MEMORANDUM

Date: December 29, 2004

To: Conservation Acquisition Commission
Chair and Members

From: C.H. Huckelberry
County Administrator

Re: Rosemont Ranch

The current owner of the Rosemont Ranch, a 2,960 acre private in holding within the Santa Rita Mountains and the Coronado National Forest, is offering to sell the majority of the ranch and associated mineral and water rights to Pima County. The owner has offered the following terms:

- Purchase price: $11,500,000
- $500,000 of purchase price to be set aside at closing for management of the Ranch
- Owner would retain 200 acres of private land to be restricted to six lots via conservation easement, and associated wells and water rights to serve the 200 acres
- All water rights will be conveyed to Pima County (with exception listed above)
- All mineral rights associated with the private property will be conveyed to Pima County
- All unpatented mining claims will be assigned to Pima County with the intent that such claims will be extinguished through Congressional action. Until claims are extinguished, seller will pay the annual assessment fees on the claims out of $500,000 fund.
- Seller will pursue renewals of the state and federal grazing leases, totaling 18,000 acres, for at least 25 years
- Seller will manage the property for the County, per a management agreement and resource plan to be developed by both parties

There is $100,000 included in the 2004 Bond Ordinance under Cultural Resource projects to purchase the Helvetia Town site, a historic mining community, within the Rosemont Ranch. According to the attached report, prior assessments show that the property does contain high biological resource values. Furthermore, the property is largely within the Biological Core and Important Riparian categories of the Conservation Lands System and appear to fit the criteria used to develop the Habitat Protection Priorities. However, none of the parcels are identified in the 2004 Bond Ordinance as Habitat Protection Priorities because the majority of the parcels are in holdings within the Forest Boundaries.

Because of the potential mineral values associated with this property, a sophisticated mineral appraisal will be necessary to determine the value of the property, and whether mining is economically feasible for this property or whether residential development is the highest and best use. Since the majority of this property is not included in the 2004 Bond Ordinance, Pima County lacks the funds to conduct the thorough due diligence needed to determine whether this is a favorable acquisition. You will remember that after Pima County purchased

the Sweetwater property with the assistance of the Trust for Public Land (TPL), TPL made a commitment to reinvest the substantial donation back into Pima County. To this end, Pima County has requested the assistance of TPL to provide the necessary due diligence and act as a Pima County agent in assessing this offer. TPL's services will also be useful for seeking alternative funding sources.

If this property were to be acquired in part with Habitat Protection Priority 2004 Bond funds, an amendment to the Bond Ordinance would be necessary. At some point in the near future, I will ask the Commission whether you wish to send this potential acquisition to the Science Technical Advisory Team for their review.

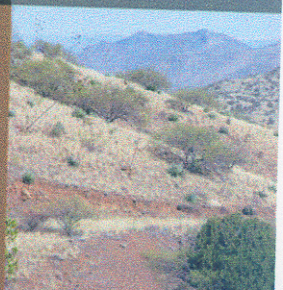
Attachments

c: Honorable Chair and Members, Pima County Board of Supervisors
John Bernal, Deputy County Administrator, Public Works
Jim Barry, Executive Assistant to the County Administrator
Christina Biggs, Real Property Services Manager
Christine Curtis, Sr. Real Property Acquisition Agent, Real Property Services
Nicole Fyffe, Special Staff Assistant, County Administrator's Office

Preserving the

SANTA RITA ROSEMONT RANCH

NOVEMBER 2004



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COUNTY ADMINISTRATOR
C.H. Huckelberry

Preserving the Santa Rita Rosemont Ranch

Location and Purpose

The Rosemont Ranch consists of 2960 deeded acres located in the Santa Rita Mountains south of Tucson, along with 18,000 acres of grazing lease within Coronado National Forest and adjoining state lands, for about 20,960 acres in total (Figure 1). The Ranch includes the crest of the mountains, sloping down and including the ghost town of Helvetia on the west. To the east, the ranch includes the oak-studded hills of Rosemont Junction sloping down to Davidson Canyon. This area can be viewed from a scenic roadside pullout along Highway 83. To the north lies Mt. Fagan, and to the south lies Box Canyon.

As recently as 1997, the Rosemont Ranch was proposed for copper mining by ASARCO, Inc. ASARCO sought to acquire an additional 13,272 acres of claimed National Forest land through a land trade, to provide additional areas for disposal of overburden and mine tailings, and to provide a land-use buffer for the mine (Figure 2).

The Ranch was recently sold by ASARCO to a new owner, who is considering conservation instead of mining, and may be willing to sell all or a portion of the Ranch to Pima County.

This report is prepared at the request of the County Administrator to evaluate the potential benefits of acquiring the Rosemont Ranch and associated water and mineral rights for open space preservation. Most of the Rosemont Ranch was not included in the 2004 Bond Ordinance, for reasons to be discussed.

A portion of the Rosemont Ranch property, the Helvetia site, is included in the County's 2004 Bond Ordinance for acquisition and preservation as an historic mining community. The balance of the Rosemont fee and lease property contains important cultural resources and is almost entirely within the designated biological core area of the Multiple Species Conservation Plan of the Sonoran Desert Conservation Plan.

Overview of Proposal and its Significance

Pima County is considering whether to acquire 2760 acres of land at Rosemont Ranch, including the Helvetia townsite and copper ore body. Under the proposal, nearly all of the water and mineral rights would be conveyed to Pima County, including those on National Forest lands. To enable ranching to continue on the adjacent 18,000 acres of leased land, 200 acres of land at Rosemont Camp, know as VR Ranch, would remain in private ownership, subject to a conservation easement restricting future subdivision and use.

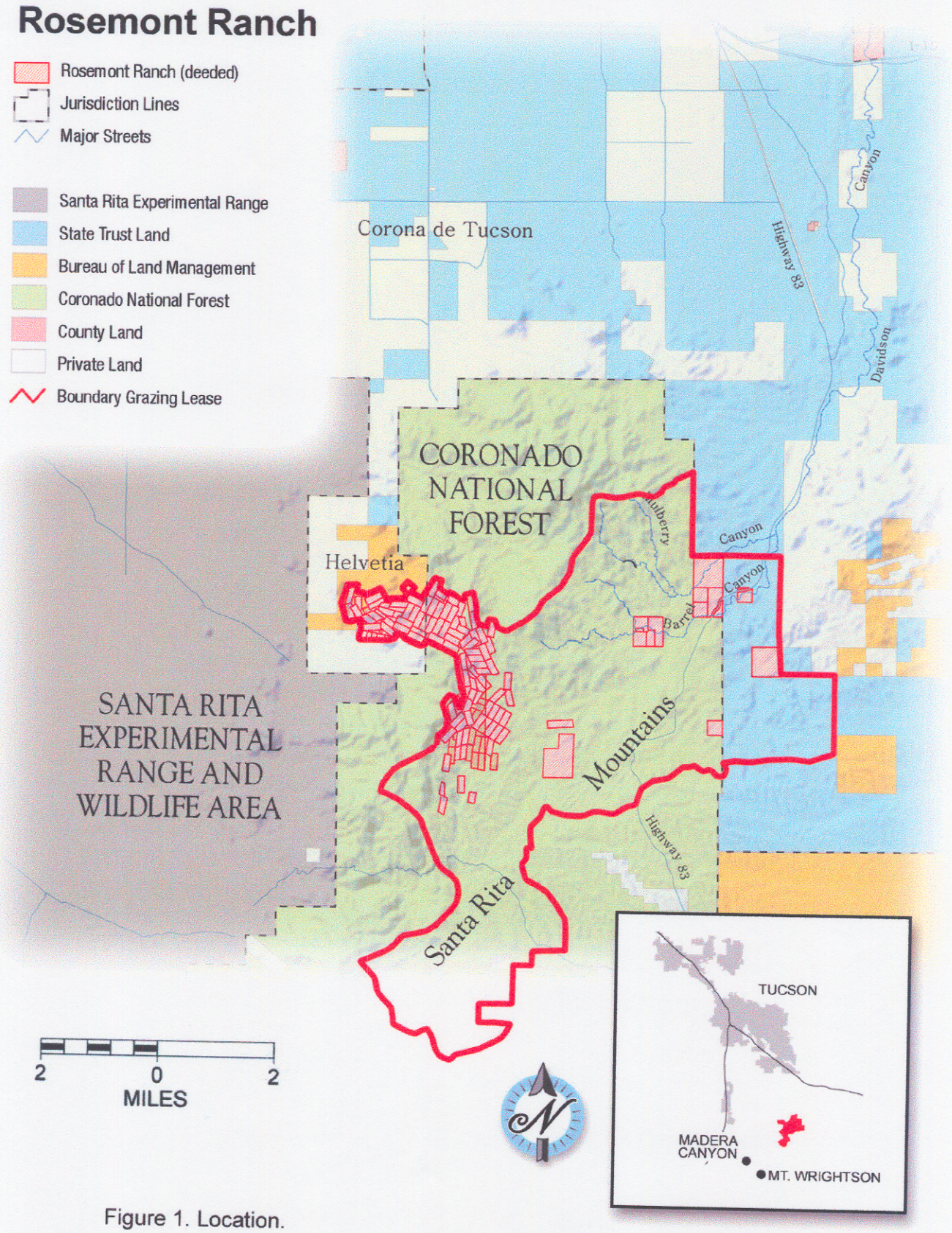


Figure 1. Location.

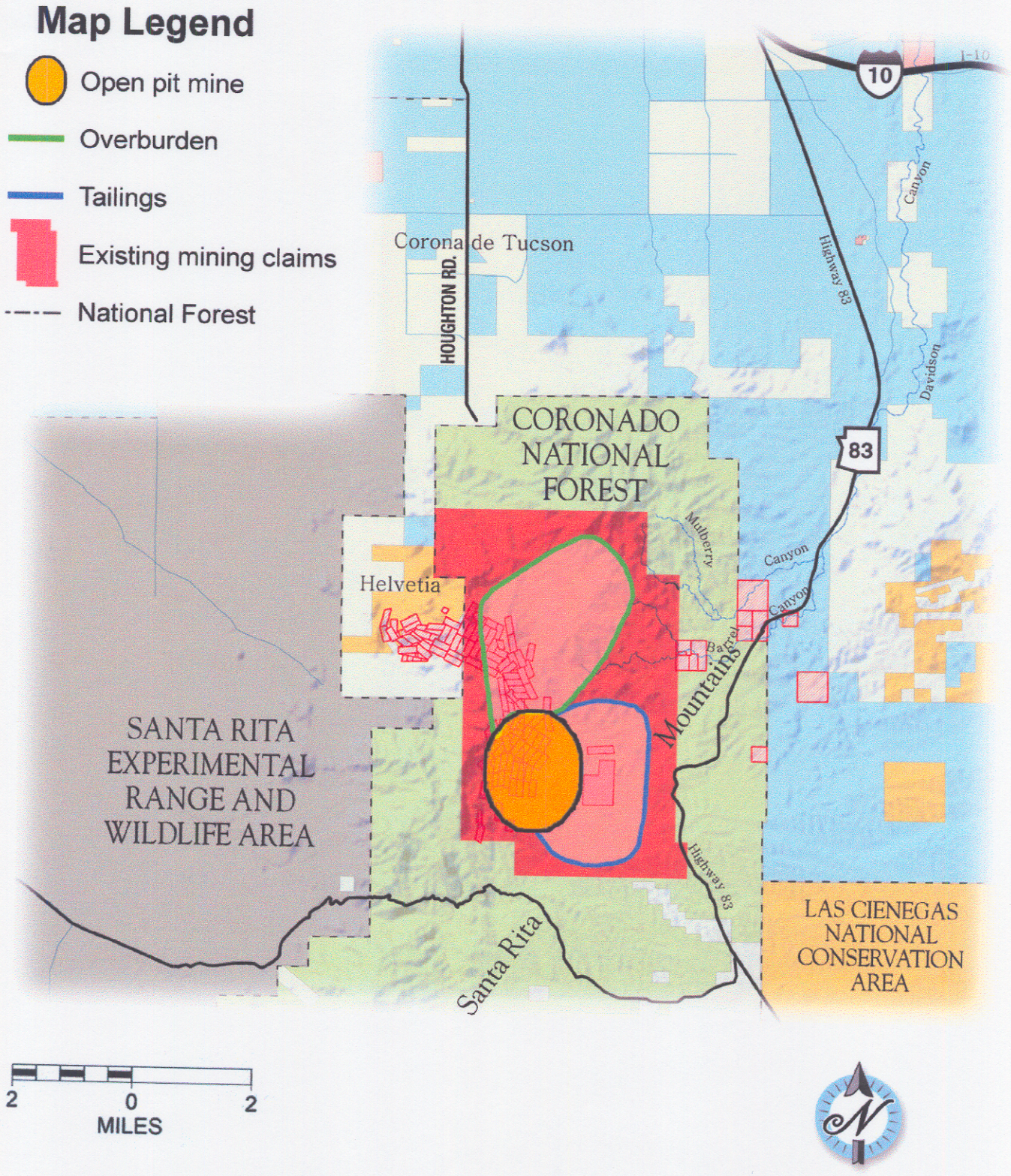


Figure 2. Relationship of ASARCO's mining proposal to Rosemont Ranch

Pima County would seek to withdraw 12,000 acres of unpatented mineral claims in the National Forest. Ultimately, Pima County would seek to extinguish these claims, removing the threat of mining permanently through an act of Congress.

These actions would preserve an intact cultural and natural landscape, protect scenic beauty, maintain public access to the Santa Rita Mountains, protect water resources in the Tucson and Cienega basins, and secure important riparian areas and biological core areas of the Sonoran Desert Conservation Plan.

Brief Chronology of the Rosemont Mine Controversy

In 1970, the Anaconda Copper Company asked the Thorne Ecological Foundation and its Rocking Mountain Center on the Environment in Denver to organize and conduct the appropriate studies necessary to facilitate an exchange of land between their company and the U.S. Forest Service. The merger of Anaconda and the AMAX mining interests resulted in the ANAMAX Corporation that sought to consolidate its holdings at Rosemont. ANAMAX subsequently became owned by ASARCO, which renewed efforts to acquire adjacent Forest Service land.

In 1996, Save the Scenic Santa Ritas Association (SSSR) formed as a non-profit organization, to stop a land exchange that would have turned over 13,272 acres of National Forest, or more than 20 square miles, to ASARCO for the Rosemont mine. Over a hundred people were actively involved in the effort, and almost 3,000 people signed petitions opposing it (Levick and Serraglio, 1998). SSSR was endorsed by 55 local groups, ranging from hunting, off-road vehicle and gun clubs, to neighborhood associations, hikers and birders. A campaign coordinator was hired to help with the political, administrative, fundraising, and media work.

SSSR also garnered the support of the local governments. In May of 1997, the Pima County Board of Supervisors voted 4-1 to oppose the proposed Rosemont Ranch Land Exchange (Appendix A). The resolution stated, "the public interest of Pima County and southern Arizona will...not be furthered by the proposed Rosemont Land Exchange." The Santa Cruz County Board of Supervisors and the Tucson City Council also passed unanimous resolutions against the land exchange that year.

All three major local governmental bodies gave similar reasons for opposing the swap: the loss of access to 20 square miles of public land, and the resulting stresses on remaining public land in the area; the loss of recreational opportunities for residents of, and visitors to, southern Arizona; the potential negative impacts on our tourism-based economy; the potential harm to wildlife as management of this diverse habitat passed from the Forest Service to a private corporation; the negative impact on the overall quality of life in southern Arizona; and several others.

In early 1998, Coronado National Forest Supervisor John McGee announced to the press that "he and ASARCO have mutually agreed to terminate the Memorandum of Understanding related to potential copper mine development or land exchange in the Santa Rita Mountains." Although the immediate threat of a land exchange and copper mine is gone, there remain over 10,000 acres of unpatented mineral claims in the National Forest, as well as the unresolved situation with the private lands at Rosemont. The mineral claims in the National Forest could be used to "privatize" federal lands for as little as $5.00 an acre. SSSR continues to monitor land issues in the Rosemont Ranch area.

Significance to wildlife and vegetation

In 1977, University of Arizona completed a detailed inventory of vertebrate and invertebrate species of the Rosemont Ranch, as well as recreation surveys, geological and hydrological studies, and paleontological and archeological investigations. Due to the efforts of many scientists, more is known about the biological significance of the Rosemont Area than is typically the case.

The topography of the Rosemont area varies from elevations of 4422 ft. to 6339 ft, with an average elevation ranging from 4620-5610 feet (Davis and Callahan, 1977). Limestone substrates are common, and there are steep cliffs, shaded hillsides, varying soil types, and talus slopes, which provide a wide range of physical and microclimatic conditions.

In the Rosemont area, four types of plant communities have been identified: woodland; grassland; limestone scrub; and riparian gallery forests (Davis and Callahan, 1977). The woodland communities are characterized by an overstory of oaks and junipers and a dense, diverse understory of grasses and herbs. This community usually occurs on north-facing slopes at most elevations and in drainages at the higher elevations (Davis and Callahan, 1977).

The grassland community has a varying degree of woody plant cover, with many species of cactus, low shrubs, and short grasses and annuals. This community is found on ridge tops and xeric slopes (Davis and Callahan, 1977). The endangered Pima pineapple cactus, known to occur in the Rosemont Ranch area (AGFD, 1996), probably is found in this habitat.

Grazing and fire suppression has probably affected the diversity and shrub cover within this plant community. Researchers considered the area overgrazed in the 1970's. Some of the ranch, particularly in the lower Box Canyon and Davidson Canyon watersheds, is classified as historic grassland that has been taken over by shrubs (The Nature Conservancy, 2003). Grasses within the shrubland on the east side of the Santa Ritas are predominantly native, whereas grasses on the west side are more dominated by Lehmann's lovegrass.

The limestone scrub community is found on all limestone substrates. Corresponding to the limestone communities, the westernmost occurrence of Chihuahuan desert vegetation is found in the Rosemont area. Approximately 20 percent of the vegetation found in the limestone communities are Chihuahuan affiliates (Davis and Callahan, 1977).

Riparian gallery forests occur in low-elevation washes and have a dense cover of deciduous trees and shrubs (Davis and Callahan, 1977). These are described in the next section because of their relationship to water resources.

Figure 3. Riparian woodland near Rosemont Junction includes oak, walnut, mesquite and desert willow. November 2004 photograph by Julia Fonseca.

The Conservation Lands System identified several Special Elements in the Rosemont Ranch area: springs, limestone outcrops, intermittent streams, oak/grass ecotone, mesquite, and unincised floodplain with contributing watershed.

Table 1 lists the Priority Vulnerable Species that occur in the Rosemont Ranch. Most of these occur on the deeded lands. Arizona Game and Fish Department (AGFD) listed fifteen Special Status Species in the Rosemont area (AGFD, 1996).

Table 1. Priority Vulnerable Species Known to Occur in the Rosemont Ranch
(based on data from Davis and Callahan, 1977; AGFD, 1996)

Pima Pineapple Cactus (*Coryphantha scheeri robustispina)* --endangered

Lesser Long-nosed Bat *(Leptonycteris curasoae yerbabuenae)* --endangered

Mexican Long-tongued Bat *(Choeronycteris mexicana)*

Western Red Bat *(Lasiurus blossevillii)*

Chiricahua Leopard Frog *(Rana chiricahuensis)* --threatened

Lowland Leopard Frog *(Rana yavapaiensis)*

Giant Spotted Whiptail Lizard (*Cnemidophorus burti stictogrammus)*

Photograph by Cecil Schwalbe

Rufous-winged Sparrow *(Aimophila carpalis)*

Bell's Vireo *(Vireo bellii)*

Yellow-billed Cuckoo *(Coccyzus americanus)* --candidate

Species experts have recommended that portions of the Rosemont Ranch be acquired for the Sonoran Desert Conservation Plan (SDCP) (Pima County, 2003). Four species with category 1 priority conservation areas (PCA1) occur in the Rosemont Ranch: Chiricahua leopard frog, Arizona shrew, Swainson's hawk, and the Rufous-winged sparrow. Priority conservation areas, category 2, have been identified for the giant spotted whiptail, Pima pineapple cactus, western red bat, Mexican long-tailed bat, Pale Townsend's bat, Lesser long-nosed bat, and the Chiricahua leopard frog.

The University of Arizona conducted field surveys between August 1975 and October of 1976 and established the presence of 44 mammals in the Rosemont area (Davis and Callahan, 1977). Another 18 species were believed to occur in the area, or had been collected in the past. Four of these, including historic specimens of the Mexican gray wolf and jaguar collected at Helvetia, were presumed extirpated. The Heritage Data Management System (HDMS) identified the lesser long-nosed bat (federally listed as endangered), the Mexican long-tongued bat, and the western red bat (all SDCP priority vulnerable species) as occurring in the Rosemont area (AGFD, 1996).

The Rosemont area has a high diversity of bird species, with 138 species identified in the area (Davis and Callahan, 1977). Riparian habitats have the highest species diversity, and woodlands support the second highest diversity of

birds. The large rock cliffs north of Lopez Pass provide nesting habitat for raptors (AGFD, 1996). The Arizona HDMS identifies the yellow-billed cuckoo, an SDCP priority vulnerable species, as well as a federally listed species, as occurring in the area (AGFD, 1996).

The University of Arizona conducted an inventory of the fish, reptile and amphibian species in the Rosemont area from August 1975 to October 1976 (Davis and Callahan, 1977). Native fish were not present. Seven species of amphibians were found, and 37 species of reptiles. This survey found the giant spotted whiptail (a SDCP priority vulnerable species) in the area. Other SDCP priority vulnerable species in the area include the Chiricahua leopard frog (federally listed) and lowland leopard frog (AGFD, 1996).

Scenic beauty

The Rosemont Basin is visually prominent from a number of public vantage points (Davis and Callahan, 1977, 1977). Many frequently traveled roads (Highway 83, I-10 and I-19) have unobstructed views into the Rosemont Ranch area, particularly the higher elevation sections along the Santa Rita mountain ridge. The results of a study conducted by the University of Arizona found that the Rosemont Ranch area views are high in aesthetic and scenic value: a visitor survey showed that scenery was the most important reason for the site's popularity for visitors (Davis and Callahan, 1977). The 1977 report concluded, "one of Rosemont's principal values to the southern Arizona community, then, is as a visual/scenic resource".

A visibility and scenic analysis study conducted in 1981 looked at seven alternative plans for mineral development in the Rosemont area and determined that all of the development alternatives were highly visible from Highway 83 (University of Arizona, 1983). Most of the seven mining alternatives were visible from the Tucson basin, I-19, and 1-10 (University of Arizona, 1981). The prominence of mining scars, tailings, and other blemishes in the Rosemont area would not be compatible with its value as a scenic resource.

The scenic beauty of the area has attracted filmmakers to the area. Classic westerns, such as *Duel in the Sun* and *Tombstone* were filmed in the Santa Ritas. More recently, Kevin Costner starred in *Tin Cup*, which was filmed at Rosemont Junction (Save the Santa Ritas, 1996).

Figure 4. Looking east across the Rosemont Ranch from overlook along Highway 83. November 2004 photograph by Julia Fonseca.

Recreation

Due to the close proximity of a major metropolitan area and the existing network of dirt roads, the Rosemont Ranch has considerable value as a regional recreational resource (Davis and Callahan, 1977). The University of Arizona identified 17 different types of recreational uses in the area, including hunting, camping, hiking, and driving for pleasure. Most of the recreational uses that occur in the Rosemont area are considered to be "dispersed recreation," or activities that are spread out over a large area.

Many of the campsites used by the public are actually on private property, and many of the public use roadways are also on privately owned lands (personal observations; Reichardt, personal communication, 2004).

Game animals hunted in the area include white-tailed and mule deer, three species of quail, javelina, dove, and rabbit. Mearn's quail were thought to be the primary quail species using the area during the late 1970's. In 1995-96, 568 white-tailed deer, 43 mule deer, 5 mountain lions and 288 javelina were harvested in the game unit 34A that includes Rosemont Ranch. Hunting use averaged 50-70 camps in the area of ASARCO's land proposed exchange that year (Scott, 1996).

Figure 5. OHV use at Rosemont Ranch. Sites under the oak trees on public and private land are popular locations for camping. Photograph by Michael Patrick, Trust for Public Land.

Off-highway use in the Rosemont area increased dramatically in the 1990's, resulting in efforts by AGFD and the Forest Service to ensure responsible use of the area by OHV users (Scott, 1996). The area is popular because of its proximity to the metropolitan area, its moderate climate, and the opportunity for loop drives.

The Arizona Trail is a 790-mile non-motorized trail that extends from Mexico to Utah. The trail highlights Arizona's topographic, biologic, historic and cultural diversity (Arizona Trail Association, no date). Primary users are hikers, equestrians, and mountain bikers (outside of wilderness or other specially managed areas). The Arizona Trail passes through the Mt. Wrightson's Wilderness Area, and extends down into Davidson Canyon.

Riparian Habitat and Water Resources

There are a number of springs and intermittent streams in the Rosemont Ranch. Not all of these naturally occurring surface water resources were included in the inventory performed for the Sonoran Desert Conservation Plan. The surface water rights associated with Rosemont Ranch include four springs and three watercourses on deeded lands, one wash on state trust land, six springs on

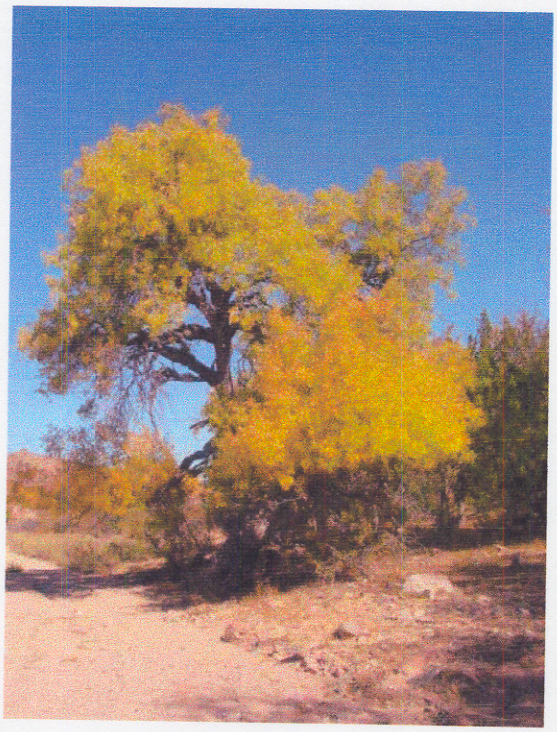
National Forest land, and five watercourses in National Forest. This is in addition to numerous stock ponds, wells, windmills, and concrete drinkers.

The average precipitation is higher than the surrounding desert, between 16 and 18 inches. Infiltration of snowmelt and runoff through fractures in the bedrock results in recharge to the bedrock aquifer. In addition, infiltration into the alluvial channel deposits of the larger streams provides some limited storage in a shallow groundwater aquifer. Most of the fracture and streambed recharge is thought to be discharged through springs and streams in the local area (Davis and Callahan, 1977). Groundwater pumping would likely deplete the flows of the springs and streams.

Several naturally occurring water sources in the area are critical for wildlife (AGFD, 1996; J. Fonseca, personal observations). These include various springs in Scholefield and McCleary Canyons, Sycamore Spring, Deering Spring, Fig Spring, Questa Spring and Casita Spring. Six of the springs in the area are reportedly perennial (Davis and Callahan, 1977). Another unmapped spring is associated with an artesian well that would provide the source of water for the 200-acre ranch homestead. Access and use of this water source is desired by the owner, to allow future irrigation of turf on the 200-acre VR Ranch inholding.

Groundwater occurs in the floodplain aquifers along Barrel and Scholefield Canyons. Most of this, up to 400 acre-feet per year, is thought to be used by riparian vegetation growing along the floodplain, which includes mesquite, hackberry, oak, willow and walnut trees (Davis and Callahan, 1977). The riparian vegetation maps prepared for the Sonoran Desert Conservation Plan show mesquite woodland along Barrel Canyon and its tributaries, with a small patch of Interior Southwest broadleaved deciduous riparian forest near Sholefield Spring. Cottonwood-willow forest is shown to occur along Sycamore Canyon and Mulberry Canyon. Another patch of riparian forest also appears on deeded land at Helvetia Spring, based on aerial photography. This latter spring is shown as being owned by Rosemont Ranch in partnership with others. It is unclear whether it is included in the offered lands.

Runoff from the watersheds within the Rosemont Ranch flows into a number of Important Riparian Areas. To the east, these include Barrel, Scholefield, Wasp, McCleary, and Davidson Canyons. Several unnamed watercourses drain to the west. While most streams in the area are ephemeral, Barrel and Davidson Canyons occasionally run in the vicinity of Highway 83 for sustained periods following wet winters, and are therefore important water sources for downstream riparian vegetation.



Springs and stockponds in the ranch provide habitat for leopard frogs, which were considered common to abundant in the 1970s (Davis and Callahan, 1977). There have been no recent surveys to confirm the presence of leopard frogs, or their nemesis, the bullfrog. Regardless, the future management of springs and stock ponds in the Rosemont Ranch will either contribute to the survival or demise of the lowland leopard frog in Davidson Canyon, and the Chiricahua leopard frog in Empire Gulch and other tributaries of Cienega Creek within the Las Cienegas National Conservation Area. Stockponds in the Rosemont 2 grazing allotment are located in the Davidson Canyon watershed, while those in the Greaterville allotment flow towards Las Cienegas.

Figure 6 --. Cottonwood along East Fork Davidson Canyon. Photograph by Michael Patrick, Trust for Public Land, November 2004.

Cultural resource preservation

In the 1970s, the Arizona State Museum conducted a survey of the ANAMAX project area, including Forest Service, fee, and ANAMAX patented lands within the Coronado National Forest covering nearly 30 square miles.

As a result of this field work, some 621 prehistoric and historic sites and one paleontological site were identified and recorded, ranging in time from the late Pleistocene, Archaic, Hohokam, Early Piman, Spanish, Mexican, and American Territorial periods, or roughly a period of time from 10,000 B.C. to the present. Of these sites, the majority reflects Native American use and occupation over many thousands of years, while only 30 sites date to the historic period or the last 300 years. Notable historic sites include a number of mines, camps, mills, and the mining towns of Helvetia, Old Rosemont, and New Rosemont, and the VR Ranch established by Edward Vail in 1883, which is today the headquarters of Rosemont Ranch (Ayers, 1984, Canty et al., 1999).

A sample of these prehistoric sites and a few historic sites were investigated through test excavations and archival research, but because the mining project has not materialized, virtually all of these sites remain undisturbed, reflecting an intact, multi-dimensional cultural landscape.

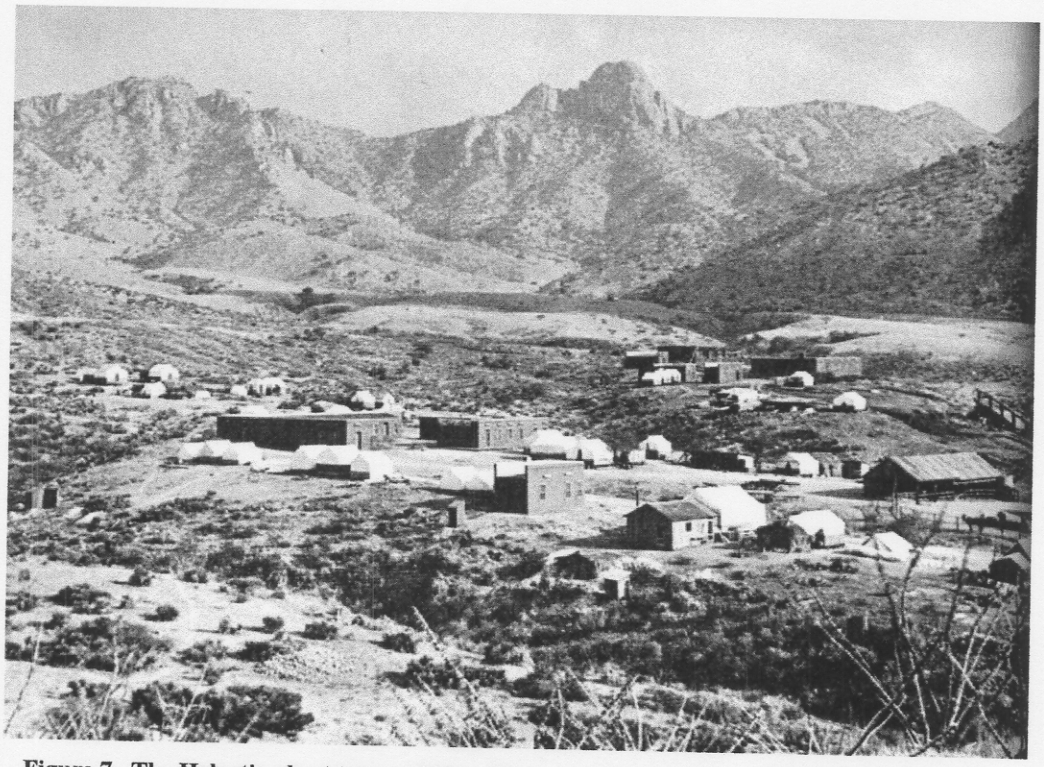


Figure 7. The Helvetia ghost town. (1901. Photo courtesy of the Arizona Historical Society)

Potential Outcomes

Rosemont Ranch has become increasingly vulnerable to development pressures. Recent drought, rising land prices, changing livestock markets, and uncertainty over access to grazing leases have contributed to the decline in working ranches, and private ranch lands are increasingly being sold and converted to real estate and other development, especially at the periphery of the urban area.

This trend, reviewed in a regional perspective, indicates significant potential for further loss of ranchlands and open space. Although there are nearly 1.4 million acres of working ranchlands in eastern Pima County, nearly 64 percent of this land base is comprised of developable private or state trust lands. Consequently, more than one million acres of unfragmented natural open space in Pima County could be developed in the future.

The next section explores potential future outcomes for the Rosemont Ranch. Mining or a rural residential development seem the most likely outcomes, absent some type of voluntary agreement to limit development. State statute exempts mining from County land use regulation. Lot splits also require no County approvals.

Mining Scenario:

Mining as proposed previously would destroy approximately six square miles of the natural soil and vegetation on the deeded and Forest land through excavation and burial, and disturb another two and one-half square miles (Davis and Callahan, 1977). It could be argued that federal permits to allow such a destructive project could be withheld, given the level of public opposition. However, new methods of mining, including in-situ leaching, could possibly eliminate the need to obtain adjacent Forest land for the overburden and tailings.

Inevitably, some sediment would escape the site, and be carried downstream along tributaries flowing toward Davidson Canyon and toward the Santa Cruz River. An open-pit mine would likely result in the desiccation of a number of the springs and reduced stream flow on Barrel Canyon (Davis and Callahan, 1977). Pumping for in-situ leaching would have the same effect, until years after pumping ceased. Some degradation of the chemical quality of both surface water and groundwater would also be likely under either scenario.

If the area is not preserved for open space, or conserved through low-density rural uses, then approximately 10,000 acre-feet of groundwater would need to be extracted to produce copper from the Rosemont mine (Davis and Callahan, 1977). Water to process the ore would come from the regional aquifer near Sahuarita, which is located in the Tucson Active Management Area. Water needs for in-situ leaching might be less, but it is likely that water would need to be imported via a pipeline to accomplish this.

Without development of the mine, groundwater in the regional aquifer will either be available for other future uses in Green Valley/Sahuarita, or it will remain in the aquifer, helping the community reach the safe yield goal of the Tucson Active Management Area.

Indirect impacts include damage due to invasive, non-native species that prefer disturbed environments, and habitat fragmentation for a wide variety of plants and animals.

Rural Ranchette Scenario

The potential for a de facto subdivision already exists without the need for further lot splitting. Patented mining claims have produced over 100 individual parcels in the Rosemont Ranch, most of which are around 20 acres in size (Figure 1). At present, these parcels are all owned by one partnership, but without Pima County's acquisition, it is unlikely that these lands will ever be under one ownership again.

Residential development of the existing parcels would ensure a proliferation of roadways and utility corridors would fragment the landscape within the Coronado

National Forest. Once the lots are sold to different owners, conservation acquisitions would be more difficult and more expensive, and further lot splitting would ensue.

Due to its distance from municipal water suppliers, each parcel would have to be served by wells or springs in the Rosemont Ranch. Water uses would rise considerably as new land owners installed their homes and landscaping, in an area where the available groundwater and spring water is already being used by riparian vegetation, wildlife, and livestock. Some springs are located on the private property, and the legal right to tap directly into six springs and five streams on adjacent National Forest also exists.

Possibly under this scenario, the private lands and grazing leases would become a "rent-a-cow" operation, which allows the developer to keep a low agricultural tax assessment while land prices rise and parcels are sold. Often these lands benefit from no further improvements in anticipation of development and are leased to non-resident ranchers to graze young steers. Because of this instability in the private holdings, the adjoining state trust grazing leases may also be subject to increased vulnerability to degradation from adjacent population growth and possible future sale for development.

Fire has been suppressed in this area historically (Davis and Callahan, 1977). It would very difficult to reintroduce fire as a natural process to the landscape under the rural ranchette scenario, even on adjacent National Forest lands. Periodic fires form necessary ecological processes for healthy vegetation communities in this setting, and would benefit watershed conditions and habitat conditions for a number of plants and animals.

Non-native plants and animals, including deliberate and adventitious introductions, would increase, and probably be more diverse than under a mining scenario. Associated woodcutting uses would probably also increase.

Rural residential development would conserve the scenic beauty of the area far better than would mining, although the ridgetop parcels would likely be targeted for telecommunication development.

Public recreation on private lands would be eliminated as the parcels developed. Through the negotiation of easements with the landowners, Forest access issues could be minimized, but there would be no guarantees of continued access.

Ranch Conservation Scenario

Under this scenario, all or most of the Rosemont Ranch would be conserved by acquisition by Pima County, and protected in perpetuity using conservation easements. The conservation easement would restrict the total area of disturbance and the future development of water resources. In addition, the

mineral rights on both deeded and Forest land would be conveyed to Pima County and ultimately extinguished.

Ranching could continue in conjunction with Pima County's ownership, with retention of a base property by the owner to satisfy Forest Service requirements. Under this scenario, grazing exclosures around several riparian areas and springs would be developed. Total irrigation needs would be limited.

Ranch conservation is more compatible with continued biological and hydrological functions than either mining or rural residential development. Acquiring the Rosemont Ranch's mineral rights would prevent the outright destruction of natural land cover by mining, and the disruption of natural watershed hydrology. Conservation easements limiting future development and/or fee acquisitions could restrict impacts upon springs and streams, and minimize the total area of disturbance and habitat fragmentation caused by rural residential development, including utilities.

A fire management plan would identify where fire suppression would need to continue, and where and when fire might be appropriate. Reintroducing fire to some of the grasslands having moderate shrub cover should be considered in conjunction with the National Forest, State Land Department and the grazing permittee.

The ranch conservation scenario offers the best outcomes for recreational benefits. The public could continue to enjoy use of the deeded lands currently used for camping, hiking and hunting. Specific provisions in the conservation easement could be used to ensure that the public can use roads across the deeded land, and to gain access to the National Forest, while ensuring that roads do not continue to proliferate. Specific provisions should also address stockpond management for native aquatic vertebrates, and conservation of the scenic beauty of the landscape, particularly the skyline and other visually prominent locations.

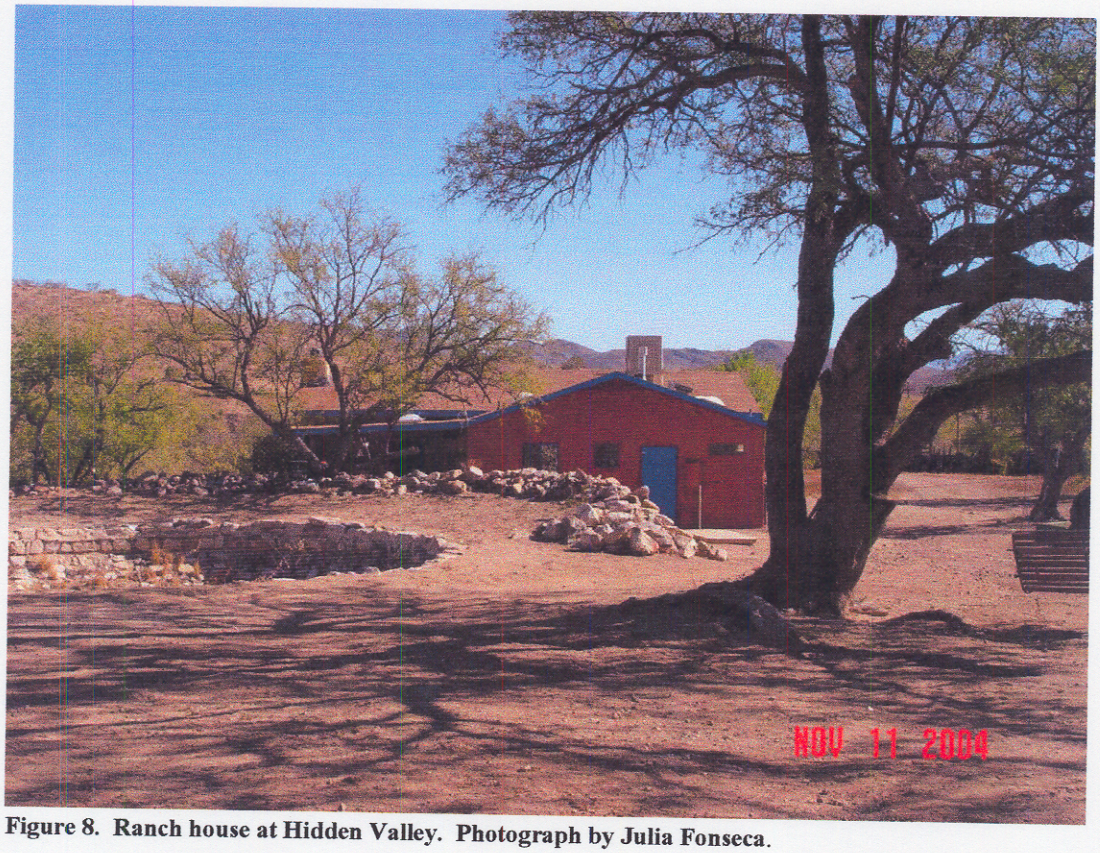
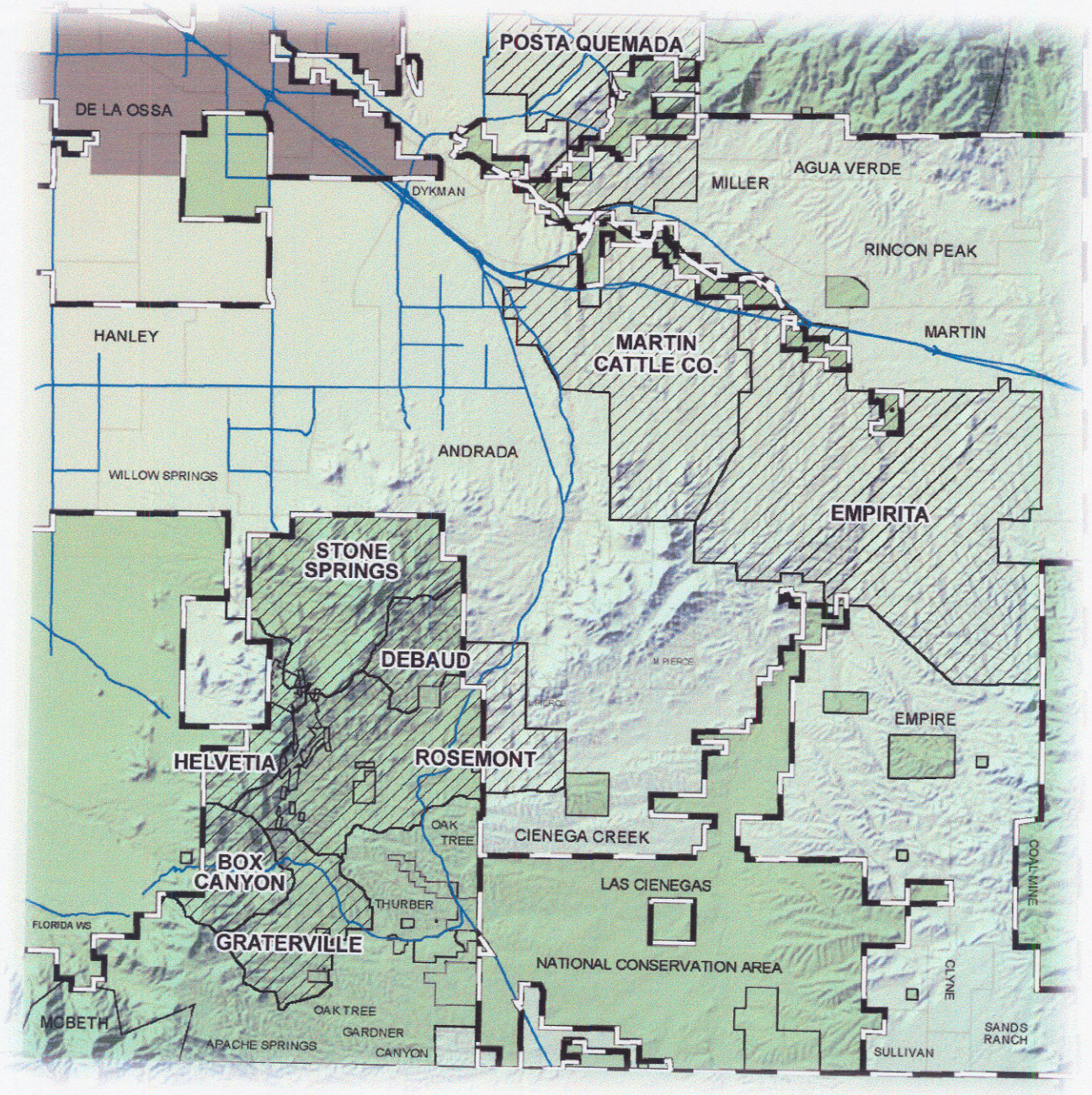


Figure 8. Ranch house at Hidden Valley. Photograph by Julia Fonseca.

Acquisition of the Rosemont Ranch properties, while allowing ranching to continue in operation, would preserve cultural resources. Moreover, through the ranch conservation option, not only would the known cultural sites be preserved, but unknown numbers of unrecorded cultural and historic sites would also be preserved on the associated federal and state grazing leases. Of the possible scenarios presented above, only the ranch conservation option serves to preserve these abundant cultural values.

With the acquisition and conservation of Rosemont Ranch as a working landscape, all these benefits will accrue, and more than 20,000 acres of fee and grazing leases will be preserved that adjoin National Forest and other state trust lands, resulting in the conservation of many tens of thousands of acres of unfragmented open space. When considered with the Bar V Ranch acquisition on Davidson Canyon, the Posta Quemada Ranch and the Empirita Ranch, the Rosemont Ranch would help to define a *de facto* boundary for urban expansion (Figure 9).



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MILES

Grazing Leases

- Incorporated Areas
- Major Streets
- Preserves
- Grazing Allotments in Conservation

Figure 9.

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Funding Opportunities

There is $100,000 in bond funding for purchase and preservation of historic features within the Rosemont Ranch, at Helvetia. The following sources of outside funding have been identified by County staff and Trust for Public Land (TPL) as possibilities to assist with the Rosemont Ranch acquisition.

1. Forest Service (USFS) funding: Since much of the ranch is an inholding in the Coronado National Forest, the County and TPL are investigating possible partnerships with the USFS. This would entail the USFS acquiring and owning some of the Rosemont Ranch property. The long timeframe required for the Land and Water Conservation Fund (LWCF) appropriations makes it difficult for this acquisition, but the possible use of Sisk Act funds (available funds that result from equalization payments made to the Forest Service as part of land exchanges) is also being investigated. USFS could only acquire those parcels that are inholdings in the authorized Forest boundaries and - when combined with USFS's reluctance for acquisition of mining claims - probably limits this funding opportunity to, at most, the purchase of 200 acres of deeded in-holdings on the eastern side of the ranch.

2. Fish and Wildlife Service (FWS) – Section 6 Funding: This funding source, already awarded to the County for purchases of Lords Ranch and Hayhook Ranch, is an obvious funding source for Rosemont Ranch assuming the acquisition can be demonstrate to contribute to important habitat for federally listed species. Given that FWS Region 2 (which includes Arizona, New Mexico and Texas) receives approximately $2 million per year for Section 6 awards, the County and TPL believe that the upper limit for any single award is likely $750,000. Due to the timing of this grant program (applications are typically due in May and awards made in September), closing on all or portion of the ranch would have to be postponed until late 2005 to facilitate use of this funding, if a grant application was successful.

3. The Arizona Department of Agriculture Livestock and Crop Conservation Grant Program (in development) may be another source of funding for the Rosemont Ranch. The program is to fund grants to landowners and grazing and agricultural lessees of state or federal land who contract with the Arizona Department of Agriculture to implement conservation based management alternatives using livestock or crop production practices, or reduce livestock or crop production, to provide wildlife habitat or other public benefits that preserve open space.

4. ADOT Transportation Enhancement funds (TEA) – The federal TEA program fits with this acquisition since Sonoita Highway, designated as a scenic road by ADOT in 1985, passes directly through two of the

Rosemont Ranch parcels, and additionally a significant portion of the ranch property is part of the viewshed from that highway. The County has been awarded one grant by the State Transportation Board under the "acquisition of scenic easements" category of the program (Davidson Canyon), and is waiting decision on another. TEA could provide $500,000 to assist with the fee acquisition of Rosemont Ranch, with applications typically due in May.

Hazard Assessment

Horizontal shafts, mine adits, and several areas of smelter slag occur in association with the historical mining activities on privately-owned properties, particularly on the western portion of the Rosemont Ranch property. An environmental site assessment of the entire property performed in May 2004 by Engineering and Environmental Consultants reportedly concluded that "no additional environmental evaluations be completed because the risk of contamination at the site is so minimal that no further investigation is warranted."

Pima County Real Property would need to review the report and determine what additional environmental investigation is necessary during the due diligence phase of this proposed acquisition. Another question to be considered is the level of risk abatement that Pima County might need to undertake upon acquisition, such as fencing around open shafts.

Relationship to Habitat Protection Priorities

The privately owned lands within the Rosemont Ranch were not identified as a priority for the habitat protection priorities included in the 2004 Bond Ordinance, but adjacent State trust lands were.

The goals of the habitat protection priorities were described by Arizona Open Land Trust (AOLT) and the Nature Conservancy (TNC) (Pima County, 2003):

1. Maximize the benefit of existing protection areas by increasing their size.
2. Emphasize protection of the rarest habitat types or "special elements" as per the Science Technical Advisory Team.
3. Maintain a network of connected protected lands where native habitat and natural corridors remain.
4. Systematically evaluate lands throughout eastern Pima County so that the priorities are identified in all of the County's biologically important areas.

The TNC/AOLT selection criteria included:

1. Lands from biological core, important riparian areas and species management areas;
2. Private lands equal to or greater than 10 acres in size in vacant or agricultural status.
3. State trust lands within the priority CLS categories emphasizing lands eligible for conservation under the Arizona Preserve Initiative.

When compared to these goals, we see that the deeded parcels are adjacent to, and within an existing protected area, the Coronado National Forest. Indeed the acquisition of the deeded lands and the various mineral and water rights on the National Forest lands are essential to conserve the integrity of the National Forest. However, the habitat protection prioritization conducted by AOLT/TNC excluded private land parcels located within the Coronado National Forest or BLM's Ironwood Forest (Robert Marshall, personal communication, 2004). The rationale was that inholdings might qualify for a federal funding source, Land and Water Conservation Funds, appropriated by Congress. Leveraging federal funds to accomplish conservation of inholdings that were identified in the Conservation Land System seemed to be a prudent strategy to stretch the value of bond funds (Robert Marshall, personal communication).

An exception was made in the Las Cienegas area where AOLT/TNC did identify BLM inholdings as habitat protection priorities when they met one or more of the following: (1) where the County had proposed County park expansion areas; (2) where private or state lands contained biological core or important riparian habitat and served as cross-valley corridors connecting County or other protected public lands; (3) where private or state lands fell within the watershed of Cienega Creek .

Nearly all of the Rosemont parcels lie within either the biological core or important riparian area of the Conservation Land System. The private parcels include some of the most rare habitat types mapped during the inventory phase of the Sonoran Desert Conservation Plan, such as mesquite woodland, cottonwood-willow forest, perennial and intermittent springs, and intermittent stream. A number of springs, streams and forest patches occurring in the private lands were not mapped in the SDCP due to their small size, or lack of information.

None of the parcels outside the Forest boundaries are smaller than 40 acres. A 10-acre threshold was used by TNC/AOLT to exclude private lands outside Coronado National Forest, thus parcels outside the Forest boundary meet that criterion. These parcels also meet the other criteria, with the exception that the cottonwoods on the East Fork of Davidson Canyon are too sparse to qualify as forest.

If the 10-acre threshold were applied individually to parcels within the National Forest, then forty-four of the parcels in the Coronado National Forest boundaries

would not qualify, including several of the ones associated with springs or other riparian resources. All parcels inside and outside the National Forest, are listed as either ranch or vacant, with the exception of the Rosemont Junction ranch headquarters, which has a large house and other improvements.

Based on the foregoing, it appears that the resources that formed the basis of the habitat protection priorities do, in fact, exist at Rosemont Ranch.

The Conservation Acquisition Commission adopted specific subarea goals for the use of 2004 Bond monies. The Rosemont Ranch spans both the Santa Cruz Basin and the Southeast areas. The acquisition would specifically contribute two of the principal conservation goals of the Southeast area (Pima County, 2003):

- Protect water resources for the region's intermittent and perennial streams, while providing recharge and flood control.
- Help to assure the protection of the critical biological linkage between the Santa Rita Mountains, the Cienega Creek and the Rincon Mountains by initiating the process of protecting the Davidson Canyon corridor. (The acquisition includes portions of Davidson Canyon and its principal tributary, Barrel Canyon.)

The acquisition would contribute to one of the Santa Cruz basin's goals, namely conserving Pima County's rural ranching heritage and lifestyle, while achieving important conservation goals.

Conclusions and Recommendations

Acquiring all or portions of the Rosemont Ranch would help meet the habitat criteria established by TNC/AOLT as part of the 2004 bond program. Of particular importance are the mineral and water rights associated with the land, because these rights, to a large degree, control the potential for mining or residential development on both the fee land and adjoining areas of National Forest. In addition, the water rights and water improvements could be used to support future restoration efforts. If an acquisition occurs, it will be imperative to see that all of the appurtenant mineral and water rights are transferred.

None of the Rosemont Ranch parcels were included in the Habitat Protection Priorities for the 2004 Open Space bonds. Private lands inside the National Forest were excluded from the analysis, and private property rights (water rights and mineral rights) were not considered.

In any acquisition, expenditures of funds in one place will reduce the ability to expend funds in another place. For the Habitat Protection Priorities, funds are geographically allocated into different subregions. The Rosemont Ranch is located in two different subregions: the Southeast area and the Santa Cruz

Basin. Rosemont Ranch acquisitions would contribute more significantly to meeting the goals of the Southeast area than those of the Santa Cruz Basin.

Because of previous inventories performed to fulfill the requirements of the National Environmental Policy Act, more is known about Rosemont Ranch than the usual acquisition. A number of the Priority Vulnerable Species for the Sonoran Desert Conservation have been found previously in the Rosemont Ranch. If due diligence proceeds, instead of the typical baseline documentation, additional inventory would be desirable, particularly for the Chiricahua leopard frog and other endangered species. This would bolster the potential for obtaining outside funding and would inform negotiations regarding management, should a decision be made to proceed with acquiring all or part of the property.

Management of springs and stockponds on the Rosemont Ranch could affect the status of lowland and Chiricahua leopard frog over a much broader area, including the Cienega Creek Natural Preserve, Davidson Canyon, and Las Cienegas National Conservation Area. If there is an acquisition, provisions should be made to manage water bodies for native aquatic fauna.

Without action by Pima County, Rosemont Ranch would probably either be mined or become a residential subdivision over the next several decades. A ranch conservation scenario offers the best outcome for preventing fragmentation of the landscape and conserving the natural and cultural heritage of the area.

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