita Mountains**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation			Recreational Uses				COMMENTS
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike	Road Bike	
Colossal Cave/ Vail Rd.	4	P	2.5	I-10 to Pantano Wash	3140	3230		X	X	X	X	Part of the Flato/ Franco Trail
Alvord Rd.	60	C	0.6	Old Spanish Trail to Richter Rd.	2880	2920		X	X			Part of Monument Boundary Trail
Colossal Cave/ Vail Rd.	64	C	3.5	Pantano Wash to Old Spanish Trail	3140	3560		X	X	X	X	
Houghton Rd.	65	C	19	Pantano Wash to CNF boundary	2760	4120		X	X		X	Includes 2.5 miles of jeep road
Marsh Station Rd.	66	C	12	Vail Rd. east to I-10	3250	3420					X	
Old Spanish Trail	67	C	8.7	SW corner Saguario NM to Colossal Cave Rd.	2880	3560		X	X		X	
Pistol Hill/ Papago Springs Road	68	C	5.5	Colossal Cave Rd. to Papago Springs/CNF	3380	3640		X	X	X		
Pistol Hill Rd. (Private)	69	C	3.0	Old Spanish Trail to X-9 Ranch Road	3320	3530		X	X			Proposed for consideration/ not currently open to public
Sahuarita Rd.	70	C	11.0	Wilmot Rd. to Arizona Hwy. 83	2900	3680		X	X		X	
Wentworth Rd.	71	C	4.6	I-10 to Sahuarita Rd./ Esmond Rd. to Hermans Rd.	3260	3560			X		X	0.5 mile segment south of I-10 is part of Flato/Franco trail
X-9 Ranch Road (Private)	72	C	6.1	Old Spanish Trail to SNM East Boundary; currently not open to public	3329	3400			X			Proposed for consideration
Andrada Rd.	270	L	1.9	Wentworth Rd. to Davidson Rd.	3420	3480		X	X	X		
Arizona Hwy. 83	271	L	6.3	Marsh Station Rd. to junction with southern end of Old Sonoita Hwy.	3420	3990			X		X	
Camino Loma Alta	272	L	3.1	Old Spanish Trail to Colossal Cave Rd.	3160	3260		X	X		X	
Davidson Rd.	273	L	1.9	Andrada Rd. to Sahuarita Rd.	3480	3680		X	X			
Garrigans Gulch	274	L	1.4	Camino Loma Alta to western end	3120	3230		X	X			
Old Sonoita Hwy.	275	L	6.5	Entire length along Arizona Hwy. 83	3440	3990		X	X	X	X	

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 7 -- Upper Santa Cruz Valley**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses				COMMENTS		
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike	
Alvernon Way	76	C	1.5	Sahuarita Rd. to Dawson Rd.	2765	2880		X	X	X		Part of Dawson/Helvetia/Jane's Wash Trail	
Cerro Colorados South Access Rd.	82	C	2.5	From Arivaca Rd. No. to Cerro Colorados	3620	3700		X	X	X		State Lands & Private Dirt Rd.	
Continental Rd.	83	C	5.0	W. Terminus at Duval Mine Rd. E. to Santa Cruz River; Bike Route eastern 2 miles	2860	3290	X	X	X	X	X	Suitable for horses & bikes in portions only (part of "Continental Combo ROW")	
Dawson Rd.	76	C	2.8	Santa Rita Rd. E. to end of section 22	2725	2870		X	X	X		Part paved; part dirt. (Part of Dawson/Helvetia/Jane's Wash Trail)	
Duval Mine Rd.	84	C	0.9	Connector between Mission Rd. & Continental Rd.	3290	3400		X	X	X	X	Part of "Continental Combo ROW"	
Elephant Head/Hawk Way	85	C	9.0	From I-19 to CNF Chino Basin	3000	3580		X	X	X	X	Paved ROW is 6 mi.; dirt rd. is 3 mi.	
Madera Canyon Rd.	86	C	10	Hwy. 89 to CNF boundary	2840	4060			X	X	X	Current access to Madera Canyon in Santa Ritas	
McGee Ranch Rd.	87	C	5.6	West from Mission Rd. to Sierrita Mtns.	3600	4640		X	X	X	X	Paved access rd. to Sierrita Mtns. (part of "Continental Combo ROW")	
Mission Rd.	88	C	4.0	McGee Ranch Rd. to Duval Mine Rd.	3400	3600			X	X	X	Part of "Continental Combo ROW"	
Sahuarita Rd.	70	C	6.5	1/4 mi. west of Santa Cruz River, east to Wilmot Rd.	2700	2900		X	X	X	X		
Abrego Dr.	295	L	3.8	Continental Rd. to Duval Mine Interchange	2780	2880	X	X			X	X	Bike route
Batamote Road	296	L	3.2	Arivaca Rd. N. to intersection w/Bob Brown Lateral	3310	3500			X	X			Access to Proctor Wash/Bob Brown Lateral Trail across State Trust Land.
Camino del Sol	297	L	2.5	Mission Twin Buttes S. to end of Rd. (Sec. 33; Mine Waterline Rd.)	3000	3080	X	X			X	X	Bike route
Camino del Toro	294	L	1.5	East of Mission Rd. T17S, R13E, S17 & 18	3170	3360		X	X	X			Part of West Toro Trail

# TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS

## SUBREGION # 7 -- Upper Santa Cruz Valley

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses				COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Country Club Rd.	298	L	1.3	Between El Toro Rd. & Santa Rita Rd.	2780	2810		X	X	X	X	Part paved, part dirt
Delgado Rd.	299	L	1.0	Sahuarita Rd. to El Toro Rd.	2690	2760		X	X	X		
Duval Mine Rd.	300	L	0.9	Local between La Cañada & Abrego Dr.	2820	2920		X		X	X	
El Toro Rd./East	301	L	1.3	Delgado Rd. to Alvernon Way	2760	2805		X	X	X		Part paved, part dirt
El Toro Rd./West	294	L	1.5	West of I-19 T17S, R13E, S22 & 23	2815	3070		X	X	X	X	Part of West Toro Trail
Esperanza Blvd.	292	L	0.3	Surface walk under I-19	2860	2880	X	X				Part of West Loop Green Valley/Arroyo #7 Trail
La Cañada	302	L	4.5	Mission Twin Buttes No. to Duval Mine Rd.	2900	2960		X		X	X	Bike route
La Villita/Sahuarita Rd. (N - S)	294	L	0.5	N - S Rd. link west of Santa Cruz T17S, R13E, S13	2720	2730		X	X	X		Part of West Toro Trail
Las Quintas	303	L	2.0	S. of El Toro Rd. for approx. 2 miles	2880	2885		X	X	X		
Mission Twin Buttes	304	L	0.8	Between Camino del Sol and La Cañada Dr.	2970	3020		X		X	X	Bike route
Ruby Star Ranch Rd.	294	L	1.8	From Mission Rd. west T17S, R12E, S25 & 26 R13E, S30	3420	3640		X	X	X		Part of West Toro Trail
Santa Rita Rd.	305	L	4.0	Sahuarita Rd. to Santa Rita Experimental Range	2710	2880			X	X	X	
Sierrita Mtn. Rd.	121	L	5.0	Fresnal Wash to Hunt Rd.	3340	3760		X	X	X	X	
Twin Buttes Rd.	294	L	1.0	East of I-19 T17S, R13E, S13 & 14	2730	2815		X	X	X		Part of West Toro Trail

**TABLE 7-3. INVENTORY OF CANDIDATE ROAD RIGHT-OF-WAY TRAILS**

**SUBREGION # 8 -- Metropolitan Tucson**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses				COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Eighteenth St.	321	L	0.3	Kroeger L. to Osborne Ave.	2350	2360		X		X	X*	Including I-10 pedestrian underpass. * Depends on design
Jackson Ave.	322	L	0.7	Prince Rd. to the Rillito River	2320	2400		X	X			
Kroeger Lane	323	L	0.4	Entire length T14S, R13E, S14	2350	2360		X		X	X*	* Depends on design

**TABLE 7-4. INVENTORY OF CANDIDATE UTILITY EASEMENT/ RIGHT-OF-WAY TRAILS**

**SUBREGION # 1 -- West and South Tucson Mountains**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses					COMMENTS
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike	Road Bike	
	Central Arizona Project Canal	3	P	27	CAP ROW from Santa Cruz River to treatment plant	2030	2500	X	X	X	X	
Central Arizona Project Proposed Southern Extension	3	P	3.3	Treatment plant to Pascua Yaqui Indian Reservation	2500	2570	X	X	X	X	X	Construction of extension not yet committed
Central Arizona Project Tunnel	3	P	2.7	Treatment plant to TMP boundary at Starr Pass	2500	2680	X	X	X	X	X	
Gas pipeline	23	C	6.2	Ajo Way & San Joaquin Rd. to West Branch of Santa Cruz River	2470	2590		X	X	X		Links TMP and Saginaw Hill Park
Gas pipeline	125	L	3.6	From East-West pipeline S. of Valencia N. to TMP	2500	2700		X	X	X		

**TABLE 7-4. INVENTORY OF CANDIDATE UTILITY EASEMENT/ RIGHT-OF-WAY TRAILS**

**SUBREGION # 2 -- Eastern Tucson Mountain Foothills**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses				COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Greasewood Utility Easement	154	L	0.3	On Greasewood Road alignment, south to TMP	2500	2500		X	X			
Gas Pipeline	155	L	13.0	Pima Farms Road to terminus near west end of Congress	2160	2550		X	X	X		(T12S, R12E, S28 to T14S, R13E, S5)

**TABLE 7-4. INVENTORY OF CANDIDATE UTILITY EASEMENT/ RIGHT-OF-WAY TRAILS**

**SUBREGION # 3 -- Tortolita Foothills and Northwest Catalinas**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses					COMMENTS
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike	Road Bike	
Central Arizona Project (CAP)	3	P	9.0	Pinal Co. line south to Santa Cruz, east & nearly parallel to I-10	2040	2050	X	X	X	X	X	Major trail corridor potential
Pipeline Rd.	163	L	2.0	Between Tangerine Rd & Lambert Ln.	2220	2380		X	X			Links Prospect Wash & El Camino de Mañana Wash - Part of Prospect Wash Trail
Power Line Rd.	180	L	10.0	La Cañada Dr. NE to 1st Ave., then N. to Pinal County Line	2400	3280		X	X	X		Heavily used in places; fenced in places
Power Transmission Line	179	L	9.3	Pinal Co. Line South-easterly, parallel to I-10, 7 miles; then So. about 2 miles to RR	2080	2240		X	X			Crosses State lands, generally fenced

**TABLE 7-4. INVENTORY OF CANDIDATE UTILITY EASEMENT/ RIGHT-OF-WAY TRAILS**

**SUBREGION # 4 -- Catalina and Rincon Foothills**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation			Recreational Uses			COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Ave. del Conejo alignment	213	L	2.0	Snyder Rd. to Roger Rd.	2720	2750		X	X			T13S, R15E, S24
Conestoga Ave. alignment	181	L	1.4	Ft. Lowell Rd. So. to Tanque Verde Wash	2600	2645		X	X			Part of Agua Caliente/Tanque Verde Wash Link
Friendly Village Drainage Way	239	L	1.3	Canyon View Dr. So. to River Rd.	2360	2440		X	X			T13S, R13E, S13 & 34. May be County ROW
La Cañada Easement	184	L	2.0	SE from La Cañada Dr. to River Rd., E to Pima Wash	2240	2400		X	X			T13S, R13E, S11 & 14. Part of Casas Adobes Loops
Linda Vista Easement	240	L	0.4	Linda Vista Blvd. N. to Cañada del Oro	2440	2512		X	X			T12S, R13E, S14 Dedicated to Pima County
Pine Tree Wash to Prince Rd.	241	L	0.8	Just W. of Wolford Rd.	2645	2680		X	X			T13S, R15E, S23 & 26
S. side Orange Grove Rd.	184	L	0.8	Nanini Wash to La Cañada Drive	2340	2400		X	X			Part of Casas Adobes Loops
Sunrise Drive	208	L	0.5	S. side of Rd. from E. fork of Craycroft Wash to W. fork of Tanuri Wash	2800	2920		X	X			Part of Tanuri/ Craycroft Trail



**TABLE 7-4. INVENTORY OF CANDIDATE UTILITY EASEMENT/RIGHT-OF-WAY TRAILS**

**SUBREGION # 6 -- Rincon Valley and Northeast Santa Rita Mountains**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses				COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Gas Pipeline	4	P	3.5	Fairgrounds to Wentworth Rd.	3080	3320		X	X	X		Part of Flato/ Franco Trail
Powerline	73	C	6.5	East from Agua Verde Creek to Cochise County Line	3760	4440			X			
Cross Hill/ Pipeline	276	L	5.6	Pipeline east from Red Hill Ranch Rd. to Mescal Arroyo	3600	3880			X			
Esmond Station Railroad Trail	277	L	5.4	Abandoned RR Grade from Houghton Rd. to Vail	2980	3240		X	X	X		
Gas Pipeline	278	L	9.2	Wentworth Rd. to Cienega Creek; northern portion of gas/powerline loop	3320	3720		X	X	X		
Gas Pipeline	269	L	1.5	Colossal Cave/Vail Rd. southeast & parallel to Southern Pacific RR to east-west transmission line	3220	3300		X	X			Part of Vail Loop Trail.
Powerline	279	L	8.3	Old Sonoita Hwy. to Cienega Creek; southern portion of gas/powerline loop	3520	3840		X	X	X		
Powerline	268	L	0.5	East-west transmission line south of Vail, east for 0.5 miles from intersection with pipeline	3300	3300		X	X			Part of Vail Loop Trail.
Powerline	280	L	5.4	Agua Verde Creek to Arrowhead Water Tank Rd.	3280	3720			X			

**TABLE 7-4. INVENTORY OF CANDIDATE UTILITY EASEMENT/ RIGHT-OF-WAY TRAILS**

**SUBREGION # 7 -- Upper Santa Cruz Valley**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses				COMMENTS	
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Green Valley/ West Grant Boundary Line Power Line	306	L	6.5	Esperanza Blvd. to S. end of Via Montana Vista T18S, R13E, S15 to T19S, R13E, S17	2940	3100		X	X	X		Dirt road on portions of easement
Pipeline north McGee Ranch Rd.	294	L	1.0	1 mile W. of Mission Rd., No. of McGee Ranch Rd. T17S, R12E, S34	3730	3780		X	X	X		Part of West Toro Trail
Power Line/ Country Club Rd.	307	L	1.0	Bet. El Toro Rd. & Sahuarita Rd. on Country Club section line	2730	2780		X	X	X		
Power Line: Hawk Way/Madera Canyon Wash	289	L	2.0	Northeasterly from Madera Wash T19S, R13E, S23 to S13	3140	3200		X	X			Part of West Loop - Green Valley/ Arroyo #7
Power Line: West Loop - Green Valley	292	L	1.6	Between power substation 1.6 miles W. of La Cañada at Esperanza Blvd.	2940	3180		X	X	X		Part of local loop trail
Power Line (West Toro Trail)	294	L	1.0	On El Toro Rd. alignment bet. S16 & 21 in T17S, R13E	3070	3170		X	X	X		Part of West Toro Trail

**TABLE 7-4. INVENTORY OF CANDIDATE UTILITY EASEMENT/ RIGHT-OF-WAY TRAILS**

**SUBREGION # 8 -- Metropolitan Tucson**

CANDIDATE TRAIL NAME	Trail Description				Trail Elevation		Recreational Uses			COMMENTS		
	Trail Map Code	Trail Type	Trail Length (miles)	Trail Route	Lowest	Highest	Whole Access	Foot	Horse		Mountain Bike	Road Bike
Abandoned El Paso & Southwestern RR ROW	324	L	3.5	6th St. to 4th Ave	2340	2430		X		X	X	This trail could be particularly suitable as a bicycle route.

# KEY TO TABLE 7-5. BOUNDARY ACCESS POINT INVENTORY

## Description of the Boundary Access Point (BAP)

**Legal Description:** Township and range in which the BAP is located

### Map Code

Primary Trail = single digit code in a diamond 

Connector Trail = double digit code in a triangle 

Local Trail = triple digit code in a box 

Established Boundary Access Point 

Proposed Boundary Access Point  
(Approved By Public Land Management Agency) 

Proposed Trail Entry Point  
(Approved By Public Land Management Agency) 

Proposed Boundary Access Point  
(Currently Not Approved By Public Land Management Agency) 

Proposed Trail Entry Point  
(Currently Not Approved By Public Land Management Agency) 

**Map Code for Connecting County Trail:** Map code of the candidate county trail leading to the BAP

**Name of Access Road:** Name of the public road, if any, leading to the BAP

**Name of Public Land & Trail Accessed:** Identity of the public land (National Forest, National Monument, etc...) and the name of the public land trail reached from the BAP

Coronado National Forest = CNF

Saguaro National Monument East = SNM E

Saguaro National Monument West = SNM W

Tortolita Mountain Park = TORMP

Tucson Mountain Park = TMP

**BAP Status:** One or more of the following apply

**BAP Elevation:** The elevation in feet above mean sea level

**Established BAP:** BAP is in public ownership and is open for public use

**Candidate BAP:** BAP is proposed for consideration but is not currently in public ownership. The public may already be using the BAP.

**Trail Entry Point Only:** This BAP serves solely as an entry point; it is accessible only by trail and has no facilities

**Recreational Trail Uses On Public Lands:** One or more of the following trail uses occur and are sanctioned by the relevant land-management agency on the public land trail accessed by the BAP

**Whole Access:** The BAP and public land trail have access and facilities for whole access users

**Foot:** The public land trail is useful to walkers or hikers

**Horse:** The public land trail is useful to equestrians

**Mountain Bike:** The public land trail is useful to all-terrain bicyclists

**Road Bike:** The public land trail is paved and useful to road bicyclists

**Comments:** Comments pertaining to BAP

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

## SUBREGION # 1 -- West and South Tucson Mountains

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Description of the BAP										BAP Status				Recreational Trail Uses On Public Land		COMMENTS
	Map Code	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	Established BAP	Candidate BAP	Trail Entry Point Only	BAP Status			Recreational Trail Uses On Public Land				
										Foot	Horse	Mountain Bike	Trail Entry Point Only	Foot	Horse	Mountain Bike	
1	T14S, R12E, S28	100	Aldon Rd.	TMP/southern spur of Prospectors Trail	2530		X		X	X	X	X					
2	T14S, R12E, S24	108	Calle Anasazi	TMP/unnamed	2420	X			X	X	X	X					
3	T14S, R12E, S23/24	21	San Joaquin Rd.	TMP/Jeep Trail	2380		X		X	X	X	X					
4	T14S, R12E, S25	3	CAP Tunnel Sarasona Blvd.	TMP/Starr Pass Trail	2660	X			X	X	X	X					
5	T13S, R12E, S33	17	Fort Lowell Rd.	Saguaro NM West/to be developed	2360		X		X	X	X	X				Links CAP Trail to Monument & Monument Roads	
6	T14S, R13E, S33	125	Ajo Way	TMP/pipeline trail	2500				X	X	X	X					
7	T14S, R12E, S26	123	Tucson Estates Parkway	TMP/Golden Gate Entrance Trail	2680	X			X	X	X	X					
8	T13S, R12E, S16	18	Manville Rd.	Saguaro NM West/New Trail	2340		X		X	X	X	X				Links CAP Trail to Monument & Monument Roads	
9	T14S, R12E, S27	117	Naomi Rd.	TMP/unnamed	2600			X	X	X	X	X					

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 1 -- West and South Tucson Mountains

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Map Code		Description of the BAP				BAP Status				Recreational Trail Uses On Public Land			COMMENTS
	Map Code for Connecting County Trail	Legal Description	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	Candidate BAP	Established BAP	Trail Entry Point Only	Whole Access	Foot	Horse	Mountain Bike	Road Bike	
Old Ajo Way	T14S, R13E, S32	13 102	Ajo Way	TMP/Cat Mountain Trail	2580	X			X	X				
Picture Rocks Rd.	T13S, R11E, S12	20	Picture Rocks Rd.	Saguaro NM West/Golden Gate Rd.	2475		X		X	X	X			
Prospector	T14S, R12E, S30	12	San Joaquin	TMP/Prospector	2480			X	X	X				
Sarasota Rd.	T14S, R12E, S25	None	Sarasota Blvd.	TMP/Starr Pass Trail	2680	X			X	X	X			

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 2 -- Eastern Tucson Mountain Foothills

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Map Code		Legal Description		Description of the BAP				BAP Status				Recreational Trail Uses On Public Land		COMMENTS	
	Map Code	Legal Description	Name of Access Road	Name of Access Road	Map Code for Connecting County Trail	Picture Rocks Rd.	Name of Public Land & Trail Accessed	Elevation	Candidate BAP	Trail Entry Point Only	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Box Canyon	T13S, R12E, S4	None	Picture Rocks Rd.	None	None	None	SNMW/ none	2400	X			X				Provides access into Box Canyon and Picture Rocks Wash
El Camino del Cerro	T13S, R12E, S21	28 148	El Camino del Cerro Rd.	None	None	None	SNMW/ none	2880	X			X				
El Camino de Oeste	T14S, R13E, S7	129	None	None	None	None	TMP/ Yetman Trail	2700	X			X				Greasewood Loop Trail access point
Enchanted Hills Wash	T14S, R13E, S29	24	None	None	None	None	TMP/ none	2740				X				
Greasewood Road	T14S, R13E, S28	154	Greasewood Rd. alignment	None	None	Greasewood Rd. alignment	TMP/ none	2520	X			X				South end of Greasewood Rd. via utility easement
Ina Road	T13S, R12E, S4	25	Ina Rd.	None	None	Ina Rd.	SNMW / none	2260				X				West end of Ina Rd. provides access to Picture Rocks Wash
Roger Extension at SNMW	T13S, R12E, S28	26	None	None	None	None	SNMW/ none	3140				X				
Roger Extension at TMP	T13S, R12E, S35	26 131	None	None	None	None	TMP/ none	2800	X			X				
Roger Wash	T13S, R12E, S36	26	None	None	None	None	TMP/ none	2640	X			X				

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 2 -- Eastern Tucson Mountain Foothills

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Map Code			Description of the BAP				BAP Status				Recreational Trail Uses On Public Land		COMMENTS		
	Map Code	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	Elevation	Type of Access	Map Iteration	Candidate BAP	Trail Entry Point Only	Whole Access	Foot	Horse		Mountain Bike	Road Bike
23	T12S, R12E, S32	120 133	Scenic Drive	SNMW/ none	2220	X			X		X	X			Access SNMW by means of 1/2 mile Co. ROW dirt road & Safford Peak Trail.	
24	T14S, R13E, S19	129	Unnamed	TMP / Start Pass Trail	2820		X				X	X				
25	T13S, R12E, S27	27	None	SNMW/ None	2780			X			X	X				
26	T13S, R12E, S28	141	El Camino del Cerro Rd.	SNMW Wasson Peak/ Sweetwater Trailhead	2940			X			X	X			Also known as Wasson Peak Trailhead. Access via private dirt road.	
27	T14S, R12E, S2	143	Trails End Dr.	TMP / None	2900			X			X	X				
28	T14S, R12E, S9	145	None	SNMW/ unnamed jeep road	2440				X		X	X			Accesses Picture Rocks Wash & Yuma Mine Trail.	

# TABLE 7-5 INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 3 -- Tortolita Foothills and Northwest Catalinas

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Map Code		Description of the BAP		BAP Status				Recreational Trail Uses On Public Land	COMMENTS					
	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	BAP Status									
						Trail Entry Point Only	Whole Access	Foot			Horse	Mountain Bike	Road Bike		
Cañada del Oro/ Catalina St. Park North	29	T11S, R14E, S22	2	None	Catalina State Park / none	2880		X	X						
Cañada del Oro/ Catalina State Park South	30	T11S, R14E, S5	2	Hwy 89	Catalina State Park / none	2640		X	X						
Cottonwood Wash	31	T11S, R12E, S5	32	Carpenter Ranch Rd. (Private)	Tortolita Mtn. Park / none	2460		X	X	X					Carpenter Rd. (Private) parallels Wash
Cottonwoods	32	T11S, R14E, S12	29	None	Coronado Nat. Forest / none	3200		X	X						
Crow Windmill	33	T11S, R13E, S3	37	Chalk Mine Rd.	Tortolita Mtn. Park/ Jeep Trail	3600		X	X	X					Dirt Rd. on Co. Line (Chalk Mine Road) not Co. R. O. W.
Flat Rock	34	T11S, R15E, S1	29	None	Coronado Nat. Forest / none	3580		X	X						
Harm Gate	35	T11S, R15E, S1	37	Edwin Rd	Coronado Nat. Forest / none	3560		X	X						Portions of Edwin Rd. Co. R. O. W.
Honey Bee	36	T11S, R13E, S11	33	Rancho Vistoso Blvd.	Tortolita Mtn. Park / none	3240		X	X	X					
Little Cottonwoods	37	T11S, R14E, S14	35 159 162	None	Coronado Nat. Forest / none	3080		X	X						

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 3 -- Tortolita Foothills and Northwest Catalinas

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Map Code			Description of the BAP			BAP Status				Recreational Trail Uses On Public Land		COMMENTS	
	Map Code	Legal Description	County Trail	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	Candidate BAP	Trail Entry Point Only	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Middle Gate	38	T11S, R14E, S12 29	None	None	Coronado Nat. Forest/ none	3280	X	X	X	X	X	X		
North Catalina Park	39	T11S, R14E, S22 29	None	None	Catalina State Park/ Equestrian Trail	3160	X	X	X	X	X	X		
Ruelas Canyon	40	T11S, R13E, S8 167	None	None	Tortolita Mtn. Park/ none	3180	X	X	X	X	X	X		Extension of Tortolita Foothills Trail to TORTMP
Shannon North	41	T11S, R13E, S17 33, 167	None	None	Tortolita Mtn. Park / none	3440	X	X	X	X	X	X		Extension of Como Dr. could provide rd. access, parking & equestrian staging
Sutherland	42	T11S, R14E, S23 29, 35	None	None	Catalina St. Park/Sutherland Trail	3000	X	X	X	X	X	X		
Tortolita Rd.	43	T11S, R12E, S30 167, 176	None	None	Tortolita Mtn. Park/ none	2900	X	X	X	X	X	X		Potential rd. access & parking on Tortolita Rd. alignment
Wild Burro	44	T11S, R12E, S14 36, 167	None	None	Tortolita Mtn. Park/ unnamed trail	2785	X	X	X	X	X	X		Access via Tortolita Foothills Trail off Tortolita Rd.

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 4 -- Catalina and Rincon Foothills

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Map Code		Legal Description			Map Code for Connecting County Trail			Name of Access Road			Name of Public Land & Trail Accessed			Description of the BAP			BAP Status			Recreational Trail Uses On Public Land			COMMENTS	
	Map Code	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	Description of the BAP	BAP Elevation	Established BAP	Candidate BAP	Trail Entry Point Only	Whale Access	Foot	Horse	Mountain Bike	Road Bike	BAP Elevation	Established BAP	Candidate BAP	Trail Entry Point Only	Whale Access	Foot	Horse	Mountain Bike		Road Bike
Agua Caliente Canyon	43	T13S, R16E, S16	1	Ave. de Suzernu	CNF / None	2800	X			X										X					Provides access to Agua Caliente, Milagrosa Canyons
Agua Caliente Hill North	46	T13S, R16E, S21	232	East end Roger Rd. & unnamed dirt Rd.	CNF/ jeep road	2840	X			X										X					
Agua Caliente Hill South	47	T13S, R16E, S28	219	E. end Ft. Lowell Rd. & Camino Cantil	CNF/ jeep road	2920	X			X										X					
Bear Canyon Rd.	48	T13S, R15E, N. Side S15	214	Bear Canyon Rd.	CNF/ Bear Canyon Trail	2760									X					X					
Cactus Forest	49	T14S, R16E, S. Side S8	216	Broadway Blvd.	SNME/ Unnamed	2720									X					X					
Campbell Ave.	50	T12S, R14E, S32/33	41	Campbell Ave.	CNF/ none	2979									X					X					
Canyon del Salto	51	T13S, R16E, S28	39	Redington Rd.	CNF/ none	3000											X			X					
Douglas Spring	52	T14S, R16E, S11	None	Speedway Blvd.	SNME/ Douglas Spring Trail	2740									X					X					

**TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED**  
**SUBREGION # 4 -- Catalina and Rincon Foothills**

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Map Code			Description of the BAP				BAP Status				Recreational Trail Uses On Public Land		COMMENTS			
	Map Code	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	Established BAP	Candidate BAP	Trail Entry Point Only	BAP Status			Foot		Horse	Mountain Bike	Road Bike
										Trail Access	Wide Access	Foot					
Finger Rock	T13S, R14E, N. side S3	41	Alverton Way	CNF/ Mt. Kimball Trail	3160	X				X	X						
Houghton Rd.	T13S, R15E, S15	221	Houghton Rd.	CNF/ none	3000		X			X	X						Currently not approved by U. S. Forest Service
Linda Vista	T12S, R13E, S. side S18	None	Linda Vista Blvd.	CNF/ Unnamed	2650	X				X	X						
Old Spanish	T14S, R16E, E. side S31	46	Old Spanish Trail	SNME/ Unnamed	3040		X			X	X						
Pima Canyon	T12S, R14E, S30/31	43	Magee or Skyline	CNF/ Pima Canyon Trail	2960		X			X	X						
Sabino Canyon Main Entrance	T13S, R15E, S9	None	Pantano Rd.	CNF/ Several	2725					X	X						
Saguaro NME Main Entrance	T14S, R16E, S29	48	Old Spanish Trail	SNME/ Several	3080		X										Mountain bikes & road bikes on paved loop road only
Tanque Verde Creek	T13S, R16E, E. side S2	9	None	CNF/ none	2800			X			X						

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 4 -- Catalina and Rincon Foothills

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Map Code				Description of the BAP				BAP Status				Recreational Trail Uses On Public Land		COMMENTS															
	Map Code	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	Established BAP	Candidate BAP	Trail Entry Point Only	Whole Access	Foot	Horse	Mountain Bike	Road Bike		COMMENTS														
																	Map Code	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	Established BAP	Candidate BAP	Trail Entry Point Only	Whole Access	Foot	Horse	Mountain Bike	Road Bike
Wentworth	61	T14S, R16E, E. side S8	49	Wentworth Rd.	SNME/ Unnamed	2720	X			X	X				Being considered by Cactus Forest Trail Plan Work Group of SNME.															
Wildhorse	62	T14S, R16E, S. side S3	None	Speedway Blvd.	SNME/ Unnamed	2700	X			X	X																			
Ventana Canyon	63	T13S, R15E, N. Side S6	47	Kolb Rd.	CNF/ Ventana Canyon Trail	3200				X	X																			

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 5 -- San Pedro Valley

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Map Code			Description of the BAP					BAP Status				Recreational Trail Uses On Public Land		COMMENTS	
	Map Code	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	Established BAP	Candidate BAP	Trail Entry Point Only	Wide Access	Foot	Horse	Mountain Bike	Road Bike		
																Forest Routes 654 & 32
Buehman Canyon North	64	T12S, R17E, W. side S10	None	Forest Routes 654 & 32	CNF / Brush Corral Trail	3800	X				X					
Buehman Canyon South	65	T12S, R17E, W. side S14	49	Forest Route 654	CNF / about 1 mile from Brush Corral Trail	3400	X	X			X					
Edgar Canyon	66	T13S, R17E, S. side S20	50	Forest Route 802	CNF / none	3800	X				X					CNF trails connect to this access point but are unmaintained
Pelon Spring	67	T13S, R18E, S. side S26	51	un-numbered	CNF / none	4200	X				X					
Soza Canyon/ Espiritu Canyon	68	T13S, R18E, S. side S27	52	Redington Rd.	CNF / none	4080	X	X			X					Redington Rd. provides access to within about 3 miles of this trail entry point

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 6 -- Rincon Valley and Northeast Santa Rita Mountains

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Map Code			Description of the BAP				BAP Status				Recreational Trail Uses On Public Land		COMMENTS	
	Map Code	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	Candidate BAP	Established BAP	Trail Entry Point Only	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Agua Verde Link	242	T16S, R17E, S10	242	None	CNF/None designated	3720	X		X	X	X			Currently not approved by U. S. Forest Service	
Agua Verde North Fork	243	T16S, R18E, S16	243	None	CNF/None designated	4400	X		X	X	X			Currently not approved by U. S. Forest Service	
Arrowhead	245	T16S, R17E, S11	245	Jeep Rd.	CNF/None designated	3760	X		X	X	X			Currently not approved by U. S. Forest Service	
Cienega East	55	T16S, R17E, S15	55	Marsh Station Rd.	Cienega Creek Preserve/Wash Bottom Trail	3540		X	X	X	X				
Cienega West	5	T16S, R16E, S14	5	None	Cienega Creek Preserve/Wash Bottom Trail	3200			X	X	X				
Davidson North	56	T17S, R17E, S31	56	None	Cienega Creek Preserve/Wash Bottom Trail	3460			X	X	X				
Davidson South	56	T18S, R16E, S15	56	None	CNF/None designated	4400			X	X	X				
Distillery Canyon	58	T16S, R18E, S18	58	Jeep Rd.	CNF/None designated	3840			X	X	X			Currently not approved by U. S. Forest Service	
Hidden Springs	57	T16S, R17E, S12	57	Jeep Rd.	CNF/Jeep Rd.	3800			X	X	X				

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 6 -- Rincon Valley and Northeast Santa Rita Mountains

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Description of the BAP				BAP Status				Recreational Trail Uses On Public Land				COMMENTS		
	Map Code	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	Established BAP	Candidate BAP	Trail Entry Point Only	Whole Access	Foot	Horse		Mountain Bike	Road Bike
Hope Camp	T155, R16E, S12	255	Resort Rd.	None	SNME/Proposed trail to Madrona Ranger Station	3360		X	X	X	X				
Houghton	T17S, R16E, S30	65	None	None	CNF/None designated	4120		X	X	X	X				
Madrona	T15S, R17E, S9	54, 60	None	None	SNME/Manning Camp Trail	4320		X	X	X	X			Access point is on X-9 property currently closed to public entry	
Mulberry	T18S, R16E, S15	56	None	None	CNF/None designated	4360		X	X	X	X				
Papago Springs	T15S, R17E, S33	68	None	None	CNF/Papago Springs Trail	3640		X	X	X	X				
Phoneline	T15S, R17E, S10	259	None	None	SNME/ Phoneline (abandoned) or Rincon Peak Trail	3480		X	X	X	X			Access point is on X-9 property currently closed to public entry	
Posta Quemada	T16S, R17E, S3	61	Jeep Rd.	None	CNF/None designated	3640		X	X	X	X			Currently not approved by the U.S. Forest Service	
Rincon Creek	T15S, R17E, S10	62	None	None	SNME/Rincon Peak Trail	3280		X	X	X	X			Access point is on X-9 property currently closed to public entry. Currently not approved by U.S. Forest Service	

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 6 -- Rincon Valley and Northeast Santa Rita Mountains

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Map Code		Description of the BAP				BAP Status				Recreational Trail Uses On Public Land		COMMENTS	
	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	Candidate BAP	Established BAP	Trail Entry Point Only	Whole Access	Foot	Horse	Mountain Bike		Road Bike
Rincon - Madrona		262	None	SNME/Proposed trail to Madrona Ranger Station	3420	X		X	X	X			Access point is on X-9 property; currently closed to public entry.	
Rincon South Fork		261	None	SNME/None designated	3400	X		X	X	X			Access point is on X-9 property; currently closed to public entry.	
Rocking K		263	Resort Rd.	SNME/Proposed trail to Madrona Ranger Station	3160			X		X				
The Narrows		55	Total Wreck Local	Empire-Cienega Resource Conservation Area/Cienega Creek	4020	X		X		X				
Total Wreck		63	Total Wreck Connector	Proposed Empire Mountains Park	4490			X		X	X		Jeep Rd. to Total Wreck Mine	
X-9		72	Pistol Hill Rd.	SNME/Manning Camp Trail	3360		X	X		X			Access point is on X-9 property; currently closed to public entry.	

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 7 -- Upper Santa Cruz Valley

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Description of the BAP										BAP Status			Recreational Trail Uses On Public Land		COMMENTS										
	Map Code	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	Candidate BAP	Trail Entry Point Only	Whole Access	Foot	Horse	Mountain Bike	Road Bike	BAP Status			Recreational Trail Uses On Public Land									
														Map Code	Name of Access Road			Name of Public Land & Trail Accessed	BAP Elevation	Candidate BAP	Trail Entry Point Only	Whole Access	Foot	Horse	Mountain Bike	Road Bike
Alvernon Ext.	T175, R14E, S27/28	74	Dawson Rd.	Santa Rita Exp. Range / none	2880		X		X	X						Note: Traditional use/entry but unsanctioned										
Ash Wash	T185, R11E, S7	75	None	Proposed Sierrita Mtn. Park / none	4400		X		X	X																
Bob Brown	T195, R11E, S33	81	None	Proposed Cerro Colorado Mtn. Park/ none	3800		X		X	X																
Cerro Colorados So./ Arivaca Rd.	T205, R10E, S9	82	Unnamed access Rd.	Proposed Cerro Colorado Mtn. Park / none	3680	X			X	X						Dirt Rd. on State & Private lands, no. from Arivaca Rd.										
Chino Basin	T195, R14E, S31	85	Elephant Head/ Hawk Way	CNF/ none	3580	X			X	X																
Demetrie Wash/ Sierritas	T185, R11E, S1	77	None	Proposed Sierrita Mtn. Park/ none	4600		X		X	X																
Esperanza/Tinaja Washes	T185, R11E, S13	78	None	Proposed Sierrita Mtn. Park/ none	4600		X		X	X						Access is from Tinaja Wash										
Fresnal Canyon	T175, R11E, S33	79	None	Proposed Sierrita Mtn. Park/ none	4600		X		X	X																
Helvetia Wash	T175, R14E, S25	76	None	Santa Rita Experimental Range/ none	3100		X		X	X						Note: Traditional use/entry but unsanctioned										

# TABLE 7-5. INVENTORY OF BOUNDARY ACCESS POINTS: CANDIDATES & ESTABLISHED

SUBREGION # 7 -- Upper Santa Cruz Valley

ESTABLISHED or CANDIDATE BOUNDARY ACCESS POINT	Description of the BAP				BAP Status				Recreational Trail Uses On Public Land			COMMENTS		
	Map Code	Legal Description	Map Code for Connecting County Trail	Name of Access Road	Name of Public Land & Trail Accessed	BAP Elevation	Established BAP	Candidate BAP	Trail Entry Point Only	Whole Access	Foot		Horse	Mountain Bike
Madera Canyon Rd.	T19S, R14E, S23	86	Madera Canyon Rd.	CNF/ Several trails	4060	X			X	X	X	X		
Madera Canyon West	T19S, R14E, S32	80	None	CNF / none	3750		X		X	X	X			
McGee Ranch Rd.	T17S, R11E, S36	87	McGee Ranch Rd.	Proposed Sierrita Mtn. Park / Dirt rds. & trad. use trail only	4640		X		X	X	X			Important access pt. currently
Sierritas South/ Proctor Wash	T18S, R11E, S22	81	None	Proposed Sierrita Mtn. Park/ none	4560			X	X	X	X			



# TABLE 7-6. TRADITIONAL TRAIL PRIORITIES

## SUBREGION # 1 -- West and South Tucson Mountains

Candidate Trail Name	Trail Map Code			Candidate Trail Name	Trail Map Code		
	Trail Type	Trail Priority			Trail Type	Trail Priority	
Santa Cruz River		P	1				
Black Wash		C	1				
Brawley Wash		C	1				
Saginaw Hill		C	1				
West Branch Santa Cruz River		C	2				
Prospector's Extension		C	2				
Aldon Rd. & East & West Forks		L	1				
Cardinal Trail		L	1				
Peña Wash		L	1				
Beehive Trail		L	2				
Dakota Wash		L	2				
Ironwood Link		L	2				

# TABLE 7-6. TRADITIONAL TRAIL PRIORITIES

## SUBREGION # 2 -- Eastern Tucson Mountain Foothills

Candidate Trail Name	Trail Map Code			Candidate Trail Name	Trail Map Code		
	Trail Type	Trail Priority			Trail Type	Trail Priority	
Santa Cruz River	8	P	1	Speedway Wash	140	L	3
Enchanted Hills/ West Branch Santa Cruz River	24	C	1	Trails End Wash	143	L	3
Sweetwater Wash	27	C	1	West Idle Hour Wash	144	L	3
Wild Horse Wash	28	C	1				
Picture Rocks Wash	25	C	2				
Roger Wash/ Roger Extension	26	C	2				
Greasewood Loop	129	L	1				
South Branches of East Idle Hour Wash	137	L	1				
Thirty-Sixth Street Extension	142	L	1				
Yuma Mine Trail	145	L	1				
Belmont Loop	127	L	2				
Middle Branch of East Idle Hour Wash	130	L	2				
Sweetwater Trail Road	141	L	2				
Anklam Local	126	L	3				
Cholla Wash	128	L	3				
North Fork of Roger Wash	131	L	3				
Painted Hills Wash	132	L	3				
Safford Wash	133	L	3				
San Juan Wash	134	L	3				
Silvercroft Wash	136	L	3				
South Fork Roger Wash	138	L	3				
South Sweetwater	139	L	3				

**TABLE 7-6. TRADITIONAL TRAIL PRIORITIES**

**SUBREGION # 3 -- Tortolita Foothills and Northwest Catalinas**

Candidate Trail Name	Trail Map Code			Candidate Trail Name	Trail Map Code		
	Trail Type	Trail Priority			Trail Type	Trail Priority	
		Trail Type	Trail Priority			Trail Type	Trail Priority
Cañada del Oro	2	P	1	El Camino de Mañana Wash	158	L	3
CA.P. Southern Segment	3	P	1	La Cholla East	161	L	3
Santa Cruz River	8	P	1	Scottie's Loop	164	L	3
C.A.P. Northern Segment	3	P	2	Twenty-Seven Wash	168	L	3
Catalina Park/ Flat Rock	29	C	1				
La Cholla/ Honey Bee Loop	33	C	1				
Wild Burro Wash	36	C	1				
Big Wash/Hawser to Catalina Park/ Flat Rock Trail	30	C	2				
Cottonwood Wash	32	C	2				
Cochie Wash	31	C	3				
Sausalito Wash	34	C	3				
Sutherland Wash	35	C	3				
Big Wash	156	L	1				
Cedar Breaks	157	L	1				
Golder Ranch Loop to Little Cottonwoods	159	L	1				
Tortolita Foothills Trail	167	L	1				
Hardy Wash	160	L	2				
Little Cottonwood Link	162	L	2				
Prospect Wash	163	L	2				
Shannon Extension	165	L	2				
South Lago Link	166	L	2				

**TABLE 7-6. TRADITIONAL TRAIL PRIORITIES**

**SUBREGION # 4 -- Catalina and Rincon Foothills**

Candidate Trail Name	Trail Map Code			Candidate Trail Name	Trail Map Code		
	Trail Type	Trail Priority	Trail Type		Trail Priority		
						Trail Type	Trail Priority
Agua Caliente Wash	1	P	1	Friendly Village/ Via Entrada	193	L	2
Cañada del Oro Wash	2	P	1	Orange Ave./ Tomahawk	199	L	2
Pantano Wash	5	P	1	Pontatoc/ Valley View/ Flecha Caida	201	L	2
Rillito River	6	P	1	Tanuri/ Craycroft	208	L	2
Santa Cruz River	8	P	1	Carmack Wash	183	L	3
Tanque Verde Wash	9	P	1	Casas Adobes Wash	185	L	3
Finger Rock Wash	41	C	1	Coronado Ridge Wash	187	L	3
Pima Wash	43	C	1	Craycroft Wash	188	L	3
Shurban Loop	46	C	1	Flecha Caida Wash	190	L	3
Ventana Canyon Wash	47	C	1	Forty Niners Wash	191	L	3
Pine Tree Wash	44	C	2	Hacienda del Sol Wash	194	L	3
Sabino Creek	45	C	2	Harrison-Houghton Link	195	L	3
Caliente Hill Wash	38	C	3	Hidden Hills Wash	196	L	3
Canyon del Salto	39	C	3	Las Lomitas Wash	197	L	3
Esperero Wash	40	C	3	Melpomene Loop	198	L	3
Geronimo Wash	42	C	3	Pegler Wash	200	L	3
Campbell/Camino Real	182	L	1	Pontatoc Wash	202	L	3
Casas Adobes Loops	184	L	1	Race Track Wash	203	L	3
Escalante Wash	189	L	1	Reyes Wash	204	L	3
Freeman/ Del Este (or Reyes Wash)	192	L	1	Robb Wash	205	L	3
Agua Caliente Wash/ Tanque Verde Wash Link	181	L	2	Rolling Hills Wash	206	L	3
Cloud Wash and Ridge	186	L	2	Spanish Trail Wash	207	L	3





# TABLE 7-6. TRADITIONAL TRAIL PRIORITIES

## SUBREGION # 6 -- Rincon Valley and Northeast Santa Rita Mountains

Candidate Trail Name	Trail Map Code			Candidate Trail Name	Trail Map Code		
	Trail Type	Trail Priority			Trail Type	Trail Priority	
		Trail Type	Trail Priority			Trail Type	Trail Priority
Pantano Wash	4	P	1	Davidson Local	247	L	2
Flato/Franco Wash System	5	P	2	Agua Verde North Fork	243	L	3
Chimenea Creek	54	C	1	Andrada Ranch Link	244	L	3
Davidson Canyon	56	C	1	Arrowhead	245	L	3
Lower Agua Verde Creek & Powerline Trail	58	C	1	Garrigans East	249	L	3
Monument Boundary Trail	60	C	1	Gas-power East	251	L	3
Cienega Creek	55	C	2	Gas-power Middle	252	L	3
Rincon Creek	62	C	2	Gas-power West	253	L	3
Total Wreck Wash & Trail	63	C	2	Hope Camp	254	L	3
Hidden Springs	57	C	3	Hope Camp East Loop	255	L	3
Mescal Arroyo	59	C	3	North Coyote	258	L	3
Posta Quemada	61	C	3	Phoneline Link	259	L	3
Agua Verde Link	242	L	1	Rincon Creek South Fork	261	L	3
Davidson Loop	248	L	1	Rincon-Madrona Link	262	L	3
Mt. Fagan East Loop	256	L	1	Sahuarita-Mt. Fagan Link	264	L	3
Mt. Fagan West Loop	257	L	1	Thunderhead Trail	265	L	3
Rocking K	263	L	1	Twin Tanks	267	L	3
Total Wreck Local	266	L	1	Upper Agua Verde Creek	268	L	3
Coyote Wash	246	L	2				
Garrigans Loop	250	L	2				
Red Hill Ranch Road	260	L	2				
Vail Loop	269	L	2				

**TABLE 7-6. TRADITIONAL TRAIL PRIORITIES**

**SUBREGION # 7 -- Upper Santa Cruz Valley**

Candidate Trail Name	Trail Map Code			Candidate Trail Name	Trail Map Code		
	Trail Type	Trail Priority			Trail Type	Trail Priority	
Santa Cruz River Subregion #7 North Reach	8	P	1	Well Trail	291	L	3
Santa Cruz River South of Elephant Head Reach	8	P	2	West Madera Loop	293	L	3
Alvernon Extension	74	C	1				
Madera Canyon Wash	80	C	1				
Dawson Rd./Helvetia Wash/ Jane's Wash Loop	76	C	2				
Fresnal Wash	79	C	2				
Proctor Wash/ Bob Brown Lateral	81	C	2				
Ash Wash	75	C	3				
Demetrie Wash	77	C	3				
Esperanza Wash	78	C	3				
Arroyo #17	281	L	1				
Canoa West Loop	282	L	1				
Cattle Loop	283	L	1				
Tailings Pond Rd.	290	L	1				
El Toro Rd. to Dawson Rd.	284	L	2				
Head East Trail	285	L	2				
Helmet Peak Loops	286	L	2				
West Loop-Green Valley/ Arroyo #7	292	L	2				
West Toro	294	L	2				
Landing Strip	287	L	3				
Pig Farm	288	L	3				
Powerline Loop	289	L	3				

# TABLE 7-6. TRADITIONAL TRAIL PRIORITIES

SUBREGION # 8 -- Metropolitan Tucson

Candidate Trail Name	Trail Map Code			Candidate Trail Name	Trail Map Code		
	Trail Type		Trail Priority		Trail Type		Trail Priority
Flato/ Franco Wash System	4	P	1				
Pantano Wash	5	P	1				
Rillito River	6	P	1				
Santa Cruz River	8	P	1				
Alamo Wash	309	L	1				
Arcadia Wash	310	L	1				
Arroyo Chico	311	L	1				
Atterbury Wash	312	L	1				
Airport Wash	308	L	2				
Christmas Wash	313	L	2				
Rodeo Wash	319	L	2				
Rose Hill Wash	320	L	2				
Citation Wash	314	L	3				
Earp Wash	315	L	3				
High School Wash	316	L	3				
Julian Wash	317	L	3				
Kinnison Wash	318	L	3				

# TABLE 7-7. BOUNDARY ACCESS POINT PRIORITIES

## SUBREGION # 1 -- West & South Tucson Mountains

Candidate Access Point	Trail Map Code			Candidate Access Point	Trail Map Code		
		Access Point Priority				Access Point Priority	
			Public Land				Public Land
Aldon Road	1	1	Tucson Mountain Park				
Naomi Road	9	1	Tucson Mountain Park				
Prospector	12	1	Tucson Mountain Park				
CAP/San Joaquin	3	2	Tucson Mountain Park				
Fort Lowell	5	2	Saguaro National Monument West				
Manville	8	2	Saguaro National Monument West				
Picture Rocks	11	2	Saguaro National Monument West				
Calle Anasazi	2	E	Tucson Mountain Park				
CAP Tunnel (Starr Pass West)	4	E	Tucson Mountain Park				
Gas Pipeline	6	E	Tucson Mountain Park				
Golden Gate	7	E	Tucson Mountain Park				
Old Ajo Way	10	E	Tucson Mountain Park				
Sarasota Boulevard	13	E	Tucson Mountain Park				

# TABLE 7-7 . BOUNDARY ACCESS POINT PRIORITIES

## SUBREGION # 2 -- Eastern Tucson Mountain Foothills

Candidate Access Point	Trail Map Code			Candidate Access Point	Trail Map Code		
	Access Point Priority	Public Land	Access Point Priority		Access Point Priority	Public Land	
							Public Land
Box Canyon		1	Saguaro National Monument West				
Enchanted Hills Wash		1	Tucson Mountain Park				
Sweetwater Trailhead		1	Saguaro National Monument West				
Yuma Mine		1	Saguaro National Monument West				
El Camino del Cerro		2	Saguaro National Monument West				
Greasewood Road		2	Tucson Mountain Park				
Ina Road		2	Tucson Mountain Park				
Roger Extension at Saguaro National Monument West		2	Saguaro National Monument West				
Roger Extension at Tucson Mountain Park		2	Tucson Mountain Park				
Roger Wash		2	Tucson Mountain Park				
Scenic Drive		2	Tucson Mountain Park				
Sweetwater Wash		2	Saguaro National Monument West				
Trails End Wash		2	Tucson Mountain Park				
El Camino de Oeste		E	Tucson Mountain Park				
Starr Pass East		E	Tucson Mountain Park				

# TABLE 7-7. BOUNDARY ACCESS POINT PRIORITIES

## SUBREGION # 3 -- Tortolita Foothills and Northwest Catalinas

Candidate Access Point	Trail Map Code			Candidate Access Point	Trail Map Code		
	Access Point Priority	Public Land	Access Point Priority		Access Point Priority	Public Land	
							Public Land
Cañada del Oro/ Catalina State Park North	29	1	Catalina State Park	Tortolita Road	43	2	Tortolita Mountain Park
Cañada del Oro/ Catalina State Park South	30	1	Catalina State Park				
Cottonwoods	32	1	Coronado National Forest				
Crow Windmill	33	1	Tortolita Mountain Park				
Flat Rock	34	1	Coronado National Forest				
Harm Gate	35	1	Coronado National Forest				
Honey Bee	36	1	Tortolita Mountain Park				
Little Cottonwoods	37	1	Coronado National Forest				
Middle Gate	38	1	Coronado National Forest				
North Catalina Park	39	1	Catalina State Park				
Ruelas Canyon	40	1	Tortolita Mountain Park				
Shannon North	41	1	Tortolita Mountain Park				
Wild Burro	44	1	Tortolita Mountain Park				
Cottonwood Wash	31	2	Tortolita Mountain Park				
Sutherland	42	2	Catalina State Park				

# TABLE 7-7. BOUNDARY ACCESS POINT PRIORITIES

## SUBREGION # 4 -- Catalina and Rincon Foothills

Candidate Access Point	Trail Map Code			Candidate Access Point	Trail Map Code		
	Access Point Priority	Public Land	Access Point Priority		Access Point Priority	Public Land	Access Point Priority
Agua Caliente Canyon	45	1	Coronado National Forest	Sabino Canyon Main Entrance	58	E	Coronado National Forest
Old Spanish	58	1	Saguaro National Monument East	Saguaro National Monument East	59	E	Saguaro National Monument East
Pima Canyon	57	1	Coronado National Forest	Wentworth	61	E	Saguaro National Monument East
Ventana Canyon	56	1	Coronado National Forest	Wild Horse	62	E	Saguaro National Monument East
Agua Caliente Hill North	46	2	Coronado National Forest				
Agua Caliente Hill South	47	2	Coronado National Forest				
Canyon del Salto	53	2	Coronado National Forest				
Houghton	44	2	Coronado National Forest				
Tanque Verde Wash	60	2	Coronado National Forest				
Bear Canyon	48	E	Coronado National Forest				
Cactus Forest	49	E	Saguaro National Monument East				
Campbell Avenue	50	E	Coronado National Forest				
Douglas Spring	52	E	Saguaro National Monument East				
Finger Rock	53	E	Coronado National Forest				
Linda Vista	55	E	Coronado National Forest				

# TABLE 7-7 . BOUNDARY ACCESS POINT PRIORITIES

## SUBREGION # 5 -- San Pedro Valley

Candidate Access Point	Trail Map Code			Candidate Access Point	Trail Map Code		
	64	Access Point Priority			65	Access Point Priority	
		1	Public Land			2	Public Land
Buehman Canyon North	64	1	Coronado National Forest; Santa Catalinas				
Edgar Canyon	66	2	Coronado National Forest; Santa Catalinas				
Pelon Spring	67	2	Coronado National Forest; Rincon Mts.				
Buehman Canyon North	65	2	Coronado National Forest; Santa Catalinas				
Soza/ Espiritu Canyon	68	2	Coronado National Forest; Rincon Mts.				

# TABLE 7-7. BOUNDARY ACCESS POINT PRIORITIES

## SUBREGION # 6 -- Rincon Valley and Northeast Santa Rita Mountains

Candidate Access Point	Trail Map Code			Candidate Access Point	Trail Map Code		
	Access Point Priority	Public Land	Access Point Priority		Public Land		
						Access Point Priority	Public Land
Cienega East		1	Cienega Creek Natural Preserve	Houghton		2	Coronado National Forest
Cienega West		1	Cienega Creek Natural Preserve	Phoneline		2	Saguaro National Monument East
Davidson North		1	Cienega Creek Natural Preserve	Posta Quemada		2	Coronado National Forest
Davidson South		1	Coronado National Forest	Rincon Creek		2	Saguaro National Monument East
Hidden Springs		1	Coronado National Forest	Rincon-Madrona		2	Saguaro National Monument East
Hope Camp		1	Saguaro National Monument East	Rincon South Fork		2	Saguaro National Monument East
Madrona		1	Saguaro National Monument East	The Narrows		2	Empire-Cienega Resource Conservation Area
Mulberry		1	Coronado National Forest	X-9		2	Saguaro National Monument East
Papago Springs		1	Coronado National Forest				
Rocking K		1	Saguaro National Monument East				
Total Wreck		1	Proposed Empire Mountains Park				
Agua Verde Link		2	Coronado National Forest				
Agua Verde North Fork		2	Coronado National Forest				
Arrowhead		2	Coronado National Forest				
Distillery Canyon		2	Coronado National Forest				

# TABLE 7-7 . BOUNDARY ACCESS POINT PRIORITIES

## SUBREGION #7 -- Upper Santa Cruz Valley

Candidate Access Point	Trail Map Code			Candidate Access Point	Trail Map Code		
		Access Point Priority				Access Point Priority	
			Public Land				Public Land
Alvernon Extension		1	Santa Rita Experimental Range				
Cerro Colorados South (Arivaca Road North)		1	Cerro Colorado Mountain Park				
Chino Basin		1	Coronado National Forest				
McGee Ranch Road		1	Sierrita Mountain Park				
Ash Wash/ Sierritas		2	Sierrita Mountain Park				
Bob Brown/ Cerro Colorados		2	Cerro Colorado Mountain Park				
Demetrie Wash/ Sierritas		2	Sierrita Mountain Park				
Esperanza/ Tinaja washes		2	Sierrita Mountain Park				
Fresnal Canyon		2	Sierrita Mountain Park				
Helvetia Wash		2	Santa Rita Experimental Range				
Madera Canyon West		2	Coronado National Forest				
Sierritas South/ Proctor Wash		2	Sierrita Mountain Park				
Madera Canyon Road		E	Coronado National Forest				



## CHAPTER 8

### TRAIL IMPLEMENTATION METHODS

#### 8.1 Legal Overview

In developing this plan, the focus has been on creating an integrated and logical trails system that would meet the needs and preferences of trail users. In the implementation of such a plan, land ownership becomes of paramount importance. The land in Eastern Pima County is a mosaic of public and private lands, with overlays of various easements and rights-of way. The trails inventoried in the plan criss-cross this mosaic of land ownership.

Trail users are no more than trespassers if they do not have the legal right to be on the property that they are crossing. In order to implement a trail system, it will be necessary for Pima County or other cooperating jurisdictions to acquire the legal right for public trail access to each parcel of land included in the formal trail system. The methods used to accomplish this will vary depending upon who owns the property and the current and proposed uses of the property.

A number of popular traditional trails have been closed in recent years because of landowners' security concerns, the desire for exclusiveness in new developments, and growing landowner and insurance company reservations about liability risks. Trail users often believe that they should have the right of continued access to a trail that they have used and come to rely upon over a number of years.

What these trail users would like to establish is a "prescriptive trail easement"

across a landowner's property. In legal terms, this easement is the right to use the property of another inconsistent with the owner's rights and is acquired by open and notorious, adverse, exclusive and continuous use for the statutory period.

This legal definition has a number of practical requirements that are impossible for most trail users to meet. One is that the use of the trail cannot have been with the permission of the property owner and this non-permissive use must have been uninterrupted for at least ten years. A second requirement is the trail user's access to the trail must have been "exclusive;" it cannot have been shared with other, unidentified members of the public. Only rarely can these requirements be met, and even then the trail user's rights will probably have to be litigated in court.

This means that trail users cannot depend upon historical use of a trail to insure their continued access to that trail. Rather, the continued right of public access to a trail must be acquired.

#### 8.2 Responsibility for Trail-Related Injuries

Trail planning must consider where responsibility lies for injuries to persons or property that occur as a result of trail use. The private and governmental entities and persons involved in trail implementation and maintenance have ongoing trail management responsibilities. If these responsibilities are not met and persons or property are injured as a result, the injured parties may seek to recover liability damages from the landowner or trail manager.

The three most apparent persons or entities with potential responsibility for safe trail use are the trail user, the landowner, and the county or other entity that maintains the trail. The extent of responsibility, and therefore the potential

liability for failure to meet that responsibility, can be established in three different ways: by contract, by statute, and by court-made law. In general, responsibility set by contract or agreement supercedes that set by statute, which in turn supercedes principles of responsibility under court-made or common law.

### **8.2.1 Common Law Responsibility**

Judge-made law provides guidance about the respective responsibilities of trail users, landowners and the trail operator. To the extent that the responsibilities for injuries in a particular situation have not been spelled out in contract or by statute, then there are certain rules that a court will apply in assigning responsibility and determining liability.

Trail users have the responsibility for using trails in a reasonable and lawful way so as to not cause harm to themselves or others, or to the property in and around the trail. If a trail user acts in an unreasonable manner causing injury to him/herself or others, the trail user may be found liable for those injuries under tort law. When a trail user engages in unpermitted behavior, such as detouring off a marked trail, he or she may also be responsible for any resulting injury. Even if the landowner or trail operator is found to be partly liable for injuries to a trail user, the trail user may be found to have also been at fault, thereby reducing his or her potential recovery.

Under the common law, landowners have different responsibilities toward people who are trespassing on their land than to people who have permission to be there. With respect to trespassers, the landowner is obligated only to warn against known dangers, but not to take affirmative steps to make the property safe.<sup>1</sup> The landowner's behavior in

causing harm to the trespasser must be intentional or malicious rather than merely negligent.

For people invited onto the property, however, the landowner is obligated to maintain his or her property in a reasonably safe condition. This standard of care is much more onerous to the landowner because it includes an obligation to discover and correct or warn of hazards which the landowner should reasonably foresee as endangering a trail user. It therefore imposes on the landowner an affirmative duty to guard against unsafe conditions. The landowner is not responsible, however, for conditions which are open and obvious and avoidable by the trail user. Moreover, the landowner's obligations to the trail user change if the trail user trespasses onto adjoining land off the trail.

Governmental entities, whether Arizona State Parks, State Land Department, an agency of the federal government or Pima County, are held to these same standards of care where the public is invited to use public recreational areas. Therefore, these governmental entities assume responsibility for maintaining the trails under their jurisdiction in a reasonably safe condition for trail users. Pima County will be involved with trails both as a landowner for many of the trails, and as the overall trail operator. Good trail design and maintenance will be essential to the county's ability to meet its responsibilities and avoid unnecessary risks of liability to trail users and property owners.

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the obligation to correct artificial conditions on the land that pose a risk of harm to young children that might be attracted onto the land by the harmful condition. This exception should not pose a problem for trails left essentially in their natural state because the risk of harm must come from an artificial condition.

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<sup>1</sup> The only exception to this is the attractive nuisance doctrine which imposes on landowners

## 8.2.2 Statutory Responsibility

A second way in which responsibility and potential liability may be determined is by statute. Arizona, along with almost all other states, has enacted a recreational users' liability statute.<sup>2</sup> This statute is intended to encourage landowners to open their lands for recreational use by reducing their responsibility.

The recreational users liability statute changes the standard of care owed to recreational users so that it is the same as that which would be owed to trespassers. That is, the landowner's responsibility is essentially limited to warning about known dangerous conditions. The landowner is also responsible for not

maintaining an "attractive nuisance" that creates an unreasonable risk of injury to small children. Under the statute, the landowner does not owe an affirmative duty to recreational users to maintain the land in a safe condition.

This statute does not provide absolute immunity from liability, nor does it prevent a landowner from being sued. Where the statute is found to apply, however, it will make it more difficult for the injured party to establish liability on the part of the landowner. Therefore the statute serves to reduce the risks associated with opening up private land for public recreational use.

There are questions about the applicability of the recreational users liability statute to a suburban/urban trail system. The statute defines the land covered by its protection as "agricultural, range, mining or forest lands, and any other similar lands which by agreement are made available to a recreational user...." Much of the property in Eastern Pima County on which trails are proposed does not fall clearly within this definition. Although it could be argued that the Pima County trail situation is covered by the part of the definition that includes "any other similar lands," it will be up to a court to make that determination. A preferable route would be to have the Legislature amend the statute to make it clear that it applies to a suburban/urban trail system and to make it explicitly apply to public as well as private landowners and easement holders.

<sup>2</sup> A.R.S. §33-1551. Duty of owner, lessee or occupant of premises to recreational users; liability; definitions.

A. An owner, lessee or occupant of premises does not:

1. Owe any duty to a recreational user to keep the premises safe for such use.

2. Extend any assurance to a recreational user through the act of giving permission to enter the premises that the premises are safe for such entry or use.

3. Incur liability for any injury to persons or property caused by any act of a recreational user.

B. As used in this section:

1. "Premises" means agricultural, range, mining or forest lands, and any other similar lands which by agreement are made available to a recreational user, and any building or structure on such lands.

2. "Recreational user" means a person to whom permission has been granted or implied without the payment of an admission fee, or other consideration to enter upon premises to hunt, fish, trap, camp, hike, ride, swim or engage in similar recreational pursuits. The purchase of a state hunting, trapping or fishing license is not the payment of an admission fee or other consideration as provided in this section.

C. This section does not limit the liability which otherwise exists for maintaining an attractive nuisance, or for willful or malicious failure to guard or warn against a dangerous condition, use or activity.

## 8.2.3 Contractual Responsibility

Contracts can be used to clarify responsibilities and liabilities of the participating parties. For example, one party to the contract can agree to hold the other party harmless from liability under specified conditions. This kind of "indemnity agreement" shifts responsibility from one party to another as part of a negotiated contract. This is

perhaps easiest to understand by thinking of an insurance contract. With a homeowner's liability policy, for example, the insurance company agrees to assume responsibility for injuries to visitors to one's home even if such injuries were caused by the owner's negligence. As long as the conditions of the policy are met, if the homeowner is found to be liable, the insurance company will pay the injured person.

The cost of an insurance contract is based, among other things, on an assessment of the risks for which the insurance company has assumed responsibility. If insured property is opened up for public trail use, the insurance company is likely to be concerned about increased liability exposure and to refuse coverage for trail-related injuries. As a result, in order for a private landowner to agree to deed a trail easement across his or her property to the county, it may be necessary for the county to agree to hold that landowner harmless from liability for trail-related injuries. In that case the county would be assuming responsibility for trail-related injuries occurring on the landowner's property.

Contracts may also be used to shift responsibility to the trail user in certain private trail situations. Where access to a trail is closely regulated, a trail user can be required to sign a waiver agreement in which he or she agrees to assume responsibility for any injuries occurring on the trail. In a public trail situation, however, that kind of waiver would neither be feasible nor advisable.

## 8.3 Implementation Methods

There are a number of possible methods for implementing trails as part of a formal trail system. The type of method that should be considered in implementing a particular trail will vary depending upon the status of the land in question. Table

8-1 summarizes the various methods of trail implementation that may be used for different kinds of land.

### 8.3.1 Designation of County Rights-of-Way as Trails

Rights-of-way that are already in public ownership represent important opportunities for trail implementation. These rights-of-way, which are held by the county either for transportation or flood control purposes, are linear corridors often well suited to trail uses. To the extent these rights-of-way are already in public ownership, the primary implementation issues will be related to management and safety concerns.

#### Road Rights-of-Way

While law permits the use of roadways by pedestrians, bicyclists and equestrians, it does not confer any preferred status on such uses. Cooperation with transportation planners is essential in identifying, enhancing and preserving trail opportunities along roadways.

Hikers, equestrians and bicyclists are authorized by state law to use roads and road rights-of-way<sup>3</sup>, with the exception of limited-access highways such as I-10, Kino Parkway, Golf Links Road, and Houghton Road. Therefore, special ordinances or policies are not required to permit access to road rights-of-way by trail users. In almost all cases, roads and road rights-of-way are owned by governmental entities and may be included within the trail system without

<sup>3</sup> A.R.S. § 28-796 provides that pedestrians are to use sidewalks if they are available and if not to walk on the left side of the roadway or its shoulder facing traffic. A.R.S. § 28-625 provides that every person riding an animal upon a roadway is subject to the same general rights and duties as drivers of motorized vehicles. A.R.S. §28-812 provides that bicyclists are subject to the same rights and duties, with certain exceptions, as drivers of motorized vehicles.

having to deal with private property owners. Even in those few instances where a road right-of-way is established by easement across private property rather than outright governmental ownership, the authorized uses of such an easement would necessarily include use by hikers, equestrians and bicyclists.

Therefore, the issues to be addressed in including road rights-of-way in a trail system are primarily spatial and design issues. The width of rights-of-way can vary dramatically depending on when the road was established and many other factors. A typical right-of-way for a two lane county road is 60 feet, with 22 to 24 feet of pavement, 8 feet for a distressed vehicle lane and an additional 12 feet making up a 20-foot "clear zone." The clear zone can contain signs, buried utilities and landscaping features.

Although these components need not be incompatible with use of the clear zone by hikers and equestrians, certain landscaping features could impede easy passage, particularly by equestrians.

In 1986, the Pima County Board of Supervisors adopted a public roads ordinance<sup>4</sup> that sets specific standards and procedures for implementing future elements in the regional transportation plan. This ordinance provides for specific consideration of pedestrian, equestrian and bicycle uses of road rights-of-way in the design and implementation of road projects authorized in the May, 1986 bond issue. To the extent these specific road projects include trail segments from the Trail System Master Plan, this 1986 ordinance will help to insure that trail needs are taken into account by Pima County's Department of Transportation and Flood Control District.

Many of the trails on road rights-of-way identified in this plan, however, occur along existing roads for which no major

improvements are planned. For these roads it will be necessary to determine if there are existing design or spatial limitations that mitigate against their inclusion in a formal trail system. For example, such conditions as dangerous intersections, steeply sloping shoulders and impaired visibility associated with certain roads might make them unsuitable for use by equestrians or hikers.

Although hikers, equestrians and bicyclists may have the legal right to use most roadways, liability concerns will prevent the county from including unsuitable road rights-of-way in the designated trail system. Roadways that are too narrow or are poorly designed for safe equestrian, pedestrian and/or bicycle use should not be included in a formal trail system that provides official sanction for such uses.

It is also important to note the primary purpose of all roadways is for use by motorized vehicles. Trail uses and needs are at best secondary to the demands of motorized vehicles. Therefore, even sanctioned trails in road rights-of-way may be impaired or even lost during road improvements. For that reason it is important that design elements permitting continued trail use be developed and incorporated in connection with road construction. For example, equestrian needs can be accommodated in the design of road intersections with the use of such features as culverts large enough to accommodate horses. Landscaping elements can be positioned to provide buffers for pedestrians and equestrians without impeding their forward movement.

### **Flood Control Rights-of-Way**

Most of the trails identified in the Trail System Master Plan are in ephemeral washes that are dry most of the year. Because of flood hazards, washes meeting certain specifications may be regulated as floodways subject to restrictions on use and development. County law authorizes that floodways

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<sup>4</sup> Pima County Ordinance No. 1986-189.

may be used for private and public recreational uses, including hiking and horseback riding trails.<sup>5</sup> Therefore, floodways are attractive candidates for inclusion in the trail system.

Public use of floodways for trails will require either public ownership of the floodway or some kind of agreement with the private property owner. A number of floodways are in public ownership because the Pima County Flood Control District has been actively acquiring flood control rights-of-way for a number of years. These have been acquired both as dedications in connection with subdivision and rezoning approval and through outright purchase. Floodways owned by the flood control district or the county could be made available for trail use subject to safety concerns or other conflicting uses associated with particular parcels. It should be noted that the primary purpose of such floodways is for flood control and that trail use must be subordinate to that purpose.

Certain flood control rights-of-way are also held by the flood control district or county as easements across private property. Permissible uses of these rights-of-way would have to be determined on a case-by-case basis from the language of the document creating the easement. In most cases, existing flood control easements will probably not encompass public trail access as a permitted use. In those instances, new or expanded easements will have to be acquired from the landowner or some other method employed to allow public access for trail purposes. As new flood control easements are acquired by the county it will be important that public trail access be included as a permitted use wherever possible.

## **Utility Rights-of-Way**

The rights-of-way for gas and electric utility lines are similar to road and flood control rights-of-way in that they are linear corridors that may offer important trail opportunities. However, because they are in private ownership, the methods for implementing trails in these rights-of-way will differ from those discussed above.

Utility rights-of-way are usually easements acquired by the utility company for the purpose of constructing, operating, inspecting and repairing its gas or electric lines and associated facilities. In some cases utility rights-of-way are owned in fee by the utility. The type of ownership of these utility rights-of-way will affect the ease with which they can be implemented as trails.

The fact that trail use by the public does not generally conflict with the purposes of utility easements is important. Utility lines are usually buried or high overhead leaving the area within the right-of-way, often including a maintenance road, free most of the time for hikers, equestrians and bicyclists. The local utility representatives with whom we spoke were generally supportive of trails within their rights-of-way, assuming proper signage and maintenance by the county. For those utility rights-of-way owned in fee, the county will only have to work with the utility company in implementing the trail.

However, for those utility rights-of-way that are easements, the process will be much more cumbersome because the underlying property owners will have to be involved. Utility easements are unlikely to be drafted in a way to include public trail access as a permitted use of the easement. Therefore, in order to implement a trail in a utility easement it will be necessary to acquire a new or additional grant from the property owner. To further complicate the situation, there are likely to be a number of different

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<sup>5</sup> Pima County Code Chapter 16.26.010 (C) and Pima County Floodplain And Erosion Hazard Management Ordinance 1988-FC2.

easements and property owners along a stretch of utility right-of-way.

These property owners, and utility easement holders, will have the same concerns about risks of liability as other landowners from whom the county seeks to acquire easements for public trail use. The county will probably have to provide some form of protection from liability for these landowners and utility easement-holders in order to acquire trail easements. In the case of utility rights-of-way, the county will not have the option of purchasing fee ownership in lieu of indemnifying the property owners.

In some cases it may be easier for the county to negotiate a license agreement with the property owner of a utility right-of-way rather than to acquire a trail easement. As discussed below, licenses are usually discouraged as a method of implementing trails because of their fragile and temporary nature. However, in the case of a utility corridor which is not suitable for development or other uses not compatible with trail use, a license agreement may be appropriate.

The Central Arizona Project right-of-way represents a very special opportunity for developing a trail in a utility corridor. Pima County and the United States Bureau of Reclamation have already entered into an agreement for a county trail along a 50-mile stretch of the Central Arizona Project's Tucson Aqueduct. Pima County and the Bureau of Reclamation have agreed to jointly prepare a development and management plan for the trail. The county will be responsible for constructing, operating and maintaining the trail, although it is anticipated that there will be some federal cost-sharing in construction of the recreational facilities.

Although the trail agreement between the county and United States is an important first step, it in no way assures that the funds will ever be appropriated and used to construct and operate the ambitious trail contemplated in the agreement. As

an interim measure, it might be advisable for the county to investigate the possibility of obtaining the Bureau of Reclamation's permission for trail users to use the reserved trail right-of-way along the Tucson Aqueduct until such time as the actual trail is constructed.

### **8.3.2 Dedication During Rezoning**

As shown in Table 8-1, this implementation method is available only for land for which rezoning or subdivision approval is sought from the county by a private landowner.<sup>6</sup> If potential trails are identified on such land, dedication of trails during the subdivision or rezoning process is a very desirable implementation method for the county because it does not require the expenditure of public funds for trails acquisition.

The most common use of the method will be in cases where a developer is seeking rezoning for a large tract of undeveloped land. Rezoning dedication of trails may also be used in situations where land has already been developed but subdivision approval or rezoning to higher densities is sought by one or more of the landowners. In the latter situation, the parcels of land will be smaller and effective use of this method more complicated.

Under applicable law, Pima County has authority to require dedication of rights-of-way from developers for public trails.<sup>7</sup> In order to utilize that authority most effectively, the county should have a local ordinance providing for proposed trail

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<sup>6</sup> The county cannot require dedication of trails by public landowners.

<sup>7</sup> This dedication may be in fee simple or it may be in the form of a trail easement. For the reasons discussed in sections 8.3.3 and 8.3.4 below, fee simple dedication is preferable to dedication of an easement.

placement. As a practical matter, the county must also have staff that is knowledgeable about trail requirements and a Board of Supervisors that is committed to implementation of a trail system.

The planning process is critical to the successful implementation of the trail system. The Trail System Master Plan will provide the information necessary for trails to be included in area plans and ultimately in specific plans and rezonings. It will also help to insure that county planning staff will identify those trails that need to be acquired at the time new subdivisions and rezonings are approved. In the past, a number of trail opportunities have been lost because they were not identified in any county ordinance or plan. Even those trail opportunities identified in the 1976 Trail Access Plan were sometimes overlooked or ignored in connection with related rezonings and subdivisions. Both a comprehensive trail ordinance and the resolve to actually implement it will be required to avoid those problems in the future.

However, just because a trail is identified in the county's trail ordinance does not automatically mean that a developer can be required to dedicate it to the county. Constitutional limits are imposed on the power of government to make regulatory exactions. The takings clause of the Fifth Amendment to the United States Constitution prohibits the taking of private property for public use without just compensation. That means that if a land-use regulation or required exaction is too extreme it may be found by the court to be a taking for which the public must pay the landowner.

Several factors are considered by courts in determining whether a regulatory exaction is a justified exercise of the government's police powers or is instead a taking of private property for which compensation must be paid. First, courts look to whether the exaction substantially advances a legitimate public purpose.

The provision of recreational trails will certainly be viewed as a legitimate public purpose, although not as compelling a public purpose as flood control or roads. Whether the legitimate purpose of public trail access is substantially advanced will depend upon the particular location and characteristics of the trail sought to be acquired.

Another important factor considered by the courts is whether the rezoning or development for which approval is sought will create a burden commensurate with the exaction being imposed. In other words, the adverse effects likely to be created by the proposed development, such as loss of trail access and increased traffic on local trails, must be logically related to what the developer is being required to provide in the form of dedicated trails.

In most cases, if the county requires a developer to dedicate a public trail in connection with approving a new subdivision or rezoning, a "takings" claim will not arise. Developers are anxious to do what is necessary, within reason, to gain approval for their projects. Since many trails will be in washes already set aside for flood control purposes, the additional dedication for public trail access will not be particularly burdensome. Moreover, as more trails are successfully implemented in the county, the requirement for additional trails in new developments may come to be regarded as a development amenity rather than as an imposition. Nevertheless, it is important to bear in mind that the county's ability to require the dedication of public trails from land developers is not unlimited.

### **8.3.3 Acquisition of Fee Simple Ownership**

Trail acquisition methods will vary depending upon who owns the land. Most of the trails in this trails plan are on private property and will have to be acquired from those individual

landowners. But even where the proposed trail property is already governmentally owned, the right of public trail access will depend upon which governmental entity owns it.

State trust lands, for example, must be regarded as essentially the same as private property even though they are under state control. That is because the state holds these lands in trust for the benefit of certain named public beneficiaries such as the common schools, the prisons, and the state universities. The Arizona State Land Department is required under state and federal law to sell or lease those lands at public auction for no less than fair market value. That means that the State Land Department cannot manage trust lands to benefit the public for recreational or other purposes, but instead must achieve the highest monetary return for the trust beneficiaries. Therefore, in implementing trails on state trust lands, the county will be required to provide adequate compensation to the trust for the use of the land just as it would have to with a private landowner. The county will also have to deal with conflicts that may arise between trail use on trust land it purchases and the adjoining trust land for which there are grazing, mineral, or commercial leases in effect.

Outright county ownership is preferable to other means of obtaining public access for trail use. Not only does it give the county the greatest measure of control over the trail, but also it is the best way to insure continued public access into the future. As discussed above, dedication of a trail during rezoning is a low-cost way for the county to obtain fee ownership of trails, but it is available only where the landowner has come to the county seeking a rezoning. Donation is another low-cost means for the county to acquire land for trails if there is a landowner desiring to donate his or her property to the county for trail use. In most instances, however, county acquisition of land for trails will have to be done by purchase, exchange or condemnation.

### **Land Purchase**

There is no question that the county is authorized to expend public monies for the acquisition of trails. ARS §11-932 authorizes the county to purchase, or enter into contracts to purchase real property for public park purposes, including trails. The county is also authorized to purchase land for the related purposes of open space preservation and flood control management.

The multi-purpose nature of many of the trails will be important to the county's ability to purchase them. Although the county may expend general funds or levy taxes for the acquisition and maintenance of parks, there are many other needs and agencies vying for those county dollars. Therefore, in many cases it may be easier to include a trail as a secondary use of land purchased for the primary purpose of flood control or open space acquisitions.

### **Land Exchange**

Land exchanges involve trading land of equivalent appraised values. The county is authorized by ARS §11-251(44) to acquire land for public purposes, including trails, by exchange without public auction. Land exchanges usually occur between different governmental entities, although the county may also exchange with a private property owner.

The primary advantage of land exchanges is that they do not require the outlay of money. In tough budgetary times in which there is stiff competition for scarce public recreation dollars, it may be easier for the county to trade land it owns but does not currently need than to come up with the purchase price of a trail. Once the exchange is accomplished, the trail is in county ownership just as if it had been purchased.

There will be difficult logistical problems with such land exchanges, however. The county will need to be able to offer to the landowner property which he or she is

interested in owning. Moreover, that property will have to be of equivalent value to the parcel sought to be acquired for the trail. Because the amount of land needed for trails is not large, and is generally not developable anyway, such exchanges will probably not work for small property owners. A land exchange may provide a good solution, however, where the county is seeking to acquire a long stretch of trail from a single landowner.

### **Condemnation**

The county has authority to acquire public parks, including trails, through the exercise of its power of eminent domain. It is very unlikely, however, that the county will choose to condemn land for a trail except under the most compelling circumstances. In order to condemn land for a trail the county would need to file a condemnation action in court, and then pay the landowner what is determined to be the fair market value of that land.

As with any litigation, there is a certain amount of uncertainty associated with such condemnation actions. The final amount of the judgment may turn out to be higher than anticipated, or the costs of litigation itself may be high if the landowner chooses to put up a strong defense. Moreover, if the public perceives that strong-arm tactics are being used by the county in acquiring trails, public support for the trail program may diminish.

Condemnation may be an appropriate acquisition method of last resort if a particular trail is very important to the overall trail system and cannot be acquired in any other satisfactory way.

### **8.3.4 Conservation and Trail Easements**

In the law, land ownership may be viewed as a bundle of legal rights. A landowner can sell or donate the whole bundle, or only one or more of those

rights, such as the right to run a utility line across the land, the right to mine subsurface minerals, or the right to cross the property to gain access to adjoining property. In order to give up certain rights in the land while retaining ownership, a landowner deeds an easement. The terms of each legal document creating an easement spell out exactly what the landowner gives up, and what he or she gets in return. Easements are granted by recording the easement document with the County Recorder, and run with the title to the land.

Trail easements are a means to acquire the legal right to cross the land of another for trail purposes. The land remains in private ownership but trail access is assured. The terms of the easement document itself will specify who is permitted to use the trail and for what purposes. A trail easement acquired by the county would have to be for the benefit of the public, and not just certain individuals, but it could limit access to the trail to certain kinds of users, for example, only hikers and equestrians but not bicyclists. Trail easements can be acquired by the county as exactions in connection with subdivision or rezoning approval. Trail easements can also be acquired by the county through purchase or condemnation, in the same way that the county can acquire land for trails in fee simple.

Conservation easements are a special kind of easement authorized by state law in order to preserve land for conservation purposes including public outdoor recreation. Conservation easements must be granted to a governmental entity or charitable corporation or trust involved in land conservation. Because conservation easements must be created voluntarily they cannot be acquired through eminent domain or required as exactions in connection with the subdivision or rezoning approval process. It is expected that most conservation easements will be donated rather than purchased, with certain tax benefits accruing to the donor.

The main advantage of conservation and trail easements in these days of tight governmental budgets is that they should be less costly to acquire than fee ownership of the land. However, because these kinds of easements have not been widely used, particularly in Arizona, there is considerable uncertainty and difference of opinion regarding how they are to be valued. In principle at least, the price of such an easement should be the difference between fair market value of the land unrestricted and the value of the land subject to the restriction set forth in the easement.

Trail easements also offer the advantage that the land remains in private ownership, leaving it on the tax rolls, and keeping it available for non-conflicting private uses. Easements are very flexible because each can be created in light of the particular situation at hand. In certain subdivisions or planned communities, for example, where a trail is part of a larger common recreational area for the development, a trail easement could allow for public access to the trail while the recreational area stays in private ownership.

Whatever the fiscal or other advantages associated with easements, the determining factor in whether trail easements will be a viable method for the county to acquire trails will probably be landowners' liability concerns. Landowners asked to grant a trail easement across their property for use by the public will want assurances that they will not be held liable for injuries to those trail users. The state's recreational users liability statute<sup>8</sup> provides some protection for private property owners opening their lands for public recreation. But that protection is not absolute, and there are questions about how the courts will actually apply the statute.

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<sup>8</sup>A.R.S. §33-1551. This statute is discussed above in section 8.2.2 on responsibilities for trail-related injuries.

Unless the county is willing to include a hold harmless provision in trail and conservation easements, landowners will probably be unwilling to accept the risk of allowing the public to cross their property. The county will need to weigh the costs of indemnifying landowners against the savings associated with acquiring an easement rather than fee ownership of a desired trail.

### **8.3.5 Trail Use Agreements**

In some instances, the best available implementation method will be one involving a legal agreement to permit trail use. The specific conditions of the agreement will vary depending upon the status and wishes of the contracting parties. Agreements implementing trails on land owned by governmental entities will probably take the form of an intergovernmental or interagency agreement although lease and license agreements may also be used. Agreements with private landowners to allow public trail access can be in the form of a license or a lease.

#### **Intergovernmental Agreements**

County and municipally owned lands may be available for trails if existing and planned uses of the land are compatible with trail use and there are no legal impediments. Where a recommended trail is owned by a local jurisdiction, an intergovernmental agreement between Pima County and that local jurisdiction could be used to provide for operation and maintenance needs associated with the trail. For county lands held by agencies other than the Pima County Parks and Recreation Department, interagency agreements could be used to provide for operation and maintenance of the trail by the Parks and Recreation Department.

Intergovernmental agreements permit one branch or agency of government to contract with another. It is a type of agreement that allows governmental

bodies to transfer or share responsibilities for achieving common goals and mandates. Such IGA's, as they are commonly called, may be important in implementing the trail system because there are nine different jurisdictions operating in Eastern Pima County. IGA's may be used to provide for county management of a trail located on land owned by a local jurisdiction. IGA's may also be used coordinate trail efforts being undertaken by the various jurisdictions in eastern Pima County.

Interagency agreements are agreements entered into between different agencies of the same jurisdiction, such as Pima County. In implementing the trail system, such interagency agreements probably will be needed between Pima County Parks and Recreation and other county departments such as Transportation and Flood Control. These interagency agreements will spell out the respective rights and responsibilities of different county departments with respect to trail use and management.

### **License Agreements**

Licenses are simple agreements that provide permission to do something. In the case of trails, a license agreement with the landowner provides permission to use a trail on his or her land. The terms of the license are spelled out in the agreement. They may provide permission for trail use by the public at large, but more commonly, they are limited to only specified persons (licensees). Licenses can be written or oral and they are revocable at any time at the will of the landowner (licensor). Unlike easements, licenses do not affect rights in land, and they are not recorded.

The "revoke at will" nature of licenses makes them a disfavored means to implement trails. Trail planners are interested in implementation methods that assure continued availability of the trail into the future. A license that can be revoked at any time does not provide a

very firm basis for planning or making investments in a trail system.

Nevertheless, there may be certain instances in which a license is the only, or the most appropriate, method for implementing a trail.<sup>9</sup> License agreements may provide a "foot in the door" to gaining the confidence and cooperation of a reluctant landowner. Initial implementation of a trail under a license agreement could be viewed as a trial period in which the trail would have to prove itself. Successful operation of the trail during this trial period would then encourage the landowner and his or her neighbors to cooperate in making the trail permanent. It certainly will be much easier for the county to get a landowner to agree to a license that he or she can revoke at any time than to agree to sell the land or an easement across it.

### **Leases**

A lease is a transfer to another of the temporary possession or use of the land, usually in return for rent or some other compensation. Unlike a license, it is not revocable except by the terms specified in the lease agreement, which must be in writing. The term of a lease is usually for at least one year, and it may or may not be renewable. Leases may run for as long as 99 years.

The county is authorized by A.R.S. § 11-932 to lease land for public parks<sup>10</sup> and to expend public funds for improvements in such leased parks. There may be certain situations in which a landowner would be willing to lease land to the county for a trail, but would be unwilling to permanently transfer rights in the land.

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<sup>9</sup> License agreements are not used by the State Land Department in its management of state trust land.

<sup>10</sup> A "public park" is defined in A.R.S. § 11-931 as "a park, parkway, trail, recreational area or playground established, maintained or administered by a county, city, or town."

This is most likely where the landowner expects development to occur in the future and does not want to sell any of the land or encumber it with trail easements. Until the landowner seeks rezoning from the county, a lease may be the best method for the county to provide for public trail use on the property. At the time the landowner decides to develop the property and initiates the rezoning process, the county may require dedication of the trail.

Right-of-way leases and perpetual leases are the most promising methods for implementing trails on state trust lands. Long term leases of trust land require public auction at no less than fair rental value. When trust land is leased, the State Land Department typically reserves the right to relocate the right-of-way if required by proposed development. Although the exact route of the trail across trust land may therefore be altered, the right-of-way applicant is not required to incur the expense of a registered survey. In order to gain access to trust land for purposes of locating a proposed trail right-of-way, the county should apply to the State Land Department for a right of entry permit.

In general, leasing will not be a preferred method of implementing trails. A lease cannot secure the trail for the future when pressures from development will be even greater and the county's ability to plan for and manage the trail will be circumscribed by the long-term goals of the landowner. Moreover, any lessor will surely require that the county indemnify him or her from liability during the term of the lease.

### **8.3.6 Trails Through Existing Subdivisions**

Most of the methods discussed in this chapter are applicable to existing subdivisions. However, because such property has already been subdivided, trail dedication during rezoning probably will not be available as an implementation method. The most likely methods for

implementing trails in existing subdivisions will be acquisition of trail easements or fee simple ownership of the trail right-of-way.

If the county chooses to implement a trail in an existing subdivision by acquiring fee simple ownership of the trail right-of-way, all of the lots through which that right-of-way passes will be affected. Not only does this mean that the county will have to deal with a number of different landowners, but also that some or all of the affected lots may be reduced below the minimum size permitted for the subdivision.

The effect of creating a substandard-sized lot will vary depending on what the landowner intends to do with the land. To the extent the landowner has already built all the structures on the lot that he or she intends, the fact that the lot is reduced to a substandard size should not pose any problems. But a landowner who wishes in the future to build new structures or remodel existing structures on substandard-sized lots may have difficulty obtaining the necessary building permits.

In this latter situation, the county either will have to compensate the landowner for this diminished use of his or her property, or facilitate a variance in the applicable lot size requirements. Such a variance, which is granted by the Board of Adjustment, must be in the form of an amendment to the zoning code as it relates to the particular parcel of property. Requests for variances must originate with the property owners themselves, although members of the Board of Supervisors and other county officials may provide information in support of the variance to the Board of Adjustment.

Because the need for these adjustments in minimum lot size would come from county action to implement a public trail rather than from something done for the landowner's private benefit, the variances should be viewed quite favorably by the Board of Adjustment. The possibility of

combining into a single hearing all of the variance requests resulting from implementation of a trail in a subdivision should be explored. This kind of "class" approach should reduce the time and expense associated with obtaining the necessary variances for landowners who are helping in the county's program to implement a public trail system.

Based on completed analysis, Dames & Moore can not recommend this procedure for implementing trails. County staff will continue, however, to explore this concept in order that a final determination on its potential usefulness can be reached.

### **8.3.7 Density Credits as a Trail Implementation Enticement Prior to Rezoning**

Dames & Moore explored the possibility of the county enticing private landowners to cooperate in the implementation of public trails by assigning density credits to their unsubdivided parcels of land prior to a rezoning application. The concepts behind such an arrangement are that the landowner would benefit from the assigned density credits in the latter sale or development of the property while the county would be granted immediate rights-of-way for public trails.

Although the county could probably implement this procedure through ordinance, Dames & Moore's analysis found this method of providing incentives to landowners to be exceedingly complex and of uncertain value for acquiring trails. Of particular concern for the county are:

- Avoiding a position where the county, in the interest of trails, is advocating subdivision of selected lands;
- Determining appropriate density credit rates in return for public trails;
- Making density credit decisions prior to a rezoning application and the opportunity to assess the full scope and implications of a proposed development plan; and
- Avoiding conflict with constitutional and statutory provisions that are applicable to legal rezoning processes.

**TABLE 8-1. METHODS FOR IMPLEMENTING PUBLIC TRAILS**

		Trail Implementation Methods			
Type of Trail Land	Designation of Part of Public Right-of-way as Trail	Dedication During Rezoning		Easement	
		Fee Simple Ownership--Purchase, Trade, Donation, or Condemnation	Lease, License, or Intergovernmental Agreement	Comments	Authority to implement trails already exists. Would require an assessment of trail compatibility with other uses.
Existing Public Rights-of-way (Roads & Flood Control)	●				
Unsubdivided & Undeveloped		a ●	b ○	c ○	d ●
Unsubdivided & Developed		a ○	b ●	c ○	
Subdivided & Undeveloped			a ●	b ○	
Subdivided & Developed			●	○	
Existing Private Rights-of-way (Utilities & Roads)			a ○	b ●	

Probability of a method being useful or effective: ● Likely ○ Less Likely ○ Least Likely

a: Requires landowner's decision to seek rezoning. May not occur for years or at all.  
 b: Acquisition would occur only in a unique situation such as for flood control.  
 c: Easement would occur only in a unique situation such as for flood control.  
 d: Lease or license desirable only as an interim method until landowner seeks rezoning.

a: Numerous rezonings of small lots would likely be necessary for effective trail implementation.  
 b: Acquisition would occur only in higher priority cases.  
 c: Complex arrangement with multiple landowners

a or b: Most likely if there is only one or a small number of landowners

a: Right-of-way presents a potential trail route but implementation would require the agreement of all underlying landowners.  
 b: Best chance when the right-of-way is owned by one landowner such as a utility company.

# CHAPTER 9

## TRAIL IMPLEMENTATION ANALYSIS

### 9.1 Introduction

An important objective in the preparation of this plan was to inventory existing trails and trailways in Eastern Pima County. The results of that inventory imply the potential for a network with over 1500 miles of trails and 104 trail access points to public lands (Tables 7-1 to 7-5). The next steps in the planning process were to rank the trails by their priority for acquisition and to identify appropriate design goals for trail implementation. Three levels of trail acquisition priority have been assigned based on:

- The Eastern Pima County Trail System goals;
- The priority selections for connector and local trails made by the subregional panels;
- An analysis of the interconnections between the primary trails, panel priority selections, and potential road and utility rights-of-way trails.

The specifics and findings of these analyses are presented in this chapter.

### 9.2 Trail System Goals

The proposed network achieves the goals as defined for an Eastern Pima County trail system. These goals are to:

- Expand on the existing and proposed river parks system to form a trails

network that will interconnect the major public recreation lands and protected open space in Eastern Pima County;

- Provide for trail recreation in all subregions of Eastern Pima County;
- Extend trail service into local areas;
- Accommodate various types of trail use;
- Take advantage of trail locations that offer the community multiple benefits such as flood control, groundwater recharge, wildlife habitat and migration corridor preservation, and open space protection in addition to trail recreation.

### 9.3 Trail Network Implementation Analyses

#### 9.3.1 Trail Network Priority Levels

Implementation of the proposed trail network will, no doubt, require 20 to 30 years and financial and management resources that the county has yet to generate. Three levels of implementation priority have been assigned to this network in order to identify a beginning point and guidance for such an undertaking. The trails recommended for first priority implementation constitute a basic trail network with service to all subregions of Eastern Pima County (Map 3). The first priority network contains 108 trails totaling about 650 miles (Table 9-1). The addition of the second priority trails expands the basic network by about 470 miles and provides more trail recreation in local areas. The most comprehensive trail network is formed by the addition of about 400 miles of trails in the third priority network.

### First Priority Trail Network

The first priority network includes 185 of the 200 miles of primary trails identified in Eastern Pima County (Table 9-1). All 105 miles of county proposed linear river park in the 1988 report of the Pima County Department of Transportation and Flood Control District, Preliminary River Park Design Guidelines, are encompassed in this total (36). The missing primary trail pieces include the San Pedro River and about the 1.3 most upstream miles of the Santa Cruz River in Pima County and about 3 miles of the CAP Trail from Cottonwood Wash to the Pinal County line. Also included in the first priority network are the first priority connector and local trails and associated boundary access points selected by the subregional panels.

The objective in formulating the first priority network was to identify a basic trail system that addressed most of the goals for the comprehensive Eastern Pima County trail system. Most important was to ensure that trail interconnections among all of the major public lands in the region were identified and that the most prominent needs of the various subregions were addressed. An analysis of the composite network formed by the primary trails and the first priority selections of the panels disclosed a number of gaps in meeting these basic goals. Deficiencies included a lack of trail connections to some public lands, trails that were not linked to the rest of the network, and inadequate trail circulation in some areas. These problems were corrected by adding appropriate second and third priority trails and road and utility right-of-way trails to the first priority network.

If fully implemented, the first priority network would accomplish a substantial portion of the overall county trail system goals. The use of the eight primary trails as the backbone of a network that incorporates 42 connector and 58 local trails to link to public lands at over 90 locations accomplishes the important

goal of establishing a system of trails that interconnects all of the major public lands in the region (Tables 9-1 and 9-2). This network also extends trail opportunities to all of the county subregions.

The resulting trail network will accommodate use by pedestrians, equestrians, bicyclists, and whole access users. Primary trails developed as linear parks and the CAP Trail will accommodate several or all of these user groups. The remaining primary segments and many of the connector and local segments in the network are in natural washes and will generally support both pedestrian and equestrian use. Some upland traditional trails and road or utility right-of-way trails would be suitable for mountain bike use in addition to use by pedestrians and equestrians.

Most of the trails in the first priority network are identified in locations that provide multiple advantages to the community, thus facilitating the opportunities for their implementation. More than 330 miles of these trails are located in washes. Washes provide flood control and groundwater recharge benefits. When maintained in a natural condition, these watercourses are also important wildlife habitat and migration corridors. Trails can be designed and used in ways that are compatible with these other public purposes. Washes are also locations that are unsuitable for development. Consequently, trail routes in washes offer natural pathways that minimize conflicts with development interests.

Approximately another 200 miles of trails in the first priority network are located in road or utility rights-of-way. Roads are already designated and accepted as transportation corridors and are principally in public ownership. Trail implementation in these cases will become a matter of assessing the compatibility of trail use with vehicle traffic. In many cases, road right-of-way widths are adequate to safely separate trail uses such as hiking or horseback riding

from the road bed. Procedures for incorporating bicycle lanes within the pavement section are already well established and are being increasingly pursued in Pima County.

About 120 miles of trails in the first priority network are in upland, cross-country locations. Most of these trail miles are found in areas that have not been developed. Although upland trails may initially appear to be in greater conflict with development interests than are wash or right-of-way trails, when incorporated as a part of a development plan, upland trails can become assets rather than hindrances to development.

The principal limitation of the first priority network is in the area of providing local trail opportunities. Although there was an attempt in the development of this network to create trail circuits in local areas, the service to these areas was restricted by the need to identify farther-reaching interconnections between public lands. Local trail needs are more adequately identified by the second and third priority additions to the basic network.

### **Second and Third Priority Additions to the Trail Network**

The second priority additions to the basic trail network were identified in two steps. First, the second priority selections of the subregional panels were added to the basic network. Second, gaps in the network were closed where possible, using trails selected from the road and utility rights-of-way inventory, and some trails were upgraded from the third priority level. The third priority additions to the expanding trail network consisted of the remaining third priority panel selections and the remaining proposed road and utility rights-of-way. Generally, access points to public lands were incorporated into the network with the associated proposed country trail.

The primary benefits of the second and third priority trail additions are the

expansion of local recreation opportunities. In particular, a much greater number of loop routes are created. Other proposed second and third priority trails within road rights-of-way create additional long distance connections between subregions. Important examples include Houghton, Sahuarita, and Silverbell Roads (Map 4).

Both the second and third priority additions to the network increase the number of linkages to public lands. The value of this apparent increase in access points is, however, misleading. Over 15 of the proposed second and third priority access points are presently unacceptable to the agencies responsible for managing the public lands in eastern Pima County. In the cases of the Coronado National Forest and Saguaro National Monument, the numbers and locations of permitted public entry points have been carefully considered in recent general management plans, in order to ensure that use does not destroy or unduly damage the natural resources that these public lands were established to conserve. Managers of state and county public conservation areas are similarly concerned. As a consequence, public entry is currently being limited in some areas to protect sensitive resources. Accordingly, second and third priority access points proposed in this plan are viewed as alternatives to the first priority sites in the event that evolving circumstances warrant a shift in the amount or location of entry points to public lands.

### **9.3.2 Trail Network Scope**

An important objective in the preparation of this plan was the inventory of existing trailways and routes in Eastern Pima County. That inventory resulted in the identification of over 1500 miles of trails (Table 7-1).

This plan was developed with no guidelines or limits placed on the expected size of the trail network. Rather, the emphasis has been placed on

the identification of three levels of trail acquisition priorities. Some perspective as to how realistic the scope of the proposed trail network, consequently, will be of value as the county considers the extent to which trail acquisition will be pursued. Any number of viewpoints on this issue are possible. Those discussed below amplify on the following major points:

- *Land Ownership:* Approximately 580 miles of the entire proposed trail network and 205 miles in the first priority network are located in publicly owned rights-of-way.
- *Flood Control Acquisition Programs:* Flood control programs may result in public ownership of up to 150 miles of the proposed primary trails and 105 miles of linear river park.
- *Trail User and Property Owner Viewpoints:* Trail users are enthusiastic supporters of public trails in metropolitan areas. However, property owners express mixed emotions.
- *Other Metropolitan Trail Networks:* Successful public trail networks in other metropolitan areas depend on public ownership and effective management. Several are of comparable size to the first priority network proposed here.

### Land Ownership

Land ownership was cited in Chapters 3 and 8 as a principal factor influencing the implementation of trails. Although easements and some forms of agreements or licenses can be helpful in some special cases, public ownership of trails has consistently been found to be essential in the implementation of successful trail networks in metropolitan areas. Public ownership provides:

- A clear right to public access;

- A definitive assignment of responsibility to the managing public agency to design, maintain, and operate the trail in a manner that provides for the enjoyment and safety of trail users and adjacent property owners;
- An opportunity to the managing agency to effectively control the use and condition of the trail;
- Protection to adjoining private property owners against claims of damages or liability from public trail users.

Existing public ownership within the entire proposed trail network for Eastern Pima County amounts to about 580 miles. Out of this total, road rights-of-way account for about 485 miles, the CAP right-of-way adds 56 miles, and public ownership of primary washes amounts to about 40 miles. The first priority trail network includes the CAP, 132 miles of primary wash mileages, and 190 miles of the road rights-of-way.

About 440 miles of trails in the first priority network are highly valued wash and cross-country trails. A summation of Table 9-1 indicates that up to 375 miles of these trails in the first priority network could potentially be acquired through rezoning dedication. However, some trails are located in areas where expensive and politically controversial purchase programs will be necessary to obtain them. For example, Subregion 4 (the Catalina and Rincon mountain foothills) is an area with about 47 miles of first priority, highly valued wash trails that lie principally on lands that have been fully subdivided and developed.

### Flood Control Acquisition Programs

Pima County has an ongoing program to acquire properties for flood control purposes where public interests are identified and available opportunities and funds permit. This program is important

to the proposed trail network because the planned acquisition of about 150 miles of the major watercourses in Eastern Pima County will establish the foundation for that proposal. Over 40 miles of the Agua Caliente, Cañada del Oro, Cienega Creek, Pantano Wash, Rillito River, Santa Cruz River, and Tanque Verde Wash have already been acquired.

The 105 miles of linear river park proposed by the county is part of the flood control acquisition program. Within the trail network, the major water courses and associated river parks will serve as primary trails and the backbone of a system interconnecting public recreation lands.

### **Trail User and Property Owner Viewpoints**

Not surprisingly, from the perspectives of trail users most of the proposed trail network is realistic in terms of the present and future needs of the Eastern Pima County community. Three points of view are often expressed by trail users. First, they see the primary trails, including the developed river parks, as being regionally available to them regardless of where they live in the metropolitan area. Primary trails could be incorporated into their daily lives without having to drive longer distances to converge with other trail users at crowded boundary access points for public land trails. The primary trails also accommodate many trail uses and interests. Finally, when combined with connector trails, primary trails give the user the promise of journeying to the national forest or national monument, or other public lands by foot, horse, or bicycle, in some cases, without having to use their vehicles and horse trailers.

Second, trail users see connector trails as traditional, natural pathways to the public land boundaries or to the primary system. They expect to see far fewer people on these trails. The connector trails also offer them the pleasure of a more natural

trail experience without the necessity of leaving their own region.

Third, local trails are usually viewed as simple pathways to be shared with neighbors. Trail users expect to drive to some primary trails and, perhaps even some connectors. They do not, however, view local trails as resources that will attract users from other areas. Local trails could easily become a part of daily personal exercise or pleasure as well as serving as linkages to the connector or primary network.

During this planning process, the expressed view points of residential property owners adjacent or near proposed public trails have been mixed. There have clearly been strong concerns expressed about personal security and privacy as well as about damage to wildlife habitat and other natural amenities along the proposed trails. Other adjacent property owners have taken the opposite position. They are supportive of public trails and feel that trails would be an asset to their property and lives. These responses are also not surprising when compared to the experiences of other communities that have implemented public trails through already established residential areas. Property owner opinion has often run against trails prior to and immediately after implementation. However, these viewpoints often reverse once sensitively designed and effectively managed trails have been in operation for a year or more. The trend toward favoring the trail is especially strong among second generation home owners after the trail implementation. New purchasers accept the trail as part of the neighborhood and, as indicated in Chapter 3, often pay more to be adjacent to or near it.

### **Other Metropolitan Trail Networks**

Compared to county and metropolitan trail systems in other states and elsewhere in Arizona, the scope of the proposed Pima County network appears ambitious. As noted in Chapter 3, a number of other

successful county and metropolitan trail systems designed to interconnect parks and other public lands have been established and planned. These systems individually contain from about 100 to 900 miles of trails (Table 9-3). The proposed first priority network for Eastern Pima County is comparable with the largest of these systems. On the other hand, at 105 miles, the proposed linear river parks network in Pima County is comparable with the smaller listed trail systems.

These comparisons offer Pima County some perspective on what might be reasonably accomplished in terms of a core trail network over the next 20 to 30 years--the time span necessary to implement most of these other systems. The examples of other effective systems also indicate that a large service area and population contribute to the success of an extensive trail network.

The Eastern Pima County study area contains roughly 2880 square miles of which 1130 square miles are within public lands and Indian reservations. This size exceeds that of most of the service areas of the other county and municipal trail networks by several fold. In fact, the combined service areas of the Alameda, Contra Costa, and Santa Clara County systems in California, with a combined planned and implemented trail mileage of over 700 square miles, is more comparable to the size of Eastern Pima County. This combined total includes the planned 400-mile San Francisco Bay Loop Trail. The population of the San Francisco Bay area is, of course, many times that of Eastern Pima County, and arguably justifies an extensive trail system. However, it is important to remember that Pima County is at the beginning point of establishing a trails network that will require two or three decades to fully implement. The county is expected to experience considerable population growth during this time period and presumably much of the trail network will be implemented through rezoning dedication at a pace equivalent to the

growth rate. In this regard, much of the proposed trail network should be viewed as a concept plan to be implemented in balance with demonstrated growth and development.

### **9.3.3 Implementing the Public Trail Network**

#### **Implementation Schedules**

Although the trails and boundary access points identified in this plan have each been assigned a first, second, or third priority for implementation, actual implementation schedules can be expected to vary somewhat from these rankings. Variations will occur because the conditions that control the opportunities to acquire public use of trails also change.

A review of several likely implementation scenarios illustrates this point. In the case of trails on unsubdivided private land, trail dedication at the time of rezoning is an attractive implementation method. For this method to even be potentially useful, however, the land owner must initiate a rezoning request. Once a request has been made and evaluated, first priority trails and boundary access points are expected to receive greater recognition than those with second or third priority status.

There is, however, no guarantee that even the first priority choices will be implemented through this process. At least two conditions will be necessary for dedication. First, dedication of the proposed trail must be legally defensible, as outlined in Chapter 8, and second, there must be sufficient commitment on the part of the Board of Supervisors or other governmental body to require the dedication.

If rezoning dedication is not an option for implementing some components of the proposed trail network, then other methods must be examined. Fee simple purchase is the most desirable from the standpoint of securing permanent public

use, but the purchase of an easement or the negotiation of a lease or other contract are viable alternatives in some situations. Regardless of the approach, implementation is dependent on a willing landowner, and scheduling is not predictable. Condemnation, the method of last resort, would provide the promise of a more certain acquisition, but would generally be deferred until other approaches had failed.

The designation and development of trails in existing public rights-of-way will also be subject to scheduling variations that may not correspond to trail priorities. In most cases, some examination of the compatibilities of trails with transportation or flood control priorities will be necessary. Trail implementation may also have to await scheduled road or flood control construction or improvements.

Finally, in all cases, trail and boundary access point implementation will be dependent on the availability of public money. This availability will be at least partially dependent on the continued growth of a pro-trails constituency as well as the political will of elected officials.

The public trail network for Eastern Pima County is going to be assembled a piece at a time over the next 20 to 30 years. The core of the network will be composed of the existing and planned river parks, but the remainder will have to be knit together from selected purchases, rezonings, trails associated with road or utility rights-of-way, occasional easements and leases and, perhaps, some land donations. Trail implementation schedules and expectations will have to be reevaluated many times over the course of this effort in order to respond to changing opportunities and to meet public expectations.

### **Coordinating Trail Implementation**

To achieve a functional trail network, the county is going to have to coordinate an

implementation program that will require the cooperation and assistance of other local governments and trail interest groups. The implementation program is likely to be more effective if it includes the following:

- Mechanisms to promote intergovernmental cooperation;
- A Pima County trails/open space coordinator;
- A trail advisory committee;
- An annual trail acquisition schedule;
- Strategies for evaluating trails at the time of rezoning; and
- New county and municipal ordinances.

### **Intergovernmental Cooperation.**

Effective implementation and management of the Eastern Pima County trail network will require cooperation and coordination of government at the local, tribal, state, and federal levels. Five local governments in Eastern Pima County have the power within their respective jurisdictions to implement and manage public trails by virtue of their authorities to acquire lands, require justifiable dedications at the time of land-use rezonings, enter into leases, licenses, or other forms of contract, and enter into intergovernmental agreements. These governments include Pima County, the cities of Tucson and South Tucson, and the Towns of Marana and Oro Valley. Two Indian Reservations, the Pascua Yaqui Indian Reservation and the Tohono O'odham Indian Reservation, also have powers to regulate land-use and to implement and manage trails on their properties. Finally the state and federal governments have the authority to implement and manage trails, including controlling public access, on their properties. In Eastern Pima County these properties include Catalina State Park, the Coronado National Forest, Saguaro National Monument, Empire-Cienega

Resource Conservation Area, and the CAP right-of-way.

Intergovernmental cooperation and coordination is essential to the Eastern Pima County Trail Master Plan if:

- Trails are to be continued across jurisdictional boundaries;
- Trails are to be effectively operated and maintained; and
- Trails, such as the CAP Trail, are to be jointly sponsored.

The problem of extending trails across jurisdictional boundaries will occur throughout Eastern Pima County. The most notable examples of this situation include transitions from county to municipal and county to federal jurisdictions.

In the former case, cooperation will be needed if continuous trails are to be assembled from segments acquired through purchases or rezonings in different jurisdictions. The county or a municipality will want assurances of cooperation before initiating trail purchases that can be completed only with the acquisition of corresponding segments in the adjoining jurisdiction. The same requirement for a shared purposed holds for trails being implemented through rezoning dedications. This need is particularly important in the case of rezoning applications where developers may "shop around" with offers to accept annexation if one municipality will require fewer trail or other dedications than another.

In the case of trails that extend to federal boundaries, access must be acceptable to the appropriate federal agency. Coordination between county and federal agencies thus becomes important. The boundary access points shown in the first priority network have the approval of the federal land management agencies.

The effective operation and maintenance of trails that cross jurisdictional boundaries will also depend on intergovernmental cooperation if uniform standards of design, use, care, and public safety are to be achieved. Boundary access points to the national forests and monument are examples of the need for shared responsibility. The access facilities may be located on county property but could be designed, built and maintained with federal assistance. Joint public trail ventures may also be possible between the county and municipalities, or between local governments and private land owners such as utility companies.

Intergovernmental cooperation can be by either formal or informal agreement. A formal agreement, such as an intergovernmental agreement, is a contract that commits the participants to specified terms of cooperation. Formal agreements can be arranged for any of a wide number of purposes and parties. An example of a formal trail agreement is the "Recreational Land Use Agreement" between Pima County and the federal government, acting through the Bureau of Reclamation, to authorize the CAP Trail. This agreement outlines the terms under which the county and the Bureau of Reclamation agrees to cooperate to permit the development and use of a multiple use public trail within the project right-of-way in Pima County.

The CAP Trail involves the joint-use of federal property and fairly rigidly defines the conditions of and responsibilities for such use. A formal agreement is necessary in this case. In other circumstances, an informal agreement may serve as well or better and could be much simpler to implement. The ongoing designation of the Arizona Trail is such an example. This project is being accomplished through informal, non-contractual cooperation among the U.S. Forest Service, National Park Service, Bureau of Land Management, Arizona State Parks Board and others. These agencies are individually implementing segments of the agreed upon route for the

trail that fall within their jurisdictions. A Coronado National Forest segment of the trail was dedicated in the spring of 1989. Cooperative participation in this project by the county, state, and possibly some private land owners is necessary to complete the trail in Pima County.

An intergovernmental agreement between the county and other governmental jurisdictions in Eastern Pima County has been considered as a means of promoting cooperative implementation and management of parts or all of the proposed trail network. Such an agreement offers the advantage of clearly specifying the limits and conditions that individual jurisdictions would be willing to commit to the trail network. A meaningful agreement with a large number of participants and a broad spectrum of cooperation could be difficult to negotiate, however, as individual governmental jurisdictions may be reluctant to enter such an agreement for fear of limiting their land-use options.

A more likely alternative would be the use of intergovernmental agreements between two or three parties for the purpose of implementing or operating one or a few specific trails such as the CAP Trail. Parties to this type of more limited agreement retain more control of their land-use options and contractual obligations.

Regardless of the preferred form of agreement, formal or informal, intergovernmental cooperation and coordination will be essential to the success of the proposed trail network. A good first approach for initiating cooperation would be informal discussion between representatives from Pima County, Tucson, Marana, Oro Valley, Coronado National Forest, and Saguaro National Monument. Representation from the communities of Catalina and Green Valley is also important. At the appropriate time, the county will need to initiate similar discussion with the Tohono O'odham and Pascua Yaqui Indian tribes, Bureau of Land

Management, Arizona State Parks, Arizona State Land Department, and others.

These discussions should occur after the participants have the opportunity to review the Eastern Pima County Trail System Master Plan. The purpose of the initial discussions would be to find areas of common interest in, and commitment to, trails and to identify effective methods of cooperation. Intergovernmental agreements may or may not be favored as an aid to cooperation but, at a minimum, continued informal consultations should be planned. Among the objectives for ongoing intergovernmental consultations would be to:

- Provide and share information pertinent to implementing and managing trails;
- Identify inconsistencies in trail management;
- Develop strategies for improved intergovernmental coordination; and
- Identify means of forging partnerships with citizen groups to support trail implementation and management.

**Pima County Trails/Open Space Coordinator.** The significance of trail recreation and the scope of the proposed trail network in Eastern Pima County are such that a position for a trails and open space coordinator should be created. This position would logically be placed in the Pima County Parks and Recreation Department, but would also need to serve as a strong liaison coordinating the trail-related functions of the several county departments. Among the most important functions of the coordinator would be:

- Establishing and maintaining lines of communications with other governmental jurisdictions and agencies, the Trails Advisory Committee, and the public;

- Coordinating interagency trail actions for the county;
- Coordinating the establishment of the Trail Advisory Committee, representing the county at Committee meetings and functions, and supporting the committee in accomplishing its goals;
- Developing and maintaining data and records on established and proposed trail and boundary access points in the county trail network;
- Overseeing the planning, design, and construction contracts for trail projects;
- Monitoring trail maintenance and law enforcement needs; and
- Developing trail recommendations for the county's annual Capital Improvement Projects Budget.

A trails coordinator could benefit local municipal governments as well as Pima County. As a consequence, shared funding for the position should be considered. An intergovernmental agreement might be an appropriate tool for accomplishing such an arrangement.

**Trail Advisory Committee.** Citizen advocacy has been at the heart of the trail issue in Eastern Pima County since the preparation of the 1976 Trail Access plan. Continued citizen involvement at a number of levels will be essential to motivate and assist government in its efforts to implement and manage the trails programs proposed in this plan. Pima County should utilize the active support in the community by establishing a Pima County Trails Advisory Committee composed of citizen representatives to advise and assist the county and other local governments on trail issues and projects.

The Tucson-Pima County Bicycle Advisory Committee has been very effective and could be used as a model for

a trails counter-part. The bicycle committee is composed of representatives appointed by the county and the City of Tucson. A trails committee could be established according to a similar format, but would require the addition of representatives from the other municipalities and the communities of Green Valley and Catalina. Functions of the trail advisory committee should be to:

- Assist in updating the Eastern Pima County Trail System Master Plan at intervals of at least five years;
- Help to establish appropriate trail design criteria for the Eastern Pima County network;
- Facilitate the formation and actions of trail groups interested in participating in the construction, operation, and maintenance of public trails through cooperative efforts such as an Adopt-a-Trail program. Citizen trail groups could assume a similar role of responsibility for trails on private property in exchange for the landowners consent for access;
- Organize a trail-watch program to monitor the use and status of established and proposed trails; and
- Promote public trail etiquette and respect for private property rights and privacy.

**Annual Trail Acquisition Schedule.** Pima County Parks and Recreation Department should identify a realistic annual budget for public trails acquisitions. This budget would be included in the annual update of the county's five-year capital improvement project budget. This budget should be targeted for trails that will not be obtainable through other parkland/open space or flood control purchases or likely rezoning dedications. The priorities established in this plan will serve as a guide for identifying trails for purchase. The county will also need to consider special opportunities for purchase that

may emerge, as well as to monitor land development proposals that could pose threats to proposed later acquisitions.

**Strategies for Evaluating Trails at the Time of Rezoning.** If the county or other local jurisdictions are to make effective use of their authority to require public trail dedications at the time of rezonings, then modifications need to be made to the procedures followed by rezoning applicants. Applicants need to demonstrate how they will comply with the Eastern Pima County Trail System Master Plan within their proposed development or, alternatively, why they should be exempt from that requirement. Their demonstration of compliance or arguments for exemption should be a required part of the site analysis which must be prepared by the rezoning applicant and submitted with development plans.

Public trails and boundary access points will be viewed as a community amenity in many cases, and some rezoning applicants will look for ways to use the proposed county trail network as a positive feature in the proposed development. In other situations, applicants may be reluctant to incorporate trails into the development.

Pima County should establish guidelines for evaluating the compliance of rezoning applications with the Trails Master Plan. As a starting point, the county should consider whether the proposed development is located in an area that is well serviced by the trail network identified in this plan or whether it is located in a region with few or no identified trails.

By county directive, the inventory portion of this plan was limited to identifying existing trails with some tradition of use. Most of the trails that were recorded under this criterion were initially identified by trail interest groups, the subregional panels, or individual trail users who were contacted through the public involvement process. This input

was generally concentrated in the more urban areas or focused on public land access. Consequently, there were rural areas with scattered populations and few public lands where few or no traditional trails were identified. This is particularly true in the northeastern and southwestern regions of the study area.

In development proposals for areas in which the potential trail network identified in this plan is fairly extensive, the county should include the following factors in its compliance evaluation:

- The area and projected population of the proposed development and the future trail needs of its residents;
- The impact of the development on other trail users;
- The boundary access points that will be affected by the development, or locations where new access could be established;
- The impact of the development on existing public trails. (The proposed development should not be permitted to block public use of an established public trail or otherwise adversely impact its use or environment);
- The degree to which the first, second, or third priority trails identified from this plan, or acceptable alternatives, are incorporated in the proposed development; and
- The number of additional trails planned for the development.

In many instances, only one segment of an identified trail will be located within a proposed development. When considering dedication requirements, evaluators should not only review the value of the trail within the development property, but also examine its potential value and probability for implementation over its entire length. A rezoning applicant should not be permitted to preclude the future implementation and

public use of a valuable trail by excluding it from his proposed development. Public acquisition of trails in segments rather than in their entirety is expected to be the norm, not the exception.

For proposed developments located in areas with few or no trails identified in the proposed public network, the following factors should be considered in compliance evaluations:

- The area and projected population of the proposed development and the future trail needs of its residents;
- The impact of the development on other trail users;
- The boundary access points that will be affected by the development or locations where new access could be established; and
- The occurrence of natural trail corridors, especially washes with significant riparian values.

Pima County Parks and Recreation Department should be involved in the review of the site analysis to evaluate the trails component.

**County and Municipal Ordinances.** Implementation of the Eastern Pima County Trail System Master Plan by the county will require an amendment of the Pima County Code Chapter 12.12 "Public Hiking Trail Access Plan" and the Pima County Zoning Code Chapter 18.91 "Rezoning Procedures." These changes would basically replace the 1976 "Trail Access Plan for the Tucson Metropolitan Area" and its 1979 revisions with the Trail System Master Plan as the county's official plan. The zoning code should incorporate the steps cited in this plan to ensure that trail needs are addressed in land-use rezonings. Enclosed in Appendix A are proposed Pima County ordinances to effect these changes. Recommended changes to the Pima County Site Analysis Policy are shown in Appendix B. Appendix C presents a

proposed Pima County Resolution to formally adopt the Eastern Pima County Trail System Master Plan.

## **9.4 First Priority Trail Network Analysis**

### **9.4.1 Primary Trail System Analysis**

Virtually all of the primary trail system that promises to have any recreational significance has been designated as a first priority for implementation. This status simply reflects the essential role that the primary trails will play as the main arteries in an interconnected network and in linking public lands. Within the primary trail system, however, some important differences in acquisition needs and opportunities are apparent and will figure into the pace at which various segments of the system should be obtained and implemented.

### **Core of the Urban Trail Network**

The first observation to note involves the Cañada del Oro downstream of Catalina State Park, the Rillito River, the Santa Cruz River within the Tucson urban area, and Pantano Wash downstream from Houghton Road. These watercourses have the potential to form the core of an urban trails network. County and City of Tucson records indicate that as much as 34 miles of the 49-mile combined length are already publicly owned or under public easement (Table 9-4). This status is especially significant along the Cañada del Oro, Pantano Wash, and Rillito River where public ownership accounts for about 26 out of 31 miles. Because of these ownership patterns, a contiguous river park network of over 49 miles in length could be established including Pantano Wash downstream from Houghton Road, the entire Rillito River, the Santa Cruz River from Silverlake Road to Cortaro Road, and the Cañada

del Oro from Catalina State Park to the Santa Cruz River through the acquisition of about 15 miles of private holdings within these segments.

In addition to trail recreation, the length of this proposed river park network is of public interest in terms of flood control, ground water recharge, and open space and some segments retain significant wildlife values. Some of the private holdings will probably become available to the public on the basis of these multiple benefits through dedication during rezonings over the next few years. The remaining private segments would be a logical first target for an active public purchase program aimed at establishing trail use within the primary trail system.

Some consideration for public ownership of Agua Caliente Wash should be made, especially when this drainage is combined with the downstream portion of Tanque Verde Wash. The combined reach of these two streams would offer one of the very best, remaining unobstructed trail routes to the national forest in the Catalina Foothills. Existing public ownership and easements amount to about 4 of 11 miles. The importance of this trail as an access route to the National Forest may outweigh the expense of acquiring the outstanding seven miles of private holding. Some acquisitions through rezoning dedication may be forthcoming from these holdings.

This connection would provide the urban trail network with one of two secure linkages to public lands; the other linkage being the Cañada del Oro at Catalina State park. If Shurban Loop, connector trail number 46, could be obtained between Pantano Wash and Saguaro National Monument East and one or two connectors to Tucson Mountain Park and Saguaro National Monument West could be acquired, a simplified interconnected trail network based on the urban primary trails would be created.

### **Riparian Habitat Protection Along Agua Caliente Wash and Tanque Verde Wash**

A special caution concerning Agua Caliente Wash and Tanque Verde Wash must be made. Both of these watercourses have been found to have very high urban wildlife values because they:

- Are major extensions of natural desert riparian habitat from protected lands (Coronado National Forest) into the urban setting;
- Support some of the last remnants of deciduous riparian habitat in urban Eastern Pima County; and
- Support some of the last mature mesquite bosques in Eastern Pima County (15).

Preservation of these habitat values is supported by trail users, property owners in the area, and residents throughout the Tucson area as well as by adopted Pima County policy.

Public concern, from all quarters, was expressed during the preparation of this plan that the riparian habitats and natural channels of Agua Caliente Wash, Tanque Verde Wash, and other remaining natural watercourses in the urban area would be destroyed by bank stabilization and other flood control projects. Although trail users recognize that flood control projects elsewhere along the urban drainage system have led to the creation of developed river parks, such a mixed blessing is adamantly opposed for Agua Caliente Wash and Tanque Verde Wash.

#### **9.4.2 CAP Trail**

The planned CAP Trail offers some unique opportunities to Pima County including:

- A continuous multi-use trail up to 56 miles in length;

- The western half of a potential loop trail around the Tucson Mountains; and
- Up to fifty percent federal funding for trail development.

As the CAP nears completion, development of specific designs for the trail appears as an attractive next step to promote creation of this facility.

## **9.5 First Priority Subregional Analysis**

### **9.5.1 Subregion 1: West and South Tucson Mountains**

The most important trail objectives identified from Subregion 1 were to establish trail access to Tucson Mountain Park and Saguaro National Monument West and initiate the design and construction of the CAP Trail. Two additional trail issues of particular note were preserving Black and Brawley Washes as riparian habitat and trails and linking Saginaw Hill Park into the trail network. There is potential for important progress on all of these fronts.

#### **Access to Public Lands**

The first priority connector and local trails proposed for Subregion 1 would provide six trail routes to Tucson Mountain Park and one to Saguaro National Monument. The potential for implementing these trails vary as discussed below (Table 9-1, Map 3).

**Aldon, Bopp, San Joaquin and Calle Anasazi.** The 0.3-mile portion of the Aldon Road Trail north of Bopp Road and the two one-mile east and west fork trails that extend cross-country from the north end of the road to the Tucson Mountain Park Boundary should be relatively easy to implement for foot, horse, or mountain bike use (Map 3). Aldon Road is a county right-of-way and all but approximately 0.1 mile of the

cross-country fork lie within Bureau of Land Management property that is proposed for inclusion in Tucson Mountain Park. Once ownership of these federal properties are transferred to the county, public use of the cross-country trails will be assured. An interim public use agreement could be established with the Bureau of Land Management. Purchase of the private holding between the end of the road and the federal property would complete the trail. This trail would likely receive considerable use from local equestrians and hikers from the adjacent residential areas.

The three-mile segment of Bopp Road from San Joaquin Road to the intersection with the CAP Aqueduct was included in the first priority network to serve as a collector trail feeding into the Aldon Road, San Joaquin Road, or CAP Aqueduct trails. The county right-of-way on this segment of the road (60 to 150 feet) could apparently accommodate equestrian and mountain bike use.

A 3-mile segment of San Joaquin Road and 0.7 miles of Calle Anasazi were also included in the first priority network to function in conjunction with Bopp Road and the CAP Trail. San Joaquin Road and Calle Anasazi both link the the Tucson Mountain Park boundary and existing park trails. San Joaquin Road, in combination with Bopp Road and the CAP Trail would complete a loop route of over 13 miles, or in combination with Bopp and Aldon Roads and Tucson Mountain Park trails, a circuit of about nine miles. San Joaquin Road and Calle Anasazi both have adequate right-of-way for trail use and are characterized by low traffic volumes and scattered residences.

**Saginaw Hill, Cardinal, and Peña Wash Trails.** Two of these trails, Cardinal and Peña Wash, are located entirely in the area of steep hills on the south side of Ajo Way, across the road from the boundary of Tucson Mountain Park. The Saginaw Hill trail is partially located within these hills. The terrain is not only rugged, but is highly visible

from Ajo Way, a major entry route into metropolitan Tucson. These hills are identified as the Robles Pass Natural Landmark in the 1988 findings of the Pima County Open Space Committee. Thus, acquisition of the portion of these properties that remains undeveloped may be in the community's best interest and would, in addition, allow for implementation of the Cardinal and Peña trails.

In the event that these trails are not acquired by fee simple purchase and the area is rezoned to higher densities, the Ajo Wash, (within the Saginaw Hill route) and the Peña Wash should be dedicated for public use at that time.

An existing problem associated with the Cardinal and Peña trails is the Ajo Way crossing. This road has four traffic lanes, a 55-mile per hour speed limit, and a high traffic volume. The sight distances are good and a wide center median offers a safety island, but a clear conflict exists. A safe Ajo Way crossing is a problem for trail users along the length of this state highway from Mission to Kinney Roads. Warning signs and flashers may help. A strategically placed signal may be the best solution.

**Orange Grove, Sanders and Picture Rocks Roads.** These county roads could provide a trail linkage between the CAP Trail and Saguaro National Monument. Formal implementation of trails in these rights-of-way could occur at the discretion of the county, but would appear more likely following completion of the CAP Trail. If Picture Rocks and Golden Gate roads in the monument are closed in the future, a proposal that has been put forward by the National Park Service, the importance of Orange Grove/Sanders/Picture Rocks Road Trail will be significantly enhanced.

**CAP Trail.** Opening the CAP Trail for public use is now primarily a matter of commitment and funding since the right-of-way is already publicly owned and the decision to implement a multi-use trail has

been made. While the entire length of the trail is of great interest, the segments from the CAP Wildlife Mitigation Corridor to Tucson Mountain Park at Starr Pass West and in the Marana area will probably receive the most early interest because of the higher population densities in these locations.

The trail agreement between the Bureau of Reclamation and Pima County specifies a hiking and equestrian trail within a 20-foot right-of-way. A 6-foot paved pathway is also called for along with various staging areas. The agreement does not mention bicycling and, at six feet, the paved pathway would be under-designed for that use. Bicycling could, however, become the predominant use of interest and should be accommodated with an appropriately designed facility. In order to develop a multi-use trail design that adequately reflects local user needs, the county and the Bureau of Reclamation should incorporate the Tucson-Pima County Bicycle Advisory Committee and the proposed Trail Advisory Committee as advisors early in the design process.

### **9.5.2 Subregion 2: Eastern Tucson Mountain Foothills**

From a trail perspective, the strong features of this subregion include a long history of trail use, a substantial amount of rugged and scenic undeveloped land adjacent to the public lands, and strong umbrella neighborhood associations that could coordinate trail management and maintenance activities.

Problems to be solved center around a lack of established access to the public lands; lack of safe pedestrian and equestrian crossings of major thoroughfares, especially Silverbell and Mission Roads; and incorporation of public trails into anticipated large-scale developments in the northern part of the subregion. In addition, the Santa Cruz River Park, although intended to be a many-mile-long landscaped trail corridor,

will require considerable attention before it becomes a true community asset that will be attractive to large numbers of area residents.

The following discussion organizes implementation recommendations around two themes: access to public lands, and access and associated trails that connect to the Santa Cruz River Park and other public parks (Table 9-1, Map 3).

### **Access to Public Lands**

Four critical access points have been identified for the eastern Tucson Mountain foothills. They are, from north to south, Box Canyon, Yuma Mine, Sweetwater, and Enchanted Hills Wash.

**Box Canyon.** The entry to this canyon is on private land and, thus, falls within the scope of this plan. At the same time, the quarter-section within which the canyon is located is within the Congressionally designated boundary of Saguaro National Monument West and is expected, at sometime, to be incorporated into the monument. Thus, implementation of this access point may be best deferred until such time as this incorporation occurs, with the National Park Service then being the appropriate agency to address the details of trail access.

**Yuma Mine.** Entry into Saguaro National Monument West at the Yuma Mine access point is expected to remain a trail entry point, that is, road access to the boundary would not be developed, but would be limited to foot and horse traffic. Bicycle use is not allowed on the trails. It is recommended that in the implementation of both the Yuma Mine access point and the Sweetwater Trailhead (discussed below), careful consideration be given to acquisition of property surrounding the trailheads as well as the access points themselves.

Topographically, the land adjacent to Saguaro National Monument West and Tucson Mountain Park, in this area north

of the Tucson Mountain Park extension, is extremely rugged, with steep hills and ridges rising several hundred feet above the surrounding terrain. Considerable historic significance is associated with the Yuma and Gila Monster mines and the natural resource qualities are outstanding.

Some of the critical land is in Bureau of Land Management and state ownership. The Yuma Mine itself is located on a quarter-section of Bureau of Land Management property with a half-section of state land adjacent to the south. Another smaller piece of state land, on which Sweetwater Drive begins, is located further south. The county should take the initiative in negotiating acquisition of these properties before the opportunity is lost.

Other critical nearby properties are private, most notably the area north of the Yuma Mine and the quarter-section in which the Sweetwater Trailhead is located. The purchase of these private properties should be given a high priority in the Tucson Mountain Park expansion program. In the case of the Yuma Mine, such an acquisition would place the current access point and one-half mile of the Yuma Mine Trail in public ownership.

**Sweetwater Trailhead.** The Sweetwater Trail to Wasson Peak is the only designated trail within Saguaro National Monument West that begins on the east side of the Tucson Mountains. The trailhead was identified in the 1976 Trail Access Plan as an important access point and remains so today. The 1976 plan recommended that the trailhead be accessed by way of a private dirt road that heads southwest from El Camino del Cerro Road. The amendments to the plan, added in 1979, modified this recommendation to one that provided access at the west end of El Camino del Cerro Drive, which is a public road. In conjunction with the El Camino del Cerro Drive access, a trail segment within Saguaro National Monument West was proposed that was to connect to the Sweetwater Trail a mile to the south.

For two significant reasons, the original access point to the Sweetwater Trail is the most appropriate. First, the rugged topography between El Camino del Cerro Road and the existing trail would not lend itself to trail construction. The proposed trail segment could not follow a ridge or wash, but would have to cut across the grain of the landscape. It would not only be difficult to build and maintain, but would probably be visible from residential developments in the Tucson Mountain foothills to the east. Second, the Sweetwater Trail, as it has existed for many years, begins on private land and, for one-half mile, continues on private land within the confines of a narrow canyon that is rugged, scenic, and essentially incapable of being developed. The best solution to trail access would seem to be the acquisition of both the one-half mile of trail and the canyon itself, in connection with public acquisition of the right-of-way along Sweetwater Trail Road.

The goal of an acquisition program in this area could also result in all or most of the Roger Extension Trail being located within Tucson Mountain Park as well as western portions of Sweetwater Wash, the South Branches of East Idle Hour Wash, Sweetwater Drive, and South Sweetwater Wash.

**Enchanted Hills Wash.** The access point into Tucson Mountain Park along Enchanted Hills Wash leads directly into Starr Valley, one of the most popular hiking and riding locations within the park. In this plan it is proposed as a trail entry point, that is, it would be accessed only by pedestrian or equestrian traffic. If West 36th Street were designated a trail corridor, also a recommendation of this plan, a small amount of vehicular parking could be made available near the west end of the street. The acquisition of a short cross-country segment and Enchanted Hills Wash itself would solidify access into the park.

**Established Access Points.** El Camino del Oeste and Starr Pass East are

both identified in this plan as established access points; they connect the two legs of the Greasewood Loop, formed by Camino del Oeste Wash, Anklam Wash, and the gas pipeline. To be functional as trailheads both will need minor improvements. At El Camino del Oeste a parking lot is necessary; in order for such a lot to be reachable by passenger cars, a small addition to Tucson Mountain Park to the west of the road may be required.

The Starr Pass access is located on property on which the City of Tucson's CAP water treatment facility is being constructed. This property would also be suitable for trailhead parking; it is recommended that an agreement to that effect be pursued between the county and the city.

#### **Access to the Santa Cruz River Park and Other Public Parks**

The second theme around which recommendations are presented relates to trail access to the primary trail (the Santa Cruz River) and to other public parks. In considering these trail connections, both trail opportunities as well as several problems and constraints are evident, including conflicts between transportation arteries and trail corridors, and the effects of environmental degradation.

**Conflicts Between Transportation Arteries and Trail Corridors.** Silverbell Road and Mission Road bisect trail routes, making connections to the Santa Cruz difficult. Mission Road is designed for high speed traffic. Safe pedestrian and equestrian crossings would require crosswalks at a minimum, with signals preferred. Silverbell Road is also a high speed road, with a 50 mile-per-hour limit posted for most of the way. At its north end, south of Cortaro Road, Silverbell still retains a rural quality, although parts of it are currently being widened. Because there is little grade differential between washes that cross Silverbell Road and the road itself, pedestrians and equestrians using the wash trails would have to cross on-grade,

using dip crossings. In new development areas, such as Continental Ranch, washes are being channelized between Silverbell Road and the river. North of Cortaro Road, Silverbell Road has been widened to four lanes, plus bike lanes and a median. Pedestrian or horse crossings in this stretch would be very difficult.

**Degradation of the Santa Cruz River.** The river has not been viewed as a scenic or recreational amenity in the recent past. A variety of uses including landfill areas, gravel pits, and a sewage treatment plant, in varying locations, are part of the riparian landscape; some conflict with river park trail use.

In spite of these constraints, the greatest trail opportunity in the subregion is the Santa Cruz River. The establishment of a developed linear park, or more natural foot and equestrian paths, from the confluence with the Cañada del Oro south to Grant Road, is a very high priority for the urban trail system. A bike path within the river park corridor, or within the Silverbell Road right-of-road should be part of this multiple-use trail. (Silverbell Road north of Cortaro Road includes designated bike lanes). To implement this priority trail, the program of public acquisition should be accompanied by a program of restoration. Restoration should include relocation of incompatible property uses, mitigation (by screening or landscape buffers) of adjacent incompatible uses, and general clean-up and revegetation. The effect of the Roger Road Wastewater Treatment Plant, located across the river to the east, can be lessened through landscaping along the river's east bank.

### **Tributary Washes and Trails**

The following discussion of tributary washes and trails is based on the assumption that the river park trail will be implemented in a timely fashion, and that as much as possible, within the limits imposed by bank stabilization, the river corridor will be restored and a trail will become a reality.

**Enchanted Hills Wash and the West Branch of the Santa Cruz.** Enchanted Hills Wash and the West Branch of the Santa Cruz were identified by the subregional panel as a first priority connector trail. For several reasons this trail merits special consideration. Both Enchanted Hills Wash and the West Branch provide a unique opportunity that other trails in the subregion do not. They serve residents who are otherwise underserved by recreational amenities. They have been impacted by development yet are still viable components of a trail network because they combine social/recreational and natural resource values. Both Enchanted Hills Wash and the West Branch are close to Kennedy Park, which will soon include an equestrian center, and have strong linkages with the expanded Santa Cruz River Park. The lower reach of Enchanted Hills Wash is edged by medium to high density housing. Much of the West Branch is also surrounded by housing. In spite of the density of residences in places along its banks, the riparian corridor is generally intact. Mature mesquite trees, found in portions of the West Branch, provide both bird habitat and an irreplaceable visual resource that should be preserved.

Unlike other wash crossings in the southern part of the subregion, the intersection of Enchanted Hills Wash with Mission Road is compatible with trail use. The road crossing over the wash employs large box culverts that permit both foot and horse use. The intersection area could be retrofitted with a horse ramp and pedestrian and equestrian trails could be designated along one side of the wash. In addition, it is strongly recommended that the entire trail length be kept in a natural state. The first and major step for implementation, as shown in Table 9-1, is acquisition of the trail corridor through rezoning dedication of a public right-of-way or fee simple acquisition.

Ultimately, the entire West Branch loop, as identified by the subregional panel,

should be implemented, although this can be done in two phases. Phase one, from Ajo Way north to the confluence, should be developed as a nature trail, since the riparian character of this reach is generally intact. Vegetation is diverse, although large mesquite trees dominate. This 1.5-mile trail should be acquired as soon as possible, since ideally, to promote coordination and a systematic trail network, development and management plans should coincide with the design of its companion reach of Santa Cruz River Park. A design contract for the Mission to Ajo reach of the Santa Cruz has been awarded and construction is planned for 1989-91.

The West Branch Nature Trail should retain the character the trail name suggests. Design and construction should follow traditional, even pre-industrial, practices in landscape design in order to preserve all native vegetation. All of the trail blazing and grading, where necessary, should be done by hand. The trail should be downsized, to approximate a narrow, foot and equestrian path that winds its way along one bank of the river. It would be signed from its junction with the developed linear park and would be a more natural detour from the engineered effects of soil cement and developed linear park. A group of volunteers, enlisted with the help of the Westside Neighborhoods Coalition and local clubs, such as the 4-H, boys and girls clubs, etc., should be recruited as "Friends of the West Branch." County and city commitment to development and maintenance would assure that the nature trail would not become an attractive nuisance. A preliminary and critical early step for county and city planners is communication with and support from adjacent and nearby property owners.

Phase two of the West Branch Nature Trail would implement the remaining portion of the loop, from Ajo Way south to the diversion canal, and east to its intersection with the Santa Cruz. This reach of the West Branch is less remarkable for its vegetation and its

potential as a nature trail, than for its function in completing a trail circuit. Portions of the West Branch, especially in the vicinity of Via Ingreso, have been denuded. The diversion canal itself might even be considered an eyesore. Because of the environmental degradation in this portion of the trail loop, phase two should include major restoration and revegetation. Again, much of this could be accomplished with community/user participation, under the supervision of the County and City Parks and Recreation Departments. The first step is acquisition of right-of-way not presently in county or city ownership. Ideally, Phase Two should be implemented during the same time the Santa Cruz River Park, south to Irvington, is being designed, to assure coordination in trail system development.

**Wild Horse Wash.** The best trail opportunity in the northern part of the subregion is Wild Horse Wash. This 4.3 mile wash, designated a first priority by the subregional panel, could be implemented through rezoning dedication and fee simple acquisition. Both methods should be pursued, in a timely fashion, since this wash is very important to the trail network. It has the potential for long-distance equestrian travel between the Tucson Mountains and several primary trails (the Santa Cruz, the Cañada del Oro and the Rillito). It also connects with the lower portions of Subregion 3, via the Hardy Wash trail. In addition, the county is planning an equestrian center for Ted Walker Park, which is located near the Cañada del Oro/Santa Cruz confluence, and Wild Horse Wash would provide Subregion 2 equestrians with an important access route.

**Other Important Trails.** Within the first priority trail network, connections from public land to parks in the subregion are provided by Sweetwater Wash, the Greasewood Loop combined with the Anklam Wash local trail, Yuma Mine, and the South Branches of East Idle Hour. Of these, the most easily implemented may be Sweetwater Wash,

Greasewood Loop, and the Anklam Local.

One of the positive features of the Sweetwater Wash Trail is that its east end flows into the northern end of Silverbell Park. Although this part of the park is impacted negatively by the sewage treatment plant across the river, landscape buffers can alleviate the visual problem and the predominantly westerly winds will continue to deal with the most serious of the olfactory concerns. In addition to the merit of its park connection, Sweetwater Wash is a high priority trail because of the multiple values of its trail corridor, which combines natural resource, scenic and recreational qualities. At its west end within Saguaro National Monument, the wash is only a short distance over a low saddle (about 0.25 miles) from the Sweetwater Trail. An easily constructed link would provide a connector trail extending from Silverbell Park to Wasson Peak. The best strategies for implementation are a combination of rezoning dedication and fee simple acquisition.

Greasewood Loop includes portions of two major washes, one of which traverses Greasewood Park, and a segment of gas pipeline. Implementation would involve a combination of strategies, which include dedication, fee simple acquisition, and negotiation with the easement holder (the utility company) and the underlying property owners for trail use on the existing pipeline easement. This latter process will involve time-consuming property investigations and negotiations, and the effort is not guaranteed to be productive. If successful, however, the easement would be an important link in a very high priority trail.

The Anklam Local Trail is largely in public ownership now; a small portion is within Northwest Park and major portions are on public road rights-of-way. The final portion, between the gas pipeline and Silverbell Road, is within

Anklam wash on private property. Acquisition of the wash between the pipeline and the road would be required, with the remainder of the trail only requiring designation within the right-of-way and minor improvements around Northwest Park. This should be a straight-forward, cost-effective implementation program.

Implementation of both the Yuma Mine Trail and the South Branches of East Idle Hour will best be accomplished by a combination of dedication during rezoning, designation within rights-of-way, and fee simple acquisition. The western portions of both are in rugged country, appropriate to low density development that would attract trail users.

Finally, two trails not included in the first priority trail network deserve brief mention: Roger Wash/Roger Extension and Trails End Wash. Roger Wash was not of special interest to the subregional panel because a portion of it lies within Agua Dulce, a planned, relatively high density development. However, the portion of the wash within Agua Dulce has been dedicated to Pima County, thus providing a basis for serious consideration of the remainder of the wash. At its upper end, where the Roger Wash Trail becomes the Roger Extension, expansion of Tucson Mountain Park could easily encompass the extension, thus placing a large fraction of the trail in public ownership. These factors suggest that this trail may be more easily implemented than others with higher priorities.

Trails End Wash, although not one of the major washes of the subregion, is nonetheless substantial in size and has the advantage of having easily implemented access at both ends. The west end is immediately adjacent to Trails End Road and only a short distance from Tucson Mountain Park. The east end flows into Silverbell Park. The wash itself would have to be acquired by a combination of rezoning dedication and purchase.

### **9.5.3 Subregion 3: Tortolita Foothills and Northwest Catalinas**

This is a critical juncture in time for trails planning in Subregion 3. Settlement patterns are changing as the subregion undergoes a transition from rural to suburban housing densities.

Development pressures could result in degradation of the natural environment and loss of trail opportunities if growth is unmanaged. On the other hand, managed growth will recognize the multiple values of trail corridors. Environmental, social, and recreation values meet in the priority trailways of the subregion. Several of the area's larger natural washes have groundwater recharge, habitat, and recreational values that would be lost if washes are channelized. The area's unique ironwood-paloverde vegetative community and the scenic resource it provides are especially important as trail and wildlife resources.

As in other subregions, washes are major traditional-use trails, especially for equestrians. Many of the problems and challenges wrought by development pressures are similar throughout much of the study area. However, there are several factors that affect future implementation of the comprehensive trail network that are unique to Subregion 3. They are:

- The ability of Pima County to expand Tortolita Mountain Park and secure a number of access routes before foothills development severely limits public access;
- The role of the towns of Marana and Oro Valley in guiding development in portions of the subregion, especially in the Tortolita and Catalina foothills; and
- The position of major landowners and developers regarding dedications or designations of trails for public use.

The following discussion provides a policy context for implementation methods suggested for the subregion's first priority trails (See Table 9-1, Map 3).

#### **Expansion of and Access to Tortolita Mountain Park**

Major portions of the Tortolita foothills that are not in private ownership are state trust lands managed by the Arizona State Land Department. The county should begin negotiations with the State Land Department for the purchase of lands for mountain park expansion. Park land acquisition should be a high priority and projected capital (a fraction of a sales tax increase, bond issues, etc.) should be earmarked for this purpose. With a general purchase plan in mind, the county could request that the State Land Department close particular lands to application to new uses. If approved, closure would protect the resource from development until such time as the county could be the bona fide buyer at public auction. Another strategy for conservation of high priority trails that cross state lands, such as Wild Burro and Cottonwood washes, is the lease of a long-term or perpetual public trail right-of way.

The county should exert a strong leadership role in shaping quality growth and development to protect trail access to the mountain park and trail use in the foothills and north Tucson Basin. Because of the existing county park, the county is an interested landowner since incompatible property uses adjacent to the park will undermine park value. Thus, it is in Pima County's best interest to encourage the town of Marana to adhere to its 1987 General Plan, which designates much of the Tortolita foothills as "development sensitive areas" with low density rural development. Upon adoption of the trail system master plan by the Pima County Board of Supervisors, the county should encourage the adoption of relevant portions by the Marana and Oro Valley

town councils in order to help insure timely dedication of trails as a condition of development plan approval in these jurisdictions.

The Tortolita Community Plan (1982) identifies several major collector trails and connector system trails that "should be acquired during the development process" to assure access to public land. They include the Cañada del Oro, Wild Burro Canyon, Honey Bee Canyon, Ruelas Canyon and the Hardy Road alignment between Arthur Pack Park and the Cañada del Oro. These are all trails that are part of the first priority trail network. In the seven years that have elapsed since the recommendations of the Tortolita Community Plan, dedication at the time of rezoning remains the most workable and cost-effective trail acquisition technique for much of this subregion.

#### **Jurisdictions of the Towns of Marana and Oro Valley**

The towns of Marana and Oro Valley are responsible for guiding development in much of the subregion. Recreational opportunities will be enhanced if these communities share with Pima County a commitment to a network of public trails. The community, neighborhood, and development plans of Rancho Vistoso, which is under the jurisdiction of Oro Valley, identified important open space and public equestrian/hiking trails. Policy 13 of the Rancho Vistoso South Neighborhood Plan (1978) states that Big Wash, the Cañada del Oro floodway and other major drainageways "should be utilized as parks, public hiking and equestrian trails, buffer zones and linkages in an open space system," noting that such a system can "unify and link major public and private recreational areas, including Catalina State Park, with suburban and urban developments." Portions of Big Wash and Honey Bee Wash are now in the process of dedication to the county.

In situations analogous to this, intergovernmental agreements between

the county and the towns of Oro Valley and Marana could be amended to include specific reference to the county trail system master plan. Such agreements should affirm the three jurisdictions' commitment to trail dedications, especially of trails that either provide public access to the county park, are natural washes with recharge or retention/detention potential, or serve as high priority trails to public lands in the Catalina Mountains.

The land use policies of the town of Marana are of special interest for trails planning in the western part of the subregion. Although the town has grown rapidly in the last few years, the General Plan also illustrates quality of life and natural resource concerns. It designates major open space zones, trails systems, and land-use buffers in the Tortolita foothills and within washes that link the Tortolitas with future linear parks along the CAP and the Santa Cruz River. However, the General Plan can be superseded by the Town Council.

#### **Opportunities for Trail Dedications and Negotiated Trail Rights-of-Way**

**Honey Bee and Big Wash.** Portions of important washes identified in the first priority trail network, such as Honey Bee Wash and Big Wash are, as noted earlier, in the process of dedication to the county by Rancho Vistoso. The upper reach of Honey Bee Wash, part of the La Cholla/Honey Bee Loop connector trail, is designated a public equestrian/hiking trail in the Rancho Vistoso Development Plan, although at the present time parts of the wash just south and north of Rancho Vistoso Boulevard are fenced. This wash is very important to hikers and equestrians for a variety of reasons, including access to the Tortolitas, scenic beauty, and cultural resources. The canyon has one of the few cottonwood/mesquite bosques in the study area. Cultural resources, including prehistoric petroglyphs, are in the

portions of Honey Bee owned by Rancho Vistoso.

Big Wash is also a high priority trail because of its natural resource, scenic, and recreational values. Because of its value for aquifer recharge, wildlife habitat and movement, and recreation use, the southern portion of the wash, within Rancho Vistoso boundaries, is currently posted as dedicated open space. Rancho Vistoso and the county are now in the process of formalizing this designation through dedication to the county.

#### **Other Tortolita Foothills Trails.**

The other major landowner in the Tortolita foothills is Westinghouse Communities of Arizona, Inc., whose holdings of approximately 7,000 acres include portions of Wild Burro and Ruelas washes and the canyons they access. Major portions of this property had been state trust lands until 1986 when a land exchange was negotiated between the State Land Department and Cottonwood Properties. Cottonwood Properties is the limited partner, and Westinghouse Communities the managing partner, in the Tortolita Mountain Properties Limited Partnership. The 1986 exchange was approved subject to the applicant executing a binding covenant, whereby Cottonwood/Westinghouse would agree to grant Pima County an access easement across the property (at a location agreeable to both the applicant and Pima County), in order to permit public access to Tortolita Mountain Park through Wild Burro Canyon (State Land Department, File #61-91644).

The agreement stipulates that a public road must be provided from Tangerine Road to Wild Burro Canyon. Although the exact terms of a public easement into the canyon and to the future Tortolita Mountain Park boundaries have not been determined, the developer supports public access. A letter of 13 October 1988, to the Pima County Parks and Recreation Commission from David Graham, Westinghouse Vice-President, advises the

commission that Westinghouse supports both "the concept of a city-county trail system" and the Marana General Plan which encourages a "corridor system of trails tying the Santa Cruz River with Tortolita Mountain Park." In addition, Westinghouse stated in the same communication that open space-access will be provided to the future Tortolita Mountain Park via Wild Burro Canyon in a future specific plan.

There seems no disagreement about the concept of public access or of a county-wide trail network. It is very important to emphasize, however, that the quality of trail and public road access will be defined in the specific plan. If the town of Marana and the county share a commitment to trails and access and, through the strategy of an intergovernmental agreement, coordinate trails planning in the Tortolita foothills, the future Westinghouse specific plan should include specific trail dedications.

Wild Burro Wash was discussed previously in Chapter 7. It is important to stress here that the entire wash corridor from its intersection with the CAP to the Tortolitas, has priority status, not just the upper reaches that access Wild Burro Canyon. The Westinghouse specific plan, therefore, should include a specified width of wash corridor and upland bank along the entire length of the wash that lies on Westinghouse property, as well as sufficient land for public parking associated with the public road access to Wild Burro Canyon. The upper portions of Wild Burro Canyon are too steep and rocky for horses, so the need for equestrian staging should be assessed prior to the drafting of the specific plan. The trails and open space component of the plan should also address the issue of trail management, including enforcement of county ordinances prohibiting off-road vehicles on recreational lands. Presently Wild Burro Wash is being degraded in its upper reaches, at least partially by jeep traffic generated by resort hotel tours to canyon petroglyphs. If the county accepts trail dedications, it would be

responsible for and empowered to maintain those trails. From the developer's and property owner's point of view, assurances on the part of the county for trail management and maintenance must be tied to trail dedications, otherwise a trail could become an attractive nuisance or a public access point could deteriorate into a parking lot for litter.

Implementing the high priority local trail, the Tortolita Foothills Trail, in its entirety, will be more problematic than Wild Burro Wash, because the foothills trail is primarily upland, out of the flood plain, and developable. This trail crosses state lands and private lands held by Westinghouse and Rancho Vistoso, and was identified by the subregional panel as a valuable east-west trail linkage. Its eastern segment is coded as a connector trail (part of La Cholla-Honey Bee Loop). Much of the trail corridor is an old jeep road with several access trails into major canyons of the Tortolitas (Prospect, Ruelas, Wild Burro, Cochie, and Cottonwood) that branch off from the major east-west trail.

Recent developments will affect major portions of this trail. Westinghouse Communities recently received approval from the town of Marana for the Tortolitas Mountain Properties Specific Plan, a master-planned community of approximately 1,800 acres, that lies in the foothills east of Wild Burro Canyon, between Tortolita Road and Thornydale Road. This development includes the upper reach of Ruelas Wash and Ruelas Canyon and a small portion of Prospect Wash. It also includes major portions of the Tortolita Foothills Trail.

The "trail concept" component of the specific plan discusses a "community trail system" located within the public rights-of-way of the projected Tortolita Parkway and Thornydale Loop. This trail system, according to preliminary plans, will be a sidewalk located on one side of these major roads. Another type of trail system consists of a private trail that will access

Ruelas Canyon and will be available only to residents of the specific plan area. A public regional nature trail will be associated with Prospect Wash, which crosses a small area of the Westinghouse property, in the southeast corner of the specific plan area. Since this trail hierarchy is still in the conceptual stage, the town of Marana and the county have an opportunity to work with Westinghouse Communities to enrich the public trail access portions of the plan. Two main concerns relate to access to Tortolita Mountain Park and need for an east-west foothills trail.

From the perspective of public access, the exclusive trail to Ruelas Canyon is in conflict both with the trail extension and access point identified in the first priority trail network of this plan, and the recommendations of the Tortolita Community Plan. However, since the specific plan has already been approved that designates Ruelas Canyon as private, public access may be a moot point. The county's position as the land manager for Tortolita Mountain Park is that if the public does not have access to the park through Ruelas Canyon, then entry to the mountain park from the canyon will also be closed to residents of the specific plan area. If the county and the town of Marana were able to renegotiate with the developer for some type of limited public access through the canyon, possibly by permit, the county's position might change. In a reassessment of Ruelas Canyon access, volume and impact of use would need to be determined and an appropriate management plan agreed upon. In any case, negotiations, if feasible at all, should be directed toward accommodating the points of view of the property owner, the land manager, and the public.

Alternative access points to the Tortolitas, in addition to the major mutually acceptable entry from Wild Burro Canyon, should be investigated. Cochie and Prospect Washes were designated as second priorities by the subregional panel although, as development plans are

proposed and dedication opportunities arise, these wash trails could assume more importance. A small portion of Prospect Wash on Westinghouse property, has been identified as a public regional nature trail. The upper reach of this wash, northeast of the Westinghouse development, is a part of the first priority Tortolita Foothills Trail. A northern extension off this trail meets the future south boundary of the mountain park at the Shannon North boundary access point. Prospect Wash/Tortolita Foothills Trail to the Shannon North entry point is currently used by area equestrians as an important access route into the southeast Tortolitas.

At present, the only accommodation to an east-west trail is a sidewalk. It is designated as a community trail, but can not accommodate equestrians, nor is it an appealing trail corridor. The county and the town of Marana should negotiate with the developer for a bridle trail along these public rights-of-way or an alternate east-west foot and equestrian path in portions of the specific plan area's designated open space. At issue is a public trail link along the base of the mountains. The trail does not have to be a homogeneous unit from Honey Bee Wash west to Cottonwood Wash. Portions could be more or less natural. Access nodes to Tortolita Mountain Park could take priority in acquisition and design, but the concept of continuity of use should be the main issue. Because much of this long trail lies outside washes in more expensive, development-prone upland areas, implementation of a trail corridor on private land will be a challenge and will probably require a combination of techniques. (See Table 9-1). The county should also investigate the possibility of portions of the east-west trail being routed along the state lands/private property boundary, in cases where the toe of the slope allows for a trail. In the portions of the trail that lie on unsubdivided lands, specific plans should address the question of east-west trail linkages between major Tortolita washes.

**Northwest Catalina Trails and Access Points.** Opportunities for trail dedications and negotiated trail rights-of-way exist in the northwest Catalinas as well. Several of the subregional panel's first priority trails in this area cross state lands or undeveloped private property. Trail dedication upon subdivision or rezoning is a likely acquisition method. Since many of these trails are in washes or in existing road rights-of-way, implementation can begin with the designation of trails in public rights-of-way. Acquisition of washes in undeveloped or low density areas can be by dedication in the event of rezoning or fee simple purchase, and such purchase may be cost effective, since these trails are generally very short.

An important trail right-of-way is currently being negotiated for the Catalina Park/Flat Rock Trail. This trail traverses state lands to connect Catalina State Park with the Coronado National Forest. Negotiation on the lease of a 50-year public right-of-way trail, in the name of the Arizona State Parks Board as the lessee, is being finalized with the State Land Department. The trail corridor is 6 miles long and 20 feet wide and has outstanding natural resource and recreation features. Unfortunately, the specifics of this case are such that it will probably not be useful in setting a precedent for future state land leases regarding trails.

A number of boundary access points to the Coronado National Forest were identified by the subregional panel as high priorities for residents of the area. Several provide access to the national forest off the Catalina Park/Flat Rock trail. Although these access points are generally on state lands, recent private land purchases in the proximity of Little Cottonwoods trail entry point may be jeopardizing continued access. The county may need to investigate the access potential (and attractiveness to local users) of the Rollin Road right-of-way.

### **Upgrading of Subregional Panel Priorities**

Three traditional trail segments were upgraded from subregional panel second priorities to be included in the first priority trail network. A portion of Cottonwood Wash was upgraded to the first priority trail network because it closes a gap in a long distance trail loop by joining Tortolita Foothills Trail with the CAP. Because the majority of this trail segment is on state lands, implementation may best be accomplished in the short term by the lease of a trail right-of-way as an interim solution. The town of Marana has designated this wash an open space corridor in its General Plan.

The one-half mile, western portion of the Big Wash/Hawser/to Flat Rock Trail was upgraded to the first priority system because this trail segment links two subregional panel first priority trails, Big Wash and Golder Ranch Loop.

Hardy Wash was upgraded to the first priority trail network because it links the Santa Cruz River primary trail with the Cañada del Oro through Arthur Pack Park. The trail is especially important to equestrians in the southern portion of the subregion. Nearly half of the trail lies in public road rights-of-way or public park lands. The balance of private land is primarily unsubdivided, undeveloped and a candidate for trail dedication as a future condition of rezoning.

Three candidate road rights-of-way trails, Tortolita Road, Moore Road, and Edwin Road/Chalk Mine Road (on the Pinal/Pima County line), were designated part of the first priority trail network. The first two are important access routes to the Tortolitas. The latter is incomplete as a county right-of-way. Only small portions east of Highway 89 are maintained right-of-way, but it has the potential to link the Tortolitas with the Catalinas, with access at Crow Windmill and Harm Gate boundary access points. As portions of this alignment come into

the county road system, trail designation should be a high priority.

### **9.5.4 Subregion 4: Catalina and Rincon Foothills**

High land costs and landowner concerns combine to make implementation difficult in this subregion. On the other hand, access to the public recreation lands, access to the primary system, and the designation of key trails (primarily in major washes) are of overwhelming concern not only to the members of the subregional panel, but to the public-at-large. One of these issues, securing access to public lands, has been of considerable public concern for over 15 years, with only limited success achieved to date.

The trails, rights-of-way, and access points incorporated into the first priority trail network, then, attempt to address these concerns. The following discussion presents implementation analyses and recommendations as they relate to these three issues (Table 9-1, Map 3).

#### **Access to Public Recreation Lands**

The critical access points identified are Agua Caliente Canyon, Agua Caliente Hill North, Agua Caliente Hill South, Old Spanish, Pima Canyon, and Ventana Canyon. Each of these points not only provides public land access, but is part of the proposed basic network. In addition, an established access point, Campbell Avenue, is discussed because of problems associated with its use.

**Agua Caliente Canyon.** This access point provides entry to the Coronado National Forest at Agua Caliente and Milagrosa Canyons as well as access to Agua Caliente Wash, an important component of the primary system. At present, access is available near the northern end of Avenida de Suzenu. However, it relies on using a private road and is, therefore, revokable at any time.

A more effective, long-term implementation method would be the purchase of the eastern end of Agua Caliente Wash with access and parking provided near the eastern end of Snyder Road. If Snyder Road were determined to be the best access route, arrangements for public use would have to be made, as the eastern one-half mile of Snyder Road is in private ownership.

**Agua Caliente Hill North and South.** These two access points are traditional entries into the national forest now threatened by development. They provide access to the Agua Caliente Hill region and, because they connect old jeep roads, are useful to pedestrians, equestrians, and mountain bicyclists. To reopen them, public acquisition of certain private roads east of Wentworth Road would be required.

**Old Spanish.** The establishment of an access point into Saguaro National Monument at this location is in accord with the 1988 Saguaro National Monument Management Plan, which recommends access at or near this location. To facilitate implementation, an agreement between Saguaro National Monument and Pima County would need to address questions of land acquisition and parking lot construction and maintenance. This access point provides an excellent connection to Pantano Wash by means of the Shurban Loop.

**Pima Canyon.** Securing public access into the national forest at Pima Canyon was the catalyst for the 1976 Trail Access Plan and remains an issue of public concern today. Because the property adjacent to the access point is undeveloped and unsubdivided, dedication at the time of rezoning would be the most appropriate implementation method. An important component of access at this location will be adequate parking at a location that does not impact nearby landowners.

**Ventana Canyon.** Of all the access points identified during this project, this

may be most in need of immediate public action. The present route used by the public to gain access into the canyon crosses property held by four private landowners and is revokable at any time. Some of the property along the route is undeveloped and unsubdivided while some has been subdivided and developed, making the acquisition of access less than straightforward.

It is recommended that implementation focus on the following strategies. A license agreement between Pima County and the resort ownership could be used to provide parking at a specified location, with improved signage to provide directions across the resort property. A license agreement would also seem to be the most appropriate mechanism to permit public use of the private road that is part of the traditional access route. In the future, if the property crossed by the road were to be rezoned, then dedication of the road should be a requirement of that rezoning.

The question of access across the undeveloped properties crossed by the trail route may be best addressed by a different procedure. The most appropriate ultimate disposition of these properties would seem to be public ownership. Topographically, these properties are within the confines of the canyon and, if developed, would effectively prohibit public access to the national forest trail. The county should actively seek to acquire these properties through purchase, trade, or donation. Additionally, it is recommended that the county open an active line of communication with the Coronado National Forest and seek to prepare an intergovernmental agreement that would address the future management of these properties.

**Campbell Avenue.** Although this is an established access point to the Catalina Mountains, its location and design are less than satisfactory and it should not be used as a precedent in future access designs. In addition, when created the

corridor did not provide access to the nearby point of significant interest, the Campbell Cliffs that was the destination of most public users of the area. These cliffs, long used by rock-climbing enthusiasts, are just outside the national forest boundary on private lands. Thus, to increase the usefulness of the Campbell Avenue access point. Because of proximity to the national forest and long-term use as a recreation site, it is possible that if purchased by the county, the property could be managed by the national forest, and ultimately incorporated within the forest boundary. If a purchase occurs, such an agreement should be pursued.

### **Access to the Primary System**

More components of the primary system occur within or adjacent to this subregion than any other. These include all of the Tanque Verde, Agua Caliente, and Rillito as well as major stretches of the Pantano and Cañada del Oro. Significant portions of the Rillito, Pantano, and Cañada del Oro are already in public ownership with linear parks existing or planned along their lengths. Thus, established public access into these streams is a critical component of the basic trail system.

Most of the identified points of access into the primary system are washes. From west to east they are Casas Adobes, Pima, Campbell, Camino Real, Finger Rock, Ventana, Cloud, Freeman, Escalante, and Shurban Loop. With the exception of Campbell Wash, which is channelized, the washes all enter the primary streams in a natural condition. Unfortunately, with the exception of Escalante Wash, all the others cross major arterials (usually at several points), primarily by means of at-grade crossings. At a minimum, signage and, in some cases signals, would be needed to make these crossings usable by pedestrians or equestrians. In a few cases, for example, Pima Wash at Oracle Road and Ventana Wash at River Road, adequate bridges permit below-grade crossings.

In addition to washes, a few roads, road alignments, and utility corridors have been designated as parts of the first priority network. These include Birch Way, Bonanza Avenue, Snyder Road, Wentworth Road, and the Agua Caliente-Tanque Verde Link. A final important access point, designated as the Linda Vista equestrian trail, provides access into the Cañada del Oro from Linda Vista Boulevard. Though an agreement among the developer, the Town of Oro Valley and Pima County. It was recently dedicated to the county.

Access into the Cañada Del Oro is provided at two points about 1.5 miles apart. The southern point is an extension of Birch Way; the northern point is the Linda Vista easement. Connection between these points consists of a short right-of-way trail that has the potential to serve an area where horse ownership is common and access into the Cañada del Oro has become an issue of considerable concern. Implementation should be relatively straight-forward, consisting of acquisition of the remainder of the Birch Avenue, and perhaps, Hardy Road, alignments and the designation of the other rights-of-way as a trail corridor.

Three of the four remaining rights-of-way (Bonanza Avenue, Snyder Road, and Wentworth Road) are all or nearly all in public ownership. The Agua Caliente-Tanque Verde Link consists of two public rights-of-way, a utility easement, and a small cross-country segment. Thus, implementation of any of these involves primarily the designation and maintenance of the rights-of-way as trail corridors.

### **Key Trails Within The First Priority Network**

Although Agua Caliente Wash is within the primary system and is already designated for public acquisition, it is worth emphasizing that this wash in its entirety appears to provide the best overall opportunities of any within the subregion. Especially important is the portion connecting Agua Caliente Park

with the national forest. Also a critical component of the basic trail system is the lower reach of Tanque Verde Wash (from the confluence east to Wentworth Road). Although ultimately, it may be desirable to have all of Tanque Verde Wash in public ownership, from a trail user perspective the downstream portion appears to be most urgent. Acquisition of both of these washes by means of purchase or rezoning dedication should be given the highest priority. In addition, it must be re-emphasized that trails associated with these washes should utilize the wash channels or, if on the bank, should be low-key pathways. Formally designed and constructed trails are not appropriate in these locations.

In terms of overall viability as connectors from the primary system to the public lands, Pima Wash, Finger Rock Wash, and Shurban Loop offer the best opportunities. All are entirely within private ownership. Because of the high cost of acquiring the entire length of Pima and Finger Rock washes, a short-term strategy could focus on the upper reaches of Pima Wash and the lower reaches of Finger Rock Wash. Upper Pima Wash is designated a high priority as a pedestrian trail, while Lower Finger Rock Wash is of considerable importance to equestrians. Shurban Loop (an equestrian trail connecting to Saguaro National Monument East at the Old Spanish access point) consists of two short washes and a cross-country segment. Implementation of this trail should be considered as a unit.

Parts of these three trails are located in undeveloped, unsubdivided properties. When rezoning and subdivision occurs, it will be critical that these washes be dedicated as public trails. If the washes within developed areas are to be incorporated into a trail system, fee simple purchase is the only other obvious method.

It is recommended that three additional trails be given consideration in the relatively short term. These are Freeman

Wash combined with Del Este Wash or Reyes Wash, Lower Ventana Wash-Cloud Wash joined by Snyder Road, and Lower Campbell-Camino Real. Although Ventana Wash is in private ownership, Snyder Road is a public right-of-way and parts of Cloud Wash are in public ownership. The Freeman-Del Este (Reyes) combination is also partially in public ownership, thanks to two strategically located parcels of City of Tucson park land. Thus, implementation costs of these trails would be somewhat reduced. Lower Campbell-Camino Real makes an excellent short loop for equestrians. However, it is entirely in private ownership with an unacceptable concrete channel on the downstream portion of Campbell Wash.

Implementation, therefore, could focus on the Camino Real segment until such time as design modifications could be made to Campbell Wash.

Two final comments pertain to two trails not included within the first priority trail network: Tanuri Wash and Sabino Creek. The subregional panel gave the Tanuri-Craycroft Wash trail a second priority designation. It was not upgraded into the first priority network primarily because of design problems associated with Craycroft Wash as it crosses Craycroft Road and River Road. Tanuri Wash, however, crosses River Road at a natural dip crossing and has a wide, sandy-bottomed channel very appropriate for equestrian uses. If the problems associated with the road crossings could be solved, this entire trail would merit high priority consideration. Failing that, Tanuri Wash could be implemented on its own.

Although Sabino Creek was designated a second priority trail by the subregional panel, the panel also recognized its natural resource values. The Nature Conservancy has recognized them as well and has included the creek within its "Streams of Life" campaign, which seeks to protect a number of stream and riparian-related sites throughout Arizona. The Conservancy has documented Lower

Sabino as supporting the last remaining relatively undisturbed mesquite bosque in the Tucson Basin. The Conservancy has also pointed out that the understory of the bosque is annual grasses that, during most of the year are highly flammable.

In addition, the Conservancy has taken the position that the destruction of this ecological community would be an irretrievable loss of an important part of the natural heritage of the Southwest. The most prudent course of action, then, may be to seek to protect the stream's natural resources by means of conservation easements or some similar designation. The Tucson office of the Nature Conservancy has recently begun such a program.

### **9.5.5 Subregion 5: San Pedro Valley**

Because of the inaccessibility of the San Pedro River Valley and lack of local population, implementation of a public trail system within the valley need not assume a high priority. For some time to come, access into the Coronado National Forest will remain the principal issue. Therefore, the main objective of a trail implementation strategy within this subregion should be to secure public vehicular access to the forest boundary (Table 9-1, Map 3).

The only national forest trail within this subregion that is usable to the forest boundary is the Brush Corral trail. It reaches the boundary at what is identified in this plan as the Buehman Canyon North access point. Forest Routes 654 and 32 have the potential to provide access to this point from the San Manuel-Benson road. Most, but not all, of these routes cross forest service land.

A simple implementation strategy to make Buehman Canyon North a viable access point would include an agreement between Pima County, the National Forest Service, and the landowner, with a right-of-way lease from the State Land

Department, to (1) to keep gates across the road unlocked, (2) maintain the road to a passable four-wheel drive standard, and (3) extend it one-half mile at its west end so it reaches the trail head.

A second, less immediately vital, implementation strategy relates to Edgar Canyon. At such time as the trails within the forest that connect the main Mt. Lemmon trail network with Edgar Canyon are upgraded, then Forest Route 802 should be opened and maintained for public use. This would provide access to both the lower and upper reaches of Edgar Canyon. Because the majority of the canyon is within private ownership, a license or lease agreement between Pima County and the landowner may be the most feasible implementation strategy for the canyon itself. As with the roads to Buehman Canyon, the question of minimal road maintenance and gate locking procedures would have to be addressed.

None of the other trails or access points within this region need be considered in current implementation strategies. However, as with other subregions, when development occurs or property changes ownership, efforts should be made to keep access opportunities from being lost inadvertently.

### **9.5.6 Subregion 6: Rincon Valley and Northeast Santa Rita Mountains**

The potential for trail implementation in Subregion 6 should be relatively great. Factors that may promote implementation include:

- The high percentage of unsubdivided and undeveloped lands in the area that are privately owned or that may be transferred to private ownership from state trust lands that may be suitable for rezoning, and thus, trail dedication.

- Trail corridors in natural wash and cross-country settings and along road and utility rights-of-way that are currently unencumbered with structures or development that would impede trail use.
- Trail corridors with attractive and even superlative natural resources that will encourage trail recreation and may be suitable for public acquisition or as natural open space in future planned developments.

Some large planned communities appear imminent in this subregion and the overall growth potential may be great. Trail dedication through the rezoning process, therefore, promises to be a very important implementation tool. At present, planned developments are widely scattered, however, and major gaps between dedicated trail segments are likely. Purchase acquisition programs should be considered to close critical gaps if infill development is likely to be some time in the future. Trails leading to Saguaro National Monument are an example where such expenditures may be justified.

Flood control, open space, or resource conservation acquisitions in this subregion may also help implement trails. In some cases, license agreements with landowners or lease agreements with the state may provide for more immediate public trail use.

Implementation of a basic trail network in Subregion 6 will (1) provide public access to the southern boundary of Saguaro National Monument East; (2) provide access to the other public lands in the area; (3) incorporate a segment of the proposed Arizona Trail; and (4) establish loop trails in both the northern and southern areas of the subregion. The first priority trail network identified by the subregional panel, plus the following additions and amendments are recommended to accomplish these basic objectives (Table 9-1, Map 3).

### **Access to Saguaro National Monument**

Public access to Saguaro National Monument through Subregion 6 has not been available for over 25 years. The east-west Monument Boundary Trail has been proposed as a solution to this problem. To coordinate this proposal, discussions were held among the project consultant and representatives from the project Steering Committee, the Subregional Panel, and the Estes Company, which has prepared a specific plan for proposed Rocking K development. These discussions led to agreements on a revision of the Monument Boundary Trail alignment, inclusion of an additional public access trail (called Hope Camp in this plan), endorsements for two boundary access points to the monument, and the importance of Rincon Creek as a trail and wildlife habitat and corridor.

The Monument Boundary Trail alignment preferred by Rocking K planners was a fairly close approximation of that selected by the citizens panel and was accepted by all parties. An agreed-upon addition to this alignment, requested by panel representatives, was an extension from the eastern end of Alvord Road to meet the boundary trail proposed in the Rocking K plan.

The Hope Camp trail is a north-south route that terminates at both the monument boundary and intersects the Monument Boundary Trail and Rincon Creek forming several possible trail circuits. The alignment for the Hope Camp trail was an acceptable variation of a trail identified independently by the panel.

Eight candidate locations for boundary access points to Saguaro National Monument were identified during the trail priority selection process. The panel recommended that three access points, including the Madrona Ranger Station, be implemented.

Rocking K Properties has proposed two boundary access points at the ends of the Hope Camp and Rocking K trails, which are about 1.5 and 3 miles respectively to the west of the Madrona Ranger Station access point. These locations were acceptable to the panel representatives as well as to the National Park Service, providing that public access is guaranteed. In the proposed specific plan, resorts are shown at these two locations, as is access to the monument for the public as well as residents of the development. The developer has made a commitment to provide both public trail and road access to these entry points.

The National Park Service proposes to complement the access points by building a pedestrian trail to the Madrona Ranger Station. This trail would be parallel to, and just inside, the monument boundary. The trail will not be open to equestrians because of the difficulties and expense that would be associated with building and maintaining a horse trail on the steep slopes.

Equestrian access to the monument by both the general public and Rocking K residents would have to await the completion of a horse-trail leading from the Rocking K properties, through some portion of the X-9 Ranch properties, to the Madrona Ranger Station. At the time of the Rocking K specific plan proposal, an agreement with X-9 property owners for such a trail had not been obtained.

The inclusion of a portion of Rincon Creek as a major regional trail in the Rocking K specific plan implies that implementation of this trail may be accomplished by means of dedication at the time of rezoning. Rincon Creek links to other proposed trails and, thus, provides several trail circuits in Rincon Valley. These circuits use the Monument Boundary, Hope Camp, and Rocking K trails along with Old Spanish Trail. In addition to its function as a trail corridor, Rincon Creek is a multi-use corridor for flood control, ground water recharge, wildlife habitat, and open space.

Rincon Creek could also figure importantly in providing trail access to the Madrona Ranger Station. The X-9 Ranch has indicated that Rincon Creek and Chimenea Creek, a small north-south tributary just west of the X-9 Ranch Road, are preferable as an alternative to the Monument Boundary Trail as an access route across their property to Madrona Ranger Station. The X-9 Ranch has also stated that they would prefer to consider the X-9 Road rather than Pistol Hill Road as a potential future access route. Short-term use of X-9 Road and Upper Rincon Creek may be negotiable with a lease or license agreement. The most useful method for opening the road over the long-term is probably by dedication in the event of rezoning. The best options for Chimenea Creek are either dedication at the time of rezoning or purchase.

#### **Access to Other Public Lands**

Other trails in the first priority network provide access to the national forest, Cienega Creek Natural Preserve, and the Empire-Cienega Resource Conservation Area. Pistol Hill Road-Papago Springs and Houghton Road provide access to the Rincon Mountains and the Santa Rita Mountains, respectively.

The Papago Springs boundary access point is one of only two out of seven proposed access points to the southern Rincon Mountains that the Forest Service finds acceptable for public use at this time. At their request the other five are being deferred for future consideration. The Papago Springs access point is on state land within the proposed expansion boundary for Colossal Cave Mountain Park. It is reached by Pistol Hill Road, a private road crossing state land. The most effective implementation strategy may be to encourage the county, in connection with its park expansion program, to negotiate a change in the status of the approximately one-mile private segment of the road.

The Houghton Road extension to the national forest boundary corresponds very closely to the access proposal included in the adopted Santa Rita Ranch Specific Plan. Therefore, if that plan moves to completion, no further action should be required in the implementation of this access trail.

The segment of Cienega Creek between the Cienega Creek Natural Preserve and the Empire-Cienega Resource Conservation Area has special significance warranting its inclusion in the first priority trail network.

First, this segment of the creek possesses many of the same riparian values that have led to the inclusion of its up- and downstream reaches into natural resource conservation areas.

Second, as noted earlier, Cienega Creek is a vital link in the proposed Arizona Trail. Implementation of a county trail along this watercourse would be an important contribution to the success of this statewide trail effort.

Third, if adequately conserved, Cienega Creek promises to become an increasingly valuable public recreation resource in Eastern Pima County. By insuring public use and management of this creek, a vital linkage between local public recreation lands will be completed.

One approach to implementation would be for as much as possible of the remaining 10 mile stretch of Cienega Creek to be incorporated into the Bureau of Land Management's Empire-Cienega Resource Conservation Area. A trade between the state and the Bureau of Land Management could be negotiated for the seven mile reach on state land. The remaining three miles on private land are included within the adopted Empirita Ranch Area Plan. This plan states that, at the time of rezoning, the floodway and/or erosion hazard zone of the creek shall be dedicated to Pima County as natural open space. If this plan is developed, then, public access within the floodway will be

guaranteed. However, before approval of development plans close to the creek, their potential impact should be carefully scrutinized by the Flood Control District.

### **Loop Trails**

Two major roads, Old Spanish Trail and Vail/Colossal Cave Road are recommended for their potential as bicycle and horse paths and because they have the potential to create a loop in conjunction with Pantano Wash. Both roads are public rights-of-way. Thus, implementation as trails primarily involves the designation and maintenance of the rights-of-way as trail corridors. Incorporation of bridle trails into these rights-of-way should be seriously considered as road improvements are made; land use planning along these roads should not preclude the possibility of bridle path development.

Within the southern part of the subregion a gas pipe-line right-of-way south of and parallel to I-10 is useful as a foot, horse, and mountain bike trail. This trail forms circuits with Cienega Creek, Davidson Canyon, Pantano Wash, and the Vail/Colossal Cave Road. As this trail lies entirely on state land, implementation may best be accomplished by a lease agreement with the utility and the state.

The other important trail in the southern portion of the subregion is the Andrada Link Trail, which connects the Mt. Fagan Loops to Davidson Canyon. This connection also provides for local circulation between the Mt. Fagan and Davidson Loop trails. These trails all follow old jeep roads and are largely on state land. Rezoning is probably not imminent; a possible implementation mechanism may be to seek a lease agreement with the State Land Department.

### 9.5.7 Subregion 7: Upper Santa Cruz Valley

Because of the diversity in land ownership, trail use patterns, and trail users in Subregion 7, a variety of strategies should be investigated to implement an integrated trail network. The proposed county mountain parks will be the focus of trail use in the western part of the subregion. A plan for purchase of parklands should include major access trails, such as Proctor Wash/Bob Brown Lateral, as well as sufficient land for trailhead facilities. Opportunities for equestrian trails exist now on several identified road rights-of-way. Finally, washes, roads, and bikeable streets in Green Valley that are already in public ownership and use can provide an urban network of local trails. Implementation can proceed on a very cost effective basis prior to Santa Cruz linear park development.

Although trail use and trail issues differ among the rural and urban/suburban residents of the subregion, the proposed trail network provides a variety of trail opportunities for a broad spectrum of area residents. Trail priorities selected by the subregional panel (Pocket Map 1) focused on the need for:

- Establishment of the proposed Sierrita and Cerro Colorado Mountain Parks and access to hiking and equestrian trails in these areas and in the Santa Rita mountains;
- Designation of bridle trails on selected road and utility rights-of-way; and
- Establishment of an urban trails network in Green Valley.

These criteria were used to augment citizens' first priority trails and resulted in the first priority trail network (Table 9-1, Map 3). In addition, the need for geographic equity, and for interconnecting the parts of the trail network (completing a circuit or closing a

trail gap) were viewed as important criteria for systematic planning that is dependent on public support.

#### Establishment of Proposed County Mountain Parks and Access to these and other Public Lands

The proposed Sierrita and Cerro Colorado Mountain Parks are major destinations for many of the trails in the subregion. Most of the land designated for these parks is state trust land or federal lands under the management of the Bureau of Land Management. Proposed park sizes are approximately 16 square miles for Sierrita Mountain Park and 13 square miles for Cerro Colorado Mountain Park. It will be necessary for the county to develop a preliminary master plan, based on analyses of both natural terrain features and the effect of mining activity on proposed park lands and park management. There are many old mine shafts, especially in the Cerro Colorados, that present safety hazards. At the same time, mines and old ruins have historic interest and become destination points for park users. The county should begin to develop a realistic land acquisition package for these mountain parks. Acquisition should focus on major peaks, access trails, notable cultural/historic resources, and sufficient land for future trailhead facilities.

Several washes that drain the Sierrita Mountains, such as Proctor Wash and Ash Wash, traverse state lands. Acquisition of trailways along these washes should be negotiated as part of the mountain parks land acquisition package with the Arizona State Land Department. In contrast to these, major washes that drain the eastern Sierritas (Esperanza/Tinaja and Demetrie washes) are primarily on private lands (Cyprus Minerals Co. or planned Caterpillar Proving Grounds). These washes were given lower priority ratings by the subregional panel because they have been negatively impacted by mining operations. They would also be more difficult to implement since the purchase

of trail corridors in fee simple or of easements would depend on the willingness of the private landowner to accommodate trail users. Depending on market conditions and projected levels of operation, corporate management might perceive recreation corridors as incompatible with mining and earth moving.

The trail connection between the proposed county mountain parks is provided by Proctor Wash/Bob Brown Lateral. This trail is part of the first priority trail network because it provides linkage between the proposed parks, is a major long distance trail in southwestern Pima County, and retains high natural resource and scenic value. Most of this 14 mile trail traverses state lands, some of which are leased for cattle grazing. Implementation should coincide with land acquisition for the parks.

Several roads that provide access to the proposed mountain parks were identified as having potential for trail use and for parking and equestrian staging facilities. McGee Ranch Road, a county right-of-way, was identified by the subregional panel as the current access to the Sierrita Mountains. This road is part of the road connector referred to as the "Continental Combo" in the Chapter 7 subregional inventory. In addition to McGee Ranch Road, it includes portions of Mission Road, Duval Mine Road, Continental Road, the west land grant boundary utility easement, and Arroyo 17, a flood control right-of-way. This road/utility/flood control combination could be implemented in stages, starting with the designation of part of the road and flood control rights-of-way as trails. Implementation phases and methods for the eastern, lower reach of this trail will be discussed further in the "urban trails network" section.

Two other important roads that are not currently public rights-of-way are Batamote Road, which provides access to Proctor Wash/Bob Brown Lateral off Arivaca Road, and Cerro Colorado South

Access Road, also off Arivaca Road. Both roads have potential for equestrian use. In order to avoid access problems later, such as those that have become only too typical in developed portions of eastern Pima County, county acquisition of these road corridors and land for trailhead parking and staging should be part of the initial mountain parks land acquisition package. Preliminary master planning should designate entry and activity nodes adjacent to those washes and road connectors that are part of the comprehensive trail network.

Access to national forest lands in the Santa Rita Mountains was another priority for the subregional panel, reflected in the first priority connector trail, Madera Canyon Wash, and in additional trails and access points represented in the comprehensive trail network. Madera Canyon Wash is valuable as a wildlife corridor and has been designated a desert belt in the 1988 report of the Pima County Open Space Committee. It also has recreational values, especially to residents of the community of Elephant Head. The privately owned western reach of the wash has been partially developed in the community of Elephant Head; the remaining portion east to the national forest is unsubdivided and undeveloped state trust lands. The most likely acquisition techniques would include purchase of the trail corridor in the developed portions, and possible trail dedication on private lands (which in the future could include present state trust lands that may be transferred to private ownership) for which a rezoning is sought.

The first priority boundary access point at West Madera, the point where Madera Canyon Wash crosses into the national forest, has been designated a trail entry point. There is no forest service trail at this point although a new trail that is nearly complete is within 0.25 mile south of the Madera Canyon Wash trail entry. Another access point to Chino Basin and the Elephant Head area is reached via

Elephant Road/Hawk Way. The new forest service trail, referred to above, is designed for foot, equestrian, and mountain bike use and will connect Madera Canyon with Chino Basin.

Several short trails that provide access to the Santa Rita Experimental Range were assigned priorities by the subregional panel. Alvernon Extension, a 1.5 mile trail south of Dawson Road, on the Alvernon Way alignment, was designated a first priority by the panel. The trail crosses a broad wash between sections of undeveloped land in private and state ownership, and meets the Santa Rita Experimental Range boundary near Santa Rita Road. It could be implemented through a right-of-way lease from the Arizona State Land Department, or, pending development, it could be acquired as a public road right-of-way through dedication. This trail and another panel first priority, Cattle Loop, are very close to residential development in Sahuarita Heights and are especially valuable to equestrians as local trails. Cattle Loop is primarily on state lands and could be implemented through easement, fee simple corridor acquisition, or dedication during rezoning.

Current trail users in Sahuarita Heights enter the Range from the Alvernon Extension trail or from Helvetia/Jane's Wash but this access is unofficial and unsanctioned. At this time, under present management of the Rocky Mountain Experimental Station, a research branch of the National Forest Service, and the University of Arizona, pedestrian and equestrian access to the northern portion of the Range does not present a serious problem. According to the Range manager, there are few experiments in the northern portion of the range and low impact public access and use are not presently controlled. In fact, walking is encouraged as long as it does not conflict with range experiments. However, eventually the Range will come under the management of the Arizona State Land Department and will have the same status as other state trust lands. Use by

members of the public will technically be trespassing. Because of this future status, the two Range boundary access points assigned priorities by the subregional panel are designated as proposed trail entry points that are not approved by the land management agency.

#### **Designation of Bridle Trails on Selected Road and Utility Rights-of-Way**

There is high potential for implementing public rights-of-way identified in the first priority trail network. These roads were added to panel priorities because they provide access to the Santa Cruz River, or have the potential to do so once the primary trail system is developed. Some of them close gaps between traditional trails; others are valuable as local trails by equestrians, especially in the Sahuarita and Sahuarita Heights areas.

Important public rights-of-way trails in the subregion are the "Continental Combo," discussed earlier in regard to access to the Sierritas, and portions of the following roads: Dawson Road, Santa Rita Road, La Villita/Sahuarita Road (N-S), Twin Buttes Road, El Toro Road/West, and Las Quintas Road. Together this east-west trending group of roads helps to connect the communities of Santo Tomas, Sahuarita, and Sahuarita Heights with each other and with the Santa Cruz River.

Implementation can start now with an assessment of the compatibility of trails with present road use and, if appropriate, designation of bridle trails with appropriate trail markers, horse crossing signs, and other necessary improvements.

#### **Establishment of an Urban Trails Network in Green Valley**

Chapter 7 briefly outlined community interest in an urban trails network in Green Valley. It is worth emphasizing in the context of implementation that Green

Valley provides a unique opportunity for acquiring and developing trails in the near future. The growing population of older citizens has leisure time for walking, hiking, and bicycling. Residents spend much of their leisure time on volunteer activities. Their time and expertise can be tapped to mobilize a corps of volunteers to construct and maintain urban trailways. Members of the Green Valley Recreation Hiking Club have worked for several years as volunteers constructing and maintaining trails in the Coronado National Forest. Another local group of volunteers, the Friends of Madera Canyon, also work on forest service projects. It is very likely that an urban trails demonstration project would attract volunteers to work closer to home. Implementation methods for a Green Valley urban trail network should tap community interest and participation.

The spine of the urban trails network is the Santa Cruz River, which will eventually be developed as a linear park, similar to the existing parks on the Rillito and Santa Cruz. Several secondary traditional trails and road rights-of-way trails have been identified that will feed into the primary system and loop between major activity centers in Green Valley. The 1989 Green Valley Community Plan advocates supplementing the proposed Santa Cruz linear park with east-west linkages to the linear park and to other significant open spaces as one means of enhancing the residential character of existing neighborhoods.

Local trails that are part of the first priority trail network are Arroyo 17; a segment of the West Grant Boundary Line power line easement; Canoa West Loop; Tailings Pond Road; and the Continental Road right-of-way. These trails are complemented by bicycle (and golf cart) routes already designated or planned for La Cañada Drive, or planned for Abrego Drive, Mission Twin Buttes and Camino del Sol. Once the Santa Cruz primary trail is constructed, it will include a bike path and complete the urban bike loop.

The most important local trail for residents of Green Valley, and one that could be the focus of an "Adopt-a-Trail" or volunteer demonstration project, is Arroyo 17. The lower portion of the trail, from La Cañada Drive to the Santa Cruz River, has potential as an important link in an urban trail network, especially after development of a linear park on the Santa Cruz. Most of the trail follows the arroyo, except for a short stretch on Continental Road at I-19. Like several other washes in Green Valley, Arroyo 17 is a county flood control right-of-way. The right-of-way width ranges from 45 feet (west of La Cañada Drive) to 100 feet (east of I-19).

Another wash that was identified as part of the comprehensive trail network is Arroyo 7, a 65 foot wide drainage easement located just north of Esperanza Boulevard. A 50 foot wide bridle trail and public utility easement (plat of 1963) along the eastern edge of the Haven Golf Course could link this drainageway trail with others to the south. Steps toward implementing these and other Green Valley washes and easements could begin in the near future.

The first step should be site analyses of arroyo bed and bank conditions, possible safety hazards, and compatibility with adjacent property. Those arroyos that present no serious use problems would become the first east-west linkages in the public urban trail network. Such a network could begin in humbler ways than through the design and construction of fully developed linear parks. In fact, designation of several short local trailways, starting with Arroyo 17, could precede funding and development of the Santa Cruz River Park. This could be done with minimal expenditure of funds and it would set the stage for developing the Santa Cruz linear park. Volunteers, under the direction of county personnel, could begin to collect field data on community drainageways, including data on current use, and begin to clean-up designated arroyos, clear paths, and place appropriate signage.

### 9.5.8 Subregion 8: Metropolitan Tucson

With only one major exception (an abandoned railroad right-of-way), trail corridors within the metropolitan Tucson subregion follow washes that are almost completely in public ownership. Thus, compared with trails outside of the city, a sizable portion of the city trail system would not require expenditure of public funds for land acquisition. Innovative design solutions are needed to:

- Solve flood control problems as unobtrusively as possible;
- Retain or restore each corridor's aesthetic qualities; and
- Respect the rights of adjacent neighbors.

The principal concern of the subregional panel was that washes used as trail corridors be as natural as possible. They were of the opinion that the designation of trail corridors in association with washes could help in the retention or restoration of natural characteristics.

The subregional panel gave special consideration to three criteria in making first priority selections:

- Washes of sufficient length to provide for both local as well as longer-distance uses;
- Linkage into the primary system; and
- Association with activity centers, especially parks and schools.

#### First Priority Network

Based on these criteria, four trail corridors were given first priority designations (Table 9-1, Map 3): Alamo Wash, Arcadia Wash, Arroyo Chico, and Atterbury Wash. The first priority trail network for this subregion was completed with the addition of Airport

Wash to these panel selections. Airport Wash was selected to give residents on the city's southwestern side a local trail opportunity and access into the Santa Cruz River.

Successful trail programs in other parts of the country (see Chapter 3) have achieved their success by starting simply. In keeping with that premise it is recommended that the implementation of a network of urban washes begin with no more than two carefully chosen projects. It is further recommended that selected trail corridors share all or most of the following characteristics:

- Be primarily in public ownership;
- If a wash, require only minimal flood control improvements, be in relatively natural condition, with dirt sides and banks;
- Be primarily in residential neighborhoods;
- Be in use now by local residents;
- Have the potential for relatively long distance uses, that is, more than a mile or so;
- Be located in neighborhoods where a trail and associated amenities will have a positive impact; and
- Avoid major arteries that have inadequately designed crossings.

From the five first priority choices it is recommended that initial implementation choices be made among the following reaches:

- Airport Wash: I-10 to Park Avenue;
- Alamo Wash: Stella Road to Golf Links Road; Golf Links Road to 22nd Street; 22nd Street to Wilmot Road;
- Arcadia Wash: 22nd Street to Craycroft Road;

- Arroyo Chico: Swan Avenue to Park Avenue; and
- Atterbury Wash: Lincoln Park to Pantano Wash.

In four of the five choices cited above only small portions of washes are designated. These portions share all or most of the characteristics listed above and, thus, should be relatively straightforward in terms of implementation. The exception is Arroyo Chico, which is listed almost in its entirety. This recommendation follows that of previous studies that have examined this wash in considerable detail (27, 28, 29).

Finally, it should be noted that, in most cases, implementation of the first priority choices can occur without requiring complex engineering solutions at major cross streets. The major arterials that cross Airport and Atterbury Washes utilize culverts of adequate size. Both would require some design solutions, but not major engineering changes. The segment of Arcadia Wash from 22nd Street to Craycroft Road crosses no major streets. The minor streets that are crossed would only need designated crossings with wash identification signs. (See Chapter 10 for more specifics regarding design questions.)

Only along Alamo Wash are there significant problems at the major arterials. The designated segments cross under both Golf Links Road and 22nd Street at inadequate culverts. Therefore, it is recommended that, for the present, the trail corridor be implemented as discrete units between these major arterials. In the future, as street improvements are made, adequate crossings can be designed and the segments can be linked for longer distance use. All initial designs must, of course, be planned so that eventual long-distance trail corridors will not be precluded.

In the case of Alamo Wash, it is especially important to note that the

segment north of Glenn Street is, at present, being designed as a linear park following the recommendations of the plan prepared by Wheat and Associates in 1986 (5). As such, it represents the first truly urban wash with which a planned trail is associated and may be a good prototype for future projects. It is recommended, however, that whenever hydrological conditions permit, future projects make a serious attempt to plan trails in association with natural, not soil-cemented or otherwise bank-protected, washes.

### **Abandoned Railroad Corridor**

Although it is not included among the first priority choices, one additional corridor deserves special mention: the abandoned El Paso-Southwestern Railroad right-of-way. The railroad corridor has the potential to serve as a commuter bicycle route between southern and western Tucson neighborhoods and the downtown. Unfortunately, a negative feature of this corridor is that it is no longer owned by the railroad nor is it in public ownership. According to records in the Pima County Assessor's Office, it is owned by approximately 173 individuals, thus making acquisition and subsequent implementation a costly endeavor. Nonetheless, this corridor should be given careful consideration in transportation planning. To encourage its use in the future, construction within the corridor should be avoided.

**TABLE 9-1. POTENTIAL IMPLEMENTATION METHODS FOR THE FIRST PRIORITY TRAIL NETWORK**

CANDIDATE TRAIL SEGMENT NAME	Trail Segment Description										Reason for 1st Priority Selection		Trail Land Type		Trail Implementation (Most Likely Methods Shown)	COMMENTS		
	Segment Description										Public (miles)		Private (miles)		Rezone Within ROW		Rezone Dedication	Easement
	Segment Length (miles)										Road Utility ROW Choice		State (miles)		Designate		Fee Simple Acquisition	Lease/License/Int Gov Agr
	Subregion Number	Trail Map Code	Trail Type	Entire trail length	Wash (miles)	Cross-county (miles)	Road Utility ROW (miles)	Upgraded 2nd/3rd Priority	Road Utility ROW Choice	Panel 1st Priority Choice	Panel 2nd/3rd Priority	Public (miles)	State (miles)	Designate	Rezone Within ROW		Rezone Dedication	Easement
1	P	6	Entire trail length	9			First Priority Primary Trail	2			4		●	●				
2	P	14	Entire trail length	14			First Priority Primary Trail	8			6		●	●				
3	P	56	Entire trail length		56		First Priority Primary Trail	56					●					Implement County/BOR agreement for trail corridors.
4	P	16	Entire trail length	9	7		First Priority Primary Trail			14	2		●	●				Includes gas pipeline (3.5 miles) and Colossal Cave/Vail Rd. (3.5 miles)
5	P	22	Entire trail length	22			First Priority Primary Trail	11			11		●	●				
6	P	12	Entire trail length	12			First Priority Primary Trail	10			2		●	●				
8	P	56	Excludes San Xavier District & 1.5 miles north of Santa Cruz Co. line	56			First Priority Primary Trail	12	1	43			●	●				
9	P	13	Entire trail length	13			First Priority Primary Trail	3			10		○	○				
7	C	1.5	Entire trail length	1.0	0.5		◆			1.5 shared			●	●				On Alvernon Way alignment between private and state lands
3	C	0.5	Big Wash to junction with Golder Ranch Loop	0.5	0.5		◆			.25	.25		●	●				Links Big Wash & Twenty-seven Wash
1	C	11	Entire trail length.	11			◆			4	7		●	○				
1	C	13	Entire trail length.	13			◆			4.5	8.5		●	○				
3	C	6.0	Entire trail length	1.5	4.5		◆			6.0			●	○				In process of negotiation as a leased trail ROW.

Probability of method being useful or effective: somewhat useful ○ useful ● most useful ●

**TABLE 9-1. POTENTIAL IMPLEMENTATION METHODS FOR THE FIRST PRIORITY TRAIL NETWORK**

CANDIDATE TRAIL SEGMENT NAME	Trail Segment Description										Reason for 1st Priority Selection			Trail Land Type		Trail Implementation (Most Likely Methods Shown)	COMMENTS	
	Segment Description										Road/Utility ROW Choice			Designate Within ROW		Easement		
	Segment Length (miles)										Road/Utility ROW (miles)			Public (miles)		Private (miles)		Fee Simple Acquisition
	Subregion Number	Trail Map Code	Trail Type	Segment Length (miles)	Segment Description	Wash (miles)	Cross-country (miles)	Panel 1st Priority Choice	Upgraded 2nd/3rd Priority	Road/Utility ROW Choice	State (miles)	Public (miles)	Private (miles)	Designate Within ROW	Resoning Dedication	Lease/License/Dir Gov Agr		
7	82	C	2.5	Entire trail length.	2.5					2.5			●	●	●	Preferred method is fee simple acquisition. Private road.		
3	37	C	8.8	Entire trail length.	7.8	1.0		◆	◆	1.0	4.8	3.0	○	●	●	Small portions of Edwin Rd. are county ROW		
6	54	C	1.5	Entire length.			◆				1.5			●				
6	55	C	10	Genega Creek Natural Preserve to Empire Genega Res. Cons. Area	10			◆			7	3		●	●	Lease may permit interim use.		
7	83	C	5.0	Entire trail length.		5.0		◆					●					
3	32	C	2.3	CAP to Tortolita Foothills Trail	2.3			◆			1.8	0.5		●				
6	56	C	12	Genega Creek Natural Preserve to CNP	12			◆			6	6		●	●	Lease may permit interim use.		
7	76	C	1.8	Alvernon Way to Santa Rita Road		1.8			◆		1.8							
7	84	C	0.9	Entire trail length.		0.9			◆				●					
5	50	C	8.5	Entire trail length.	8.5			◆			2.5	6.0		○	●			
2	24	C	6.0	Entire trail length.	6.0			◆			6.0			●				
4	41	C	5.5	Entire trail length	3.8	0.6	1.1	◆			1.1	4.4		○	○	Most implementable segment is from Sunrise Dr. to Rillito River		
6	57	C	1.0	Entire trail length.	1.0			◆			1.0			●	●			

Probability of method being useful or effective: somewhat useful useful most useful

**TABLE 9-1. POTENTIAL IMPLEMENTATION METHODS FOR THE FIRST PRIORITY TRAIL NETWORK**

CANDIDATE TRAIL SEGMENT NAME	Trail Segment Description										Reason for 1st Priority Selection		Trail Land Type	Trail Implementation (Most Likely Methods Shown)	COMMENTS		
	Subregion Number		Segment Length (miles)		Trail Type		Wash (miles)		Road/Utility ROW (miles)		Public (miles)					Private (miles)	
	Trail Map Code		Segment Description		Cross-county (miles)		Upgraded 2nd/3rd Priority		Road/Utility ROW Choice		State (miles)					Fee Simple Acquisition	
	Trail Map Code		Segment Description		Road/Utility ROW (miles)		Panel 1st Priority Choice		Road/Utility ROW Choice		Public (miles)					Private (miles)	
Houghton Road Extension	6	65	C	2.0	End of Houghton Rd. to CNF	2.0	◆					2.0		Lease/License/Int'l Gov Agr			
La Cholla/Honey Bee Loop	3	33	C	16	Entire trail length.	9.2	◆	4.3	2.5	3		13		Fee Simple Acquisition	Portion of Honey Bee Wash in Rancho Vistoso in process of dedication to county.		
Lower Agua Verde Creek and Powerline Trail	6	58	C	16	Entire trail length.	9	◆	7				4	12	Fee Simple Acquisition			
Madera Canyon Wash	7	80	C	5.5	Entire trail length.	5.5	◆					3.3	2.2	Fee Simple Acquisition			
McGee Ranch Road	7	87	C	5.6	Entire trail length.			5.6			◆			Lease/License/Int'l Gov Agr			
Mission Road	7	88	C	4.0	Entire trail length.			4.0			◆			Lease/License/Int'l Gov Agr			
Monument Boundary Trail	6	60	C	9.0	Entire trail length.	9.0	◆					1.5	7.5	Lease/License/Int'l Gov Agr			
Old Spanish Trail	4	67	C	16	Entire trail length.			16			◆			Lease/License/Int'l Gov Agr	Already designated as a bicycle trail.		
Orange Grove Road	1	19	C	1.3	Entire trail length.			1.3			◆			Lease/License/Int'l Gov Agr			
Picture Rocks Rd	1	20	C	4.1	Entire trail length.			4.1			◆			Lease/License/Int'l Gov Agr			
Pima Wash	4	43	C	4.5	Entire trail length.	4.5	◆						4.5	Lease/License/Int'l Gov Agr	SW of Ins Rd. route may have to leave wash to avoid conflicts.		
Pistol Hill/Papago Springs	6	68	C	3	Old Spanish Trail to CNF			3			◆		3	Lease/License/Int'l Gov Agr	Approximately 1.5 miles is a private road.		
Proctor Wash/ Bob Brown Lateral	7	81	C	14	Entire trail length	11	◆	3				12	2	Lease/License/Int'l Gov Agr	Preferred method is fee simple acquisition.		

Probability of method being useful or effective: somewhat useful useful most useful

**TABLE 9-1. POTENTIAL IMPLEMENTATION METHODS FOR THE FIRST PRIORITY TRAIL NETWORK**

CANDIDATE TRAIL SEGMENT NAME	Subregion Number	Trail Map Code	Trail Segment Description										Trail Land Type	Trail Implementation (Most Likely Methods Shown)	COMMENTS					
			Segment Description		Reason for 1st Priority Selection		Trail Segment Description		Reason for 1st Priority Selection		Trail Land Type					Trail Implementation				
			Segment Length (miles)	Trail Type	Wash (miles)	Cross-country (miles)	Trail 1st Priority Choice	Upgraded 2nd/3rd Priority	Road/Utility ROW Choice	Public (miles)	State (miles)	Private (miles)				Designate Within ROW	Rezoning Dedication	Fee Simple Acquisition	Easement	Lease/License/Inv Gov Agr
			Segment Length (miles)	Trail Type	Wash (miles)	Cross-country (miles)	Trail 1st Priority Choice	Upgraded 2nd/3rd Priority	Road/Utility ROW Choice	Public (miles)	State (miles)	Private (miles)				Designate Within ROW	Rezoning Dedication	Fee Simple Acquisition	Easement	Lease/License/Inv Gov Agr
Rincon Creek	6	C	62	C	9.0												Lease may allow interim public use pending rezoning application.			
Saginaw Hill	1	C	13	C	1.0	3.3														
Sahuarita Road	7	C	70	C	1.5		1.5													
San Joaquin Road	1	C	21	C	3.0		3.0													
Sanders Road	1	C	22	C	0.5		0.5													
Shurban Loop	4	C	46	C	3.5		1.0													
Sweetwater Wash	2	C	27	C	4.5															
Ventana Canyon Wash	4	C	47	C	5.0												Most implementable segment is from Snyder Rd. to Tanque Verde Wash.			
Wild Burro Wash	3	C	36	C	5.3												Approx. 2 miles upper reach owned by large private developer.			
Wild Horse Wash	2	C	28	C	4.3												*0.5 miles coded as public is in BLM ownership.			
X-9 Road	6	C	72	C	6.1		6.1										Private road to X-9 Ranch, Access to Madrona RS. Lease may permit interim use.			
Agua Caliente/Tanque Verde Link	4	L	181	L	1.5		0.2	1.3									Part of the trail is both road ROW and utility easement.			
Airport Wash	8	L	308	L	2.0		2.0										Public ROW is 120 to 150 ft.			

Probability of method being useful or effective: somewhat useful ○ useful ◐ most useful ●

**TABLE 9-1. POTENTIAL IMPLEMENTATION METHODS FOR THE FIRST PRIORITY TRAIL NETWORK**

CANDIDATE TRAIL SEGMENT NAME	Trail Segment Description										Reason for 1st Priority Selection			Trail Land Type	Trail Implementation (Most Likely Methods Shown)	COMMENTS		
	Segment Length (miles)		Wash (miles)		Road/Culity ROW (miles)		Upgraded 2nd/3rd Priority Road/Culity ROW Choice		Public (miles)		Private (miles)		Designate With ROW				Revoke Dedication	Lease/License/Int Gov Agr
	Trail Map Code	Trail Type	Segment Description	Cross-country (miles)	Road/Culity ROW (miles)	Panel 1st Priority Choice	Upgraded 2nd/3rd Priority Road/Culity ROW (miles)	Road/Culity ROW Choice	Public (miles)	State (miles)	Private (miles)	Designate With ROW						
	Subregion Number	Trail Type	Segment Description	Wash (miles)	Road/Culity ROW (miles)	Panel 1st Priority Choice	Upgraded 2nd/3rd Priority Road/Culity ROW (miles)	Road/Culity ROW Choice	Public (miles)	State (miles)	Private (miles)	Designate With ROW						
Alamo Wash	8	309	L	2.5	2.5	◆	◆	◆	2.5	◆	◆	◆	◆	◆	◆	Public ROW is 60-80 ft.		
Aldon Road and East and West Fork Links	1	100	L	1.3	1.0	◆	◆	◆	1.2	◆	◆	◆	◆	◆	◆	BLM ownership. Proposed addition to TMP		
Andrada Ranch Link	6	244	L	2	2	◆	◆	◆	2	◆	◆	◆	◆	◆	◆	Trail crosses Northwest Park.		
Anklam Local	2	126	L	1.5	1.1	◆	◆	◆	1.1	◆	◆	◆	◆	◆	◆	Public ROW is 50-60 ft.		
Arcadia Wash	8	310	L	0.8	0.8	◆	◆	◆	0.8	◆	◆	◆	◆	◆	◆	Flood control ROW about 1.5 miles		
Arroyo #17	7	281	L	3.5	3.2	◆	◆	◆	1.8	1.0	0.7	◆	◆	◆	◆	Public ROW is 50-106 ft.		
Arroyo Chico	8	311	L	3.5	3.0	◆	◆	◆	3.3	◆	◆	◆	◆	◆	◆	Public ROW is 140-200 ft.		
Atterbury Wash	8	312	L	1.2	1.0	◆	◆	◆	1.0	◆	◆	◆	◆	◆	◆	Private road.		
Batamote Road	7	296	L	3.2	3.2	◆	◆	◆	3.2	◆	◆	◆	◆	◆	◆	Future dedication to county by Rancho Vistoso of approx. 3.5 miles.		
Big Wash	3	156	L	7.0	7.0	◆	◆	◆	3.5	3.5	◆	◆	◆	◆	◆	Provides access to Cañada del Oro. Small portion next to wash may be privately owned.		
Birch Way Alignment	4	215	L	0.5	0.5	◆	◆	◆	0.5	◆	◆	◆	◆	◆	◆			
Bonanza Avenue	4	199	L	0.5	0.5	◆	◆	◆	0.5	◆	◆	◆	◆	◆	◆			
Bopp Road	1	107	L	3.0	3.0	◆	◆	◆	3.0	◆	◆	◆	◆	◆	◆			

Probability of method being useful or effective: somewhat useful useful most useful

**TABLE 9-1. POTENTIAL IMPLEMENTATION METHODS FOR THE FIRST PRIORITY TRAIL NETWORK**

CANDIDATE TRAIL SEGMENT NAME	Trail Segment Description										Reason for 1st Priority Selection		Trail Land Type	Trail Implementation (Most Likely Methods Shown)	COMMENTS				
	Segment Description		Wash (miles)		Cross-country (miles)		Road/Utility ROW (miles)		Upgraded 2nd/3rd Priority		Public (miles)	State (miles)				Private (miles)	Designate With ROW	Fee Simple Acquisition	Lease/License/Int Gov Acq
	Trail Map Code	Trail Type	Segment Length (miles)	Trail Type	Segment Length (miles)	Trail Type	Segment Length (miles)	Trail Type	Segment Length (miles)	Trail Type									
	Subregion Number	Trail Map Code	Trail Type	Segment Length (miles)	Trail Type	Segment Length (miles)	Trail Type	Segment Length (miles)	Trail Type	Segment Length (miles)	Trail Type	Segment Length (miles)				Trail Type	Segment Length (miles)	Trail Type	Segment Length (miles)
Broadway Boulevard	4	216	L	2.0			2.0				2.0								
Calle Loma Linda	4	217	L	2.0			2.0				2.0								
Campbell/Camino Real	4	182	L	8.0	4.8	2.8	0.4				0.4	7.6							
Canoa West Loop	7	282	L	5.3	1.0	4.3						4.7	0.6					Crosses washes; portions on jeep roads	
Cardinal Trail	1	102	L	1.2								1.2							
Casas Adobes Loops	4	184	L	7.5	2.5	1.5	3.5				2.0								
Cattle Loop	7	283	L	1.5															
Cedar Breaks	3	157	L	1.0															
Cloud Wash and Ridge	4	186	L	2.2	1.6	0.6												*Portion may be in County ROW.	
Davidson Loop	6	248	L	3.5															
El Toro Road/West	7	294	L	.25			.25												
Escalante Wash	4	189	L	1.5	1.5														
Freeman/Del Este	4	192	L	5.3	4.5	0.3	0.5												

Probability of method being useful or effective: somewhat useful useful most useful

**TABLE 9-1. POTENTIAL IMPLEMENTATION METHODS FOR THE FIRST PRIORITY TRAIL NETWORK**

CANDIDATE TRAIL SEGMENT NAME	Trail Segment Description										Reason for 1st Priority Selection		Trail Land Type		Trail Implementation (Most Likely Methods Shown)	COMMENTS		
	Trail Map Code		Segment Length (miles)		Segment Description		Road/Utility ROW (miles)		Road/Utility ROW Choice		Public (miles)		Private (miles)		Reserve Within ROW		Fee Simple Acquisition	Lease/License/Int Gov Agr
	Subregion Number	Trail Type	Wash (miles)	Cross-country (miles)	Panel 1st Priority Choice	Upgraded 2nd/3rd Priority	State (miles)	State (miles)	Designate Within ROW	Reserve Within ROW	Fee Simple Acquisition	Lease/License/Int Gov Agr	Trail Implementation	Comments				
	Trail Map Code	Segment Length (miles)	Wash (miles)	Cross-country (miles)	Panel 1st Priority Choice	Upgraded 2nd/3rd Priority	State (miles)	State (miles)	Designate Within ROW	Reserve Within ROW	Fee Simple Acquisition	Lease/License/Int Gov Agr	Trail Implementation	Comments				
2	155	L	11				11											
				Pima Farms Road to Anklam Wash														
6	278	L	9.2				9.2											
				Entire trail length.														
3	159	L	4.8				3.0	1.8	◆			2.0	2.8	●			County ROW western portion; easement on private rd. portion of loop.	
				Entire trail length.														
2	129	L	9				7.8	1.2	◆			1.0	8.0	●				
				Entire trail length.														
7	306	L	0.5				0.5		◆				0.5	●			Existing power line ROW or easement	
				Between Continental Rd. and Arroyo #17														
4	220	L	1.0				1.0		◆				1.0	●				
				Entire trail length.														
3	160	L	6.0				3.0	1.0	◆			3.0	3.0	●			Road ROW plus portion through Arthur Pack Park.	
				Santa Cruz to Cañada del Oro														
6	254	L	1.3				1.3		◆				1.3	●				
				Entire trail length.														
7	294	L	0.5				0.5		◆			0.5		●				
				Entire trail length.														
7	303	L	2.0				2.0		◆			2.0		●				
				Entire trail length.														
4	240	L	0.4				0.4		◆			0.4		●			Provides access to CIDO. Dedicated to Pima County.	
				Entire trail length.														
3	171	L	4				1	3	◆			3	1	●			Camino de Oeste to Tortolita Road not county ROW.	
				La Cholla/Honey Bee Loop Trail to Tortolita Road														
6	256	L	16				16		◆				13	3				
				Entire trail length.														

Probability of method being useful or effective: somewhat useful ○ useful ◐ most useful ●





**TABLE 9-2. NUMBERS OF PROPOSED COUNTY TRAILS IN THE FIRST PRIORITY NETWORK THAT LINK WITH PUBLIC LANDS**

<b>Public Land Area</b>	<b>Number of Proposed County Trail Links</b>
Coronado National Forest	
Catalina Ranger District	15
Nogales Ranger District	3
Saguaro National Monument	
East	9
West	5
Empire-Cienega Resource Conservation Area	2
Santa Rita Experimental Range	1
Catalina State Park	3
Cienega Creek Natural Preserve	4
Colossal Cave Park	1
Southeast Regional Park and Fairgrounds	2
Tortolita Mountain Park	6
Tucson Mountain Park	8
Proposed Cerro Colorado Mountain Park	2
Proposed Sierrita Mountain Park	2
Other Existing or Proposed County/Municipal Parks	28
<b>TOTAL INTERCONNECTIONS</b>	<b>91</b>

**TABLE 9-3. TRAIL NETWORKS IN SELECTED COUNTIES AND METROPOLITAN AREAS**

<u>Trail Network Sponsor</u>	<u>Trail Network Information</u>
Boulder, Colorado City Department of Parks and Recreation and Department of Open Space	120 miles of trails implemented 30 miles of trails under development 140,000 population in service area 750 square miles in service area Trail system initiated in 1900
Alameda and Contra Costa Counties, California East Bay Regional Park District	111 miles implemented 130 miles expected to be added in 15 years Target is 500 miles of regional trails 2,000,000 population in service area 1,282 miles in service area Trail system initiated in 1970 and before
Hennepin County and Minneapolis, Minnesota	402 miles implemented 50 miles planned 2,000,000 population 1,282 square miles in service area Trail system initiated in 1959
Association of Bay Area Governments, San Francisco, California	400-mile trail around San Francisco Bay planned
Santa Clara County, California Midpeninsula Regional Open Space	200 miles implemented 600,000 population in service area 300 square miles in service area Trail system initiated in 1972
Maricopa County, Arizona	205 miles implemented 720 miles planned Initiated in the mid 1960s
Scottsdale, Arizona	200 miles recently proposed

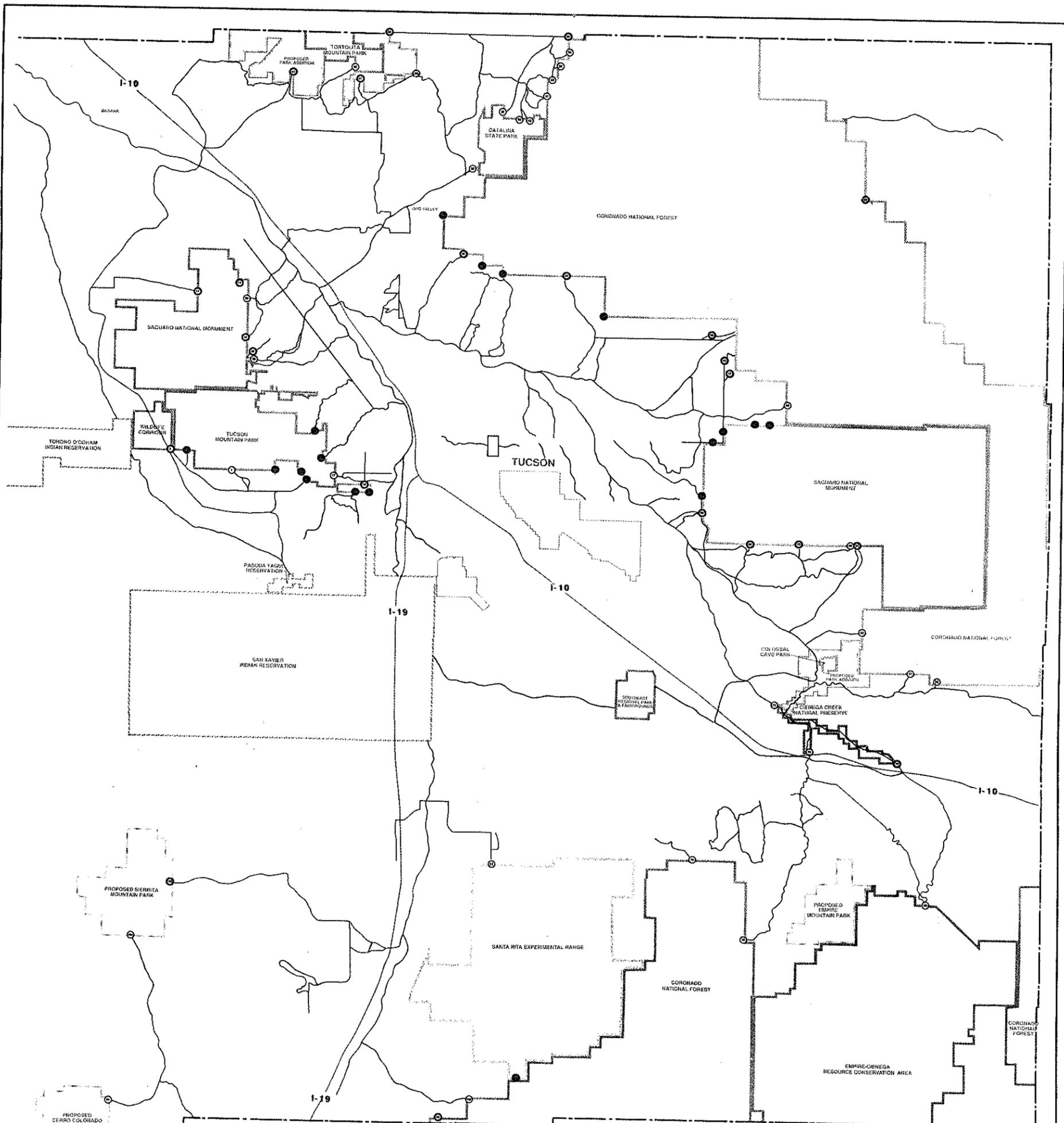
The Eastern Pima County Trail System Master Plan proposes about 650 miles of trails in the first priority network. As proposed, there are about 1500 miles in the entire system

**TABLE 9-4. PUBLIC EASEMENTS OR OWNERSHIP IN  
MAJOR WATERCOURSES IN THE TUCSON  
URBAN CORE**

<u>Watercourse</u>	<u>Public Ownership Or Easements</u>
Agua Caliente	2.0 of 6.0 miles from the Coronado National Forest to the confluence with Tanque Verde Wash
Cañada del Oro	7.5 of 9.5 miles from Catalina State Park to the Santa Cruz River
Pantano Wash	9 of 10 miles from Houghton Road to the confluence with Tanque Verde Wash
Rillito River	9 of 12 miles from the confluence of Pantano Wash and Tanque Verde Wash to the Santa Cruz River
Santa Cruz River	8 out of 18 miles from the San Xavier District of the Tohono O'odham Indian Reservation to Cortaro Road
Tanque Verde Wash	3 of 13 miles from the Coronado National Forest to the confluence with Pantano Wash

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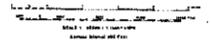
**TOTAL OWNERSHIP AND EASEMENTS IS APPROXIMATELY 38 OUT OF 68 MILES**



### MAP 3: FIRST PRIORITY TRAIL NETWORK\*

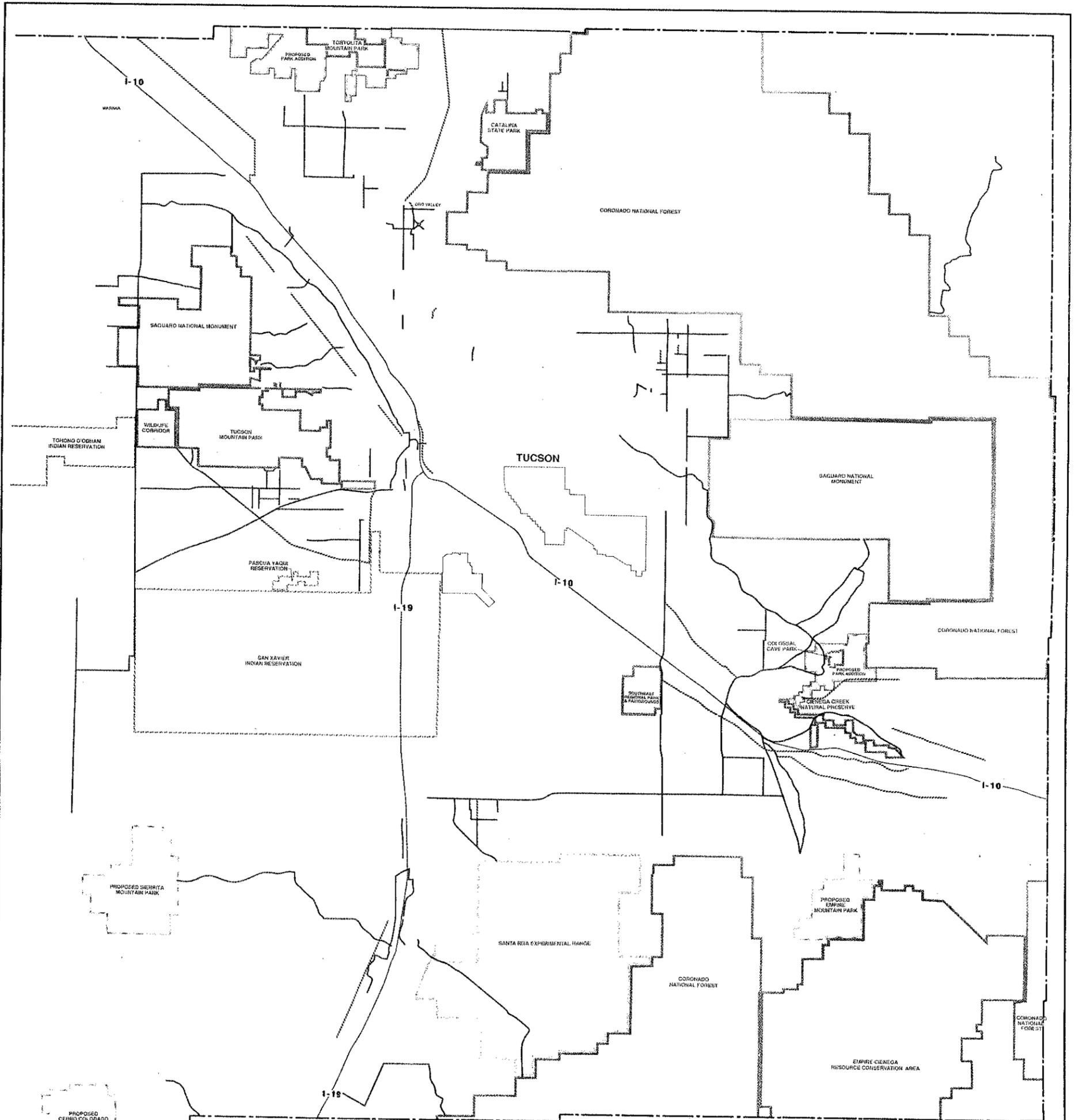
- First Priority Trail Network
- Established Boundary Access Point
- ⊙ Proposed Boundary Access Point  
(Approved By Public Land Management Agency)
- ⊙ Proposed Trail Entry Point  
(Approved By Public Land Management Agency)
- ⊙ Proposed Boundary Access Point  
(Currently Not Approved By Public Land Management Agency)
- ⊙ Proposed Trail Entry Point  
(Currently Not Approved By Public Land Management Agency)

### EASTERN PIMA COUNTY TRAIL SYSTEM MASTER PLAN



\*This map was prepared by the Eastern Pima County Trail System Master Plan. It is intended to provide a general overview of the trail network and is not intended to be used for legal purposes. For more information, please contact the Eastern Pima County Trail System Master Plan.



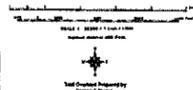


**MAP 4: ROAD AND UTILITY RIGHTS-OF-WAY IDENTIFIED FOR POTENTIAL TRAIL USE\***

— Road Right-of-Way  
 - - - Utility Right-of-Way

**EASTERN PIMA COUNTY TRAIL SYSTEM MASTER PLAN**

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## CHAPTER 10 TRAIL DESIGN GOALS

### 10.1 Background

Design considerations are important components of an implementation plan and essential to creating and maintaining a viable public trail network. An overall Trail System Master Plan should address design and development planning in three steps, to show a progression from the philosophy and mission of a public trail network to specifics of site and trail design and construction.

Only the first of these steps was examined during the development of this plan. The other steps will be completed in subsequent trail planning and implementation phases. The three steps are:

- Step One: Identify the basic design concepts that will shape the overall character of the trail system (this plan);
- Step Two: Establish trail design, operation and maintenance standards to guide specific development and management of the entire system (Second planning phase); and
- Step Three: Complete individual design and development plans, including specific construction criteria, for each trail scheduled for implementation (Final planning and implementation phase).

### 10.2 Step One: Design Goals and Concepts

The following design goals and concepts were identified with the assistance of the Steering and Advisory committees. They will help to define the overall character of the trail network and serve as a guide for future trail planning, design, and development. The county and the proposed Trail Advisory Committee should use these goals as a foundation for developing specifications from which to develop designs for individual trails.

#### 10.2.1 Resource Protection

##### Design Goal

Trails and their associated facilities should be designed to be in harmony with natural settings and to retain natural appearances and values. Trail designs should require the minimum of construction necessary to provide for public use and protect natural and cultural resources. In many cases, virtually no construction will be necessary.

##### Design Concepts

**Wildlife Habitat.** Trail designs should not endanger habitats that have been designated as critical or sensitive. Trail alignments can include critical habitats but trail corridors should avoid them. Use levels on trail corridors adjacent to critical or sensitive habitats should be based on a clearly articulated management plan and philosophy of use. Program and design details should be consistent with this management plan and philosophy. Interpretive programs on wildlife and other natural history topics are appropriate.

**Open Space.** Trail corridor design should be appropriate to specific types and levels of use and sensitive to preserving open space values.

Appropriate recreational use can support and nurture open space.

**Cultural Resources.** Trail design should minimize negative impacts on cultural resources. Appropriate and sensitive design can enhance cultural resources.

**Visual Resources.** Trail design should enhance the visual experience of the user. Where possible trails should preserve the scenic quality of areas through which they pass.

**Motorized Vehicles.** Barriers to unauthorized motor vehicle use should be installed where needed. These designed deterrents should be supplemented by signage and a management and enforcement program. Barriers should not impede whole access.

**Interpretive Programs.** Trails should integrate interpretive programs on wildlife, natural history, and cultural resources into the trail experience. Interpretive programs and design will depend on the trail environment, anticipated users, and volume of use.

## 10.2.2 Trail Use

### Design Goal

Trails, trail facilities, and trail management programs should be designed to take into consideration the unique qualities and needs of Eastern Pima County.

### Design Concepts

**Trail-Use Compatibilities.** Trail designs should separate uses that are in frequent conflict or that pose unacceptable safety hazards to each other. This concept should be applied where necessary but is not intended to promote separated trail-ways where multiple-use conflicts do not exist. Trail protocol and courtesy should be promoted through

signage and supervision on multiple-use trails.

**Whole Access Trails.** Linear park trails and trails in other appropriate locations should be designed to accommodate whole access needs. That is, a trail should be accessible to trail-users with physical, mental and sensory disabilities or impairments. Trails, facilities, and approaches should be designed utilizing established standards and input from local disability advisors and trail users with special needs. Through these efforts, the resulting system will have the continuity necessary to serve the whole access user.

**Flood Hazards.** Escape ramps of an appropriate design and spacing must be provided in channels with flood control structures. Escape paths and "climb outs" should be located and clearly signed in natural channels with flash flood hazards.

**Access To County Trails.** Major county trails must be designed with adequate access for local neighborhoods as well as users from other areas. Smaller local trails may be designed with access patterns that are primarily responsive to neighborhood needs. The numbers, locations, and designs of access points must not, however, promote use levels that will result in damage to the trail and adjoining environments. Access point designs must also be compatible with private property and located so as to minimize local resident concerns about privacy and security.

**Access to Public Lands.** Boundary access points to public lands must be designed to accommodate public users from local as well as non-local areas. The access facilities should be designed to accommodate those uses that are permitted on the adjoining public land trail. Access point facilities must also be compatible with public land management plans and with private property and

located so as to minimize local resident concerns about privacy and security.

**Trails and Trail Facilities.** Trails and related facilities should be designed to promote types and levels of use that are consistent with the management plan and philosophy of use and appropriate for the surrounding landscape setting and community.

A trail loop is one example of a design that helps to avoid overuse.

**Trails In Washes.** Trails in washes should consist of natural pathways within the channel, rather than constructed pathways. Signage, fencing or other construction that is necessary to control trail use and restrict motorized vehicle access to the trail or to protect the security of private property must not restrict flood-ways and should be unobtrusive.

**Trails Within Road Rights-of-way.** Pedestrian and equestrian trails should be safely separated from the road way. Bicycle trails and lanes should be planned in accordance with the "Arizona Bicycle Facilities Planning and Design Guidelines" available from the Arizona Department of Transportation.

**Trails at Road Crossings.** The preferred trail crossing at roads with high traffic volumes is an appropriately sized bridge or box culvert underpass. Established standards for safe box culverts, especially for equestrian users, should be followed. Trails that must cross the road at-grade need clear sight distances, cross-walk markings, signs and easy access to the road grade level. In some cases, signals may be advisable.

**Trail Parking Areas.** Trailhead parking areas must be designed to adequately accommodate and manage anticipated use levels and prevent overflow parking into local neighborhoods. Parking areas may be located and sized to discourage overuse of a trail where environmental or community sensitivities exist. The design

and location should be as attractive to the local neighborhood as possible.

Whenever possible, parking facilities should be located within parks or other existing public areas. They should be adjacent to or linked with public transportation, whenever possible. Parking for whole access linear parks should include handicapped parking spaces, in accordance with established standards, and trail entrance gates or ramps. Problems associated with public parking areas, such as dust and erosion, traffic, noise, glare from lights, and litter should be controlled by the least obtrusive and most cost effective techniques.

**Equestrian Staging Areas.** Equestrian staging areas should be designed in accordance with established national and regional standards and with the assistance of local equestrians. Staging areas should be designated in regional parks that access the county trails system and public lands. Many of the design concepts noted for trail parking areas will apply to equestrian staging areas.

**Bicycle Nodes and Staging Areas.** Bicycle nodes or staging areas should be planned and designed at strategic points in a multiple-use trail. Racks and locks and other security measures should be provided.

**Water Stops.** Water stops are a critical feature if trails are to be designed for more than seasonal use. This is especially true of designed trails, such as linear parks. Water fountains and horse troughs should be strategically located, in accordance with projected types and volumes of trail use.

**Trail-use Signage System.** A visual identification system, using symbols, shapes, etc., should be developed to clarify lane or direction of movement on multiple use trails, level of trail difficulty, trail length, and safety measures associated with the trail, such as ramps or climb outs. Depending on the type of

trail and projected level of use, trail route maps should be posted.

### **10.2.3 Trail Linkages**

#### **Design Goal**

Trails should be designed to provide linkages to, and loops with, other trails wherever possible.

#### **Design Concept**

**Local Neighborhoods.** Trail linkages to local neighborhoods, including parks and schools, are critical so that users can reach major trails without having to resort to automobile use or horse back riding on paved streets.

**3.2 System-Wide Planning & Design.** Individual trails should be designed within a system-wide perspective to ensure that the components of the system fit together as a unified and workable whole.

### **10.2.4 Trail Compatibility With Private Property**

#### **Design Goal**

Each trail should be designed so that in both its appearance and use it will be an amenity to the local neighborhood.

#### **Design Concepts**

Trail facilities should promote security for adjacent properties as well as for the trail user. To the extent possible, these facilities should be visually unobtrusive.

**Security.** Trail facilities should promote security for adjacent properties as well as for the trail user. To the extent possible, these facilities should be visually unobtrusive.

**Law Enforcement.** Trail designs should be responsive to law enforcement needs.

**Trail Protocol.** Trails should be clearly marked, and information on adjacent private property rights provided, in order to avoid conflicts and trespassing.

### **10.2.5 Trail Implementation and Management**

#### **Design Goal**

Trails should be designed so they can be implemented, managed and maintained in a cost-effective manner. Trail designs must be compatible with maintenance requirements.

#### **Design Concepts**

**Trail Maintenance Programs.** Trails should be designed for easy and low cost maintenance. Trail users and groups, under the supervision of county personnel, should be encouraged to participate in maintenance

programs. An effective trail maintenance program will tap neighborhood volunteers for a variety of support services, that range from "trail watch" and clean-up activities to trail blazing and construction.

**Trail Encroachment.** The trails management plan should outline specific procedures that will protect trails against encroachment from incompatible property uses. Any threats to the continuity of the trail corridor and to its wildlife, scenic, and cultural resources should be dealt with in a timely manner.

## CHAPTER 11

# RECOMMENDATIONS

### 11.1 Summary

Trail recreation is a highly valued tradition that has historically occurred in both the mountain and valley areas of Eastern Pima County. Public trail use within most of the mountain areas is well protected by virtue of established federal lands and county mountain parks. Public access to trails in the mountain regions and public use of valley trails are not, however, at all secure because they lie wholly or partially within private lands or state trust lands subject to private lease or purchase. Trails and trail access points in these locations are increasingly in jeopardy as a result of urban development or because public use presents private property owners with the specter of security and liability risks. Nevertheless, as the metropolitan population of Pima County continues to grow, public trails and trail access points will become increasingly important to the health and well being of the community.

The principal solution to this dilemma, identified in this plan and supported by the successful experiences of many other communities, is public ownership of and management responsibility for trails and access points. While some other land-use arrangements such as easements or licenses can offer some limited or interim solutions to the public trail problem, the public ownership approach has been found to best serve both the interests of the public and private property owners in the widest variety of circumstances.

An eastern Pima County trail network has been proposed and ranked by acquisition priority in Chapter 9 of this plan. This network of public trails and access points would generally serve present and future

recreational needs in Eastern Pima County.

The trails proposed for first priority acquisition would establish a basic trails network. The addition of the second and third priority trails would expand the network to a full-service level. These additions are especially important for increasing trail service in local neighborhoods.

Effective implementation of a public trail network for Eastern Pima County is going to take commitment, coordination, and vigilance on the parts of county and municipal governments, federal and state agencies, and concerned citizen groups. These efforts will need to extend through at least 20 to 30 years in order to implement the network. The various levels and divisions of government will need to attend to actions that directly and indirectly impact the implementation and management of trails. Careful coordination will be especially necessary on their parts to ensure that trail opportunities are not unintentionally compromised by indirect actions for flood control, transportation, and development purposes. Citizen group involvement will continue to be necessary to provide government with updated input on trail use and to maintain the level of support and vigilance that is necessary to carry-out such wide-ranging long-term goals.

### 11.2 Trail System Recommendations

#### 11.2.1 Legislative Actions

1. Pima County should adopt an ordinance to direct implementation of a non-motorized, multi-use public trail network. The county should further adopt, by resolution a policy to use the Eastern Pima County Trail System Master Plan as a guide for developing the trail network (Appendices A and B).

2. Other local governments in Eastern Pima County should adopt those portions of the Eastern Pima County Trail system Master Plan that apply to their jurisdictions in order to promote coordinated implementation of the proposed trail network (Appendices A and B).
  3. Pima County should request that the Arizona State Legislature amend the recreational users' liability statute (A.R.S. §33-1551) to clarify its application to public and private property owners and easement holders who open their lands for public use, so that it includes suburban/urban as well as rural locations (Chapter 8).
- Master Plan at least every 5 years (Chapter 9).
  - Help establish appropriate design guidelines for the Eastern Pima County trail network (Chapters 9 and 10).
  - Facilitate the formation and actions of trail groups interested in participating in the maintenance and operation of public trails through cooperative efforts such as the Adopt-A-Trail Program (Chapter 9).
  - Organize a neighborhood trail-watch program to monitor the status of established and proposed public trails (Chapter 9).
  - Promote public trail etiquette and respect for private property rights and privacy (Chapters 9 & 10)

### **11.2.2 Management Coordination**

4. Pima County and other governmental jurisdictions in Eastern Pima County should enter into formal and informal agreements to coordinate and promote acquisition, design, development, operation, and maintenance of a non-motorized, multi-use public trail network. An intergovernmental committee should meet at least biannually to address issues pertaining to the public trail network. Pima County Parks and Recreation Department should serve as the administrative coordinator for committees and actions arising from intergovernmental agreements in order to ensure continuity of the trail network (Chapter 9).
5. Pima County should establish a Trails Advisory Committee of citizen representatives to work with the Parks and Recreation Department and other county departments to:
  - Assist in updating the Eastern Pima County Trail System
6. Create a Trails and Open Space Coordinator staff position within the Pima County Parks and Recreation Department. The coordinator will provide shared benefits to all local governments. The county should evaluate the potential of using an intergovernmental agreement to establish joint county/municipal funding for this position (Chapter 9).

### **11.2.3 Trail Acquisition Program**

7. Pima County should recognize that public ownership of trail corridors and access points is essential in order to develop an effective trail network. Other trail implementation methods such as easement, lease, and license agreements, have value for complementing an acquisition program but are of limited value in

- developing a comprehensive public trail network (Chapters 8 and 9).
8. The Pima County Manager should identify a realistic yearly trail acquisition program in the annual update of the 5 year capital improvement projects budget (Chapter 9).
  9. The Pima County Department of Planning and Development Services, when revising area plans or creating sector plans in conformance with the proposed Comprehensive Land Use Plan, should incorporate policies reinforcing the Eastern Pima County Trail System Master Plan. The Department should also require that site analyses for specific plans and rezonings, and wherever else required by the county, demonstrate how the proposed development will comply with, or be given exemption from complying with, the Eastern Pima County Trail Plan. Minimum compliance requirements should include:
    - Proposed developments should not be permitted to block or otherwise adversely impact an established public trail or to unreasonably preclude the opportunity for future implementation of proposed first, second, or third priority trails identified in this plan (Chapter 9).
    - Public trails may be required in proposed developments in which traditional trails have not been identified in this plan or are inadequate to accommodate the demands that will be generated by the new community. The public trail network within the proposed development should ideally connect to the county trail network (Chapter 9).
  10. Following acquisition of a public trail, the Pima County Parks and Recreation Department should complete an analysis of the trail corridor to determine appropriate levels of environmental protection, use, maintenance, and law enforcement prior to sanctioning any public use (Chapter 10).
  11. Where road rights-of-way have been given priority as potential trail corridors, Pima County Department of Transportation and Flood Control District, in consultation with the Parks and Recreation Department, should designate trails within these rights-of-way if such use is found to be compatible and appropriate. They should determine which road rights-of-way can accommodate a trail corridor based on public safety, road designs, trail requirements, and other pertinent criteria (Chapters 8, 9, and 10).
  12. Pima County Department of Transportation and Flood Control District, in consultation with the Parks and Recreation Department, should assess the potential impacts of road projects on any first, second, or third priority trails (Chapter 10).
  13. The Pima County Parks and Recreation Department should confer with utility companies to determine the opportunities, specific requirements, and strategies for implementing trails in utility rights-of-way as identified in this plan (Chapters 8 and 9).
  14. In making any major public parkland acquisitions, Pima County should ensure that trail access to the acquired lands and to other public lands via the county trail network is protected (Chapter 9).

### 11.2.4 Trail Design Criteria

15. In consultation with the Trails Advisory Committee and other intergovernmental cooperators, Pima County Parks and Recreation Department and the Department of Transportation and Flood Control District should identify uniform public trail design criteria for the Eastern Pima County Trail network. The design goals and concepts presented in this plan should be used as the basis for this effort and all site specific planning (Chapters 9 and 10).

### 11.2.5 Immediate Actions for Implementing the Trail Network

#### Primary Trails

16. Pima County's first actions in terms of acquisitions within the primary trail system should be to complete the linkages joining the Rillito and Santa Cruz River Parks and the planned Cañada del Oro and Pantano Wash River Parks. The acquisition of approximately 15 miles of privately owned channel between these river parks would establish almost 50 miles of contiguous public trail within the metropolitan core of Eastern Pima County (Chapter 9).
17. Pima County Parks and Recreation Department should initiate a design process, including public participation, to determine the specific design for the Central Arizona Project trail and ensure its compatibility with the Eastern Pima County Trail System Master Plan (Chapter 9).
18. Pima County Department of Transportation and Flood Control District should require public trail rights-of-way on both sides of watercourses with river parks in

order to preserve access from either side and to avoid the need for public trail cross-overs at major arterials or via the wash bottom (Chapters 9 and 10).

19. Pima County Department of Transportation and Flood Control District should provide a means to eliminate or bypass obstructions to public trail use, such as flood control structures, fences, pits, and refuse in the major watercourses or in other washes with established public use (Chapter 10).
20. Pima County should preserve the remaining natural riparian habitats along all watercourses that are designated priority trail corridors. Riparian vegetation is an essential asset for public trail recreation as well as for flood control, wildlife habitat, and open space protection (Chapters 9 and 10).
21. Pima County should consult with the San Xavier District of the Tohono O'odham Indian Reservation about developing a public river park along the Santa Cruz River within the reservation boundary (Chapter 9).

#### Subregion 1

22. Begin acquisition studies in this subregion with the Saginaw Hill, Peña and Cardinal Trails before development eliminates viable opportunities for these trails.

#### Subregion 2

23. Resolve the Sweetwater Trailhead access problem through public acquisition of the one-half mile of trail and associated canyon land presently on private land east of the Saguaro National Monument, along with acquisition of the right-of-way along Sweetwater Trail Road.

24. Undertake to acquire the trail corridor along Sweetwater Wash, which has the potential to connect to the Sweetwater Trail.  
way: Birch Way, Bonanza Way, Wentworth Road, and the Agua Caliente-Tanque Verde Link. Consider acquisition of portions in private ownership.
25. Develop the West Branch Nature Trail with the cooperation of the city and the support and active participation of area residents.
26. Implement the Anklam Wash local trail.

**Subregion 3**

27. Continue negotiations with the State Land Department for acquisition of land and rights-of-way for Tortolita Mountain Park. Such negotiations should be preceded by preliminary park master planning and identification of feasible funding sources.
28. Develop ways to enhance coordination with the jurisdictions of Marana and Oro Valley in order to promote rezoning dedications for open space and public trails.

**Subregion 4**

29. Pursue the acquisition of Agua Caliente Wash, especially the portion between Agua Caliente Park and the national forest. Accompany acquisition with an arrangement that establishes adequate public access.
30. Require dedication, at the time of rezoning, of adequate public access to Pima Canyon and an adequate trail corridor within any remaining unsubdivided segments of Pima Wash.
31. Improve parking, signage and directions for public access to Ventana Canyon. Initiate steps to acquire a public right-of-way as a permanent solution.
32. Assess the compatibility of trail use within the following road rights-of-

33. Begin acquisition studies for the Shurban Loop. Begin negotiations with Saguaro National Monument concerning relocation and construction of the Old Spanish access point.
34. Begin an acquisition program for the Freeman Wash/Del Este (Reyes Wash) trail.

**Subregion 5**

35. Initiate an agreement among all involved parties that would ensure public access at the Buehman Canyon North access point.

**Subregion 6**

36. Pursue an agreement with the owners of Rocking K properties, the X-9 Ranch, and other applicable lands to allow public trail access to Madrona Ranger Station via Rincon and Chimenea creeks in the near future.
37. Explore the possibility of providing some public access to Madrona Ranger Station, perhaps on a limited permit system, via the X-9 Ranch Road. The county may also need to purchase/lease a trail right-of-way across state trust lands to effect this goal.
38. Continue to pursue attainment of an in-stream flow permit of the Cienega Creek Natural Preserve in order to maintain the outstanding trail qualities of this area.
39. Pursue measures to allow completion of the Arizona Trail along Cienega Creek and elsewhere within county jurisdiction.

**Subregion 7**

40. Develop a land acquisition package for the proposed Sierrita and Cerro Colorado Mountain Parks. Parklands acquisition should include acquisition of trail corridor rights-of-way.
41. Designate bridle trails on selected road and utility rights-of-way.
42. Establish an urban trail network in Green Valley along major drainageway and road rights-of-way, which will connect to the future Santa Cruz River Park. A footpath system could be started immediately through community support and user participation.

**Subregion 8**

43. Select one from among the five first priority wash segments and initiate a trail design effort. Take into consideration the weaknesses and strengths of the completed Alamo Wash linear park and build on the strengths.

APPENDIX A  
PROPOSED PIMA COUNTY ORDINANCES

ORDINANCE NUMBER \_\_\_\_\_

AMEND THE PIMA COUNTY CODE CHAPTER 12.12:

BE IT ORDAINED BY THE BOARD OF SUPERVISORS OF PIMA COUNTY,  
ARIZONA:

Section 1. That the Pima County Code, Chapter 12,12 is amended to read as follows:

Chapter 12.12

PUBLIC HIKING TRAIL ACCESS PLAN

PUBLIC HIKING, EQUESTRIAN AND BICYCLE TRAILS

Section 12.12.010 Trail access plan.

~~A. On September 20, 1976, in a regularly noticed board of supervisors study session, the board adopted "The Trail Access Plan for the Tucson Metropolitan Area," which designates some, but not all, public hiking trails.~~

~~B. On November 20, 1979, the board of supervisors authorized and directed the county parks and recreation department to prepare revisions to "The Trail Access Plan for the Tucson Metropolitan Area" so that the plan would reflect all public hiking and equestrian trails and trailheads and designate official public access [sic] points to all trails. This resolution further authorized and directed the county parks and recreation department to plan and implement the trail access plan and to designate those areas where present and potential access problems exists or may occur, reviewing the plan periodically and revising it as deemed necessary or desirable per A.R.S. Section 11-806, giving the board of supervisors the authority, among other things, to plan hiking and riding trails.~~

~~C. This plan is to be implemented and maintained in conjunction with the county planning and zoning department, the trail access committee and with citizen participation in development and implementation of each section, to include both adjacent property and homeowners, and trail users.~~

Section 12.12.010 Purpose and intent.

A. The purpose of this chapter is to:

1. Provide for the implementation of a public trail system for Eastern Pima County.
2. Designate the Pima County Parks & Recreation Department as the lead agency in directing implementation of the trail system.

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B. The intent of this chapter is to provide for the ever increasing outdoor recreation needs of a rapidly expanding resident and tourist population in Eastern Pima County by providing for the implementation of a public trail system in Eastern Pima County which provides for public access into the public recreational lands in Eastern Pima County and which interconnects the major public recreational lands while also providing local trail opportunities.

### 12.12.020 Definitions.

A. Certain terms used in this chapter shall be defined as follows:

1. Eastern Pima County Trail system Master Plan. The County policy, adopted as Resolution No. 1989- , identifying and describing the system of proposed trails for Eastern Pima County.

2. Eastern Pima County Trail Users Guide. the official trails map and guide produced by the Parks & Recreation Department showing those public trails available for public access.

3. Public trail: A trail which has been implemented for use by the public and may be shown on the official Eastern Pima County Trail User's Guide.

4. Proposed public trail: A trail which has not been implemented for public trail use but which is delineated in the Eastern Pima County Trail System Master Plan or has been identified by the Parks & Recreation Department staff as an alternative trail to one shown on the Trail System Master Plan.

5. Trail implementation: Acquisition by Pima County or other cooperating jurisdictions of the legal right of public trail access. The methods by which trails may be implemented on privately-owned land include, but are not limited to, rezoning and subdivision dedications of trail rights-of-way or easements, land or easement purchase, land exchanges, leases, and license agreements. On publicly-owned lands trails may be implemented by intergovernmental and interagency agreements, leases, licenses, land exchanges and other appropriate methods.

### 12.12.030 Trail Implementation Program

A. The County Parks & Recreation Department is designated as the lead agency in implementing a public trail system for Eastern Pima County and is authorized to take steps necessary to accomplish this goal including:

1. Establish an annual implementation program for proposed public trails in cooperation with the County Manager;

2. Work with the Pima County Department of Transportation and Flood Control District to implement proposed public trails, where appropriate, in road rights-of-way and flood control rights-of-way;

3. Work with the Planning and Development Services Department in identifying and where possible requiring dedication of proposed public trails on property for which rezoning or subdivision approval has been requested;

4. Identify uniform design criteria for the public trail system;

## *Eastern Pima County Trail System Master Plan*

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5. Establish a Trails Advisory Committee of citizen representatives to provide public input and assistance;

6. Work with other governmental jurisdictions in Eastern Pima County to coordinate and promote public trail planning, implementation, development, operations and maintenance;

7. Periodically publish an Eastern Pima County Trail User's Guide identifying public trails available for public access;

8. Periodically update the Eastern Pima County Trail System Master Plan.

B. The Board of supervisors, in deciding whether to approve a subdivision plat or Rezoning request, shall review compliance with the Eastern Pima County Trail System Master Plan. The owner or agent of the property shall demonstrate substantial compliance with the Plan or adequate justification for not so complying. Substantial compliance with the Trail System Master Plan may be demonstrated by approval of County Parks & Recreation of an alternative trail to one delineated in the Trail System Master Plan.

ORDINANCE NUMBER \_\_\_\_\_

AMEND THE PIMA COUNTY ZONING CODE Ordinance 1979-171:

BE IT ORDAINED BY THE BOARD OF SUPERVISORS OF PIMA COUNTY,  
ARIZONA:

SECTION 1. That the Pima County Zoning Code, Ordinance 179- 171, Chapter 18.69, is amended to read as follows:

Chapter 18.69

Subdivision Standards

Section 18.69.040 Design Standards

.....

D. Easements

.....

~~a. When such trails are officially designated by "The Trail Access Plan for the Tucson Metropolitan Area," as amended, or by any county area plan, as amended; or~~

~~b. As may be required by the planning and development services department.~~

a. When such trails are designated in the "Eastern Pima County Trails System Master Plan," or by any county area plan, as amended; or

b. As may be required by the Pima County Planning and Development Services Department in consultation with the Pima County Parks & Recreation Department.

ORDINANCE NUMBER \_\_\_\_\_

AMEND THE PIMA COUNTY ZONING CODE Ordinance 1986-41 1 (part), 1986; Ordinance 1985-141 1 (part), 1985:

BE IT ORDAINED BY THE BOARD OF SUPERVISORS OF PIMA COUNTY, ARIZONA

SECTION 1. That the Pima County Zoning Code, Ordinance 1986-41 1 (part), 1986; Ordinance 1985-141 1 (part), 1985, Chapter 18.91, is amended to read as follows:

Chapter 18.91

Rezoning Procedures

Section 18.91.030 Application.

.....

E. Plan submittals.

.....

2. Preliminary development plan:

.....

b. Specifications: A preliminary development plan shall be drawn on a topographic map at a scale which is adequate to show all the necessary details clearly. It shall contain, at a minimum, the following applicable mapped elements and supporting information:

1) Map elements

.....

o) Proposed trail rights-of-way determined in consultation with the Pima County Parks & Recreation Department based upon the "Eastern Pima County Trail System Master Plan" and other available information

**APPENDIX B**

**PROPOSED CHANGES IN PIMA COUNTY  
PLANNING AND DEVELOPMENT SERVICES**

**SITE ANALYSIS REQUIREMENTS**

Section I-K Recreation and Trails (page 13)

1. Describe and map all parks, recreation areas, and adopted public trails within one mile of the site.
2. Describe and map proposed trail rights-of-way from the Eastern Pima County Trail System Master Plan," as amended.

.....

Section II-O Recreation and Trails (page 22)

1. Describe and quantify the size of all recreation areas to be provided. Include those recreation areas provided in accordance with 18.09.080 (Small Lot Option) if applicable.
2. Describe the proposed ownership of natural and modified open space within the development. (e.g., homeowners' association, individual lot owners.)
- ~~3. Where applicable, describe and map how the proposed development will facilitate access to off site public trails. Discuss how access will be maintained.~~
3. Describe and map any proposed trails for the development and discuss how such trails comply with the "Eastern Pima County Trail System Master Plan," or if not, why such compliance should not be required.

## APPENDIX C

### PROPOSED PIMA COUNTY RESOLUTION

RESOLUTION NUMBER \_\_\_\_\_

RESOLUTION OF THE PIMA COUNTY BOARD OF SUPERVISORS ADOPTING THE "EASTERN PIMA COUNTY TRAIL SYSTEM MASTER PLAN" AND PROVIDING FOR THE PERIODIC REVISION OF THE PLAN BY THE PIMA COUNTY PARKS & RECREATION DEPARTMENT.

WHEREAS, the Board recognizes that a public trail system encompassing primary trails along the major riverbeds, as well as connector trails and local neighborhood trails will greatly enhance the outdoor recreational opportunities for residents and visitors in Pima County; and

WHEREAS, it has come to the attention of the Board that action must be taken to preserve and enhance public trail access into and between the major natural preserves around Metropolitan Tucson such as Saguaro National Monument, Tucson Mountain Park, Catalina State park and Coronado National Forest; and

WHEREAS, the Board further recognizes that development of a comprehensive trail system depends upon good planning and effective action to acquire public trail access as opportunities arise.

NOW, THEREFORE, upon motion duly made, seconded and carried, be it resolved as follows:

That the Pima County Board of Supervisors hereby adopts the "Eastern Pima County Trail System Master Plan" as the planning document for the implementation of a comprehensive public trail system for the County. The County Parks & Recreation Department and other interested County agencies and officials are directed to begin efforts to implement the "Eastern Pima County Trail System Master Plan."

The County Parks & Recreation Department is further authorized to periodically review and revise the "Eastern Pima County Trail System Master Plan," as is deemed necessary or desirable. The decision to add or delete trails in the Plan shall be based on one or more of the following criteria:

1. Whether the subject trail serves as a link to a major natural preserve.
2. Whether the subject trail will connect with existing or proposed public trails.
3. Whether the subject trail is selected so as to minimize the impact upon the environment.
4. Whether the subject trail is positioned in a way to minimize impacts upon adjacent structures and property owners.

5. Whether the subject trail crosses roadways at grade separations or away from blind curves or stretches of road where visibility is obscured.
6. Whether the subject trail is a significant scenic or historical route which serves as a link in the trail system.
7. Whether the subject trail will require significant alteration or removal of existing vegetation.
8. Whether the subject trail will pose significant design or safety problems.

Revisions to the "Eastern Pima County Trail System Master Plan" shall be subject to review and approval by the Parks & Recreation Commission and the Board's final approval and adoption.

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