

DRAFT

SONORAN DESERT CONSERVATION PLAN STEERING COMMITTEE

EDUCATION SESSION

**August 14, 1999 (9:00 a.m - 12:30 p.m.)
Arizona-Sonora Desert Museum (Gallery)
2021 N. Kinney Road / Tucson, Arizona, 85743**

RANCHING WITHIN PIMA COUNTY

**An Overview of Ranch Conservation
Thomas Sheridan**

OPENING REMARKS: CHUCK HUCKELBERRY, COUNTY ADMINISTRATOR

My name is Chuck Huckelberry, and I would like to welcome all the members today to our session on Ranch Conservation, but first, we will be talking about the Conservation Plan. Ranch Conservation was one of the very first elements included in the Conservation Plan and it is probably one of the most important elements. As we get into the discussions today, you will begin to understand why.

There are maps and pictures set up around the room and I invite everyone to look at them during the break so you will have an idea about the topic to be discussed. Ranch Conservation is probably one of the most important elements that has formed in the past, in the urban boundary definition of eastern Pima County and Metropolitan Tucson. As we will learn through the discussion and with the analysis to date, it is obvious that element has been probably the most important in shaping the urban boundary. When we talk about initiatives that deal with land use and where the County has control over the land use, the historical occurrence of ranges and range conservation has probably done more to form the urban boundary of Pima County than any other element.

Also, when we talk about preserving Ranch Conservation, this graphic is something that with the advent of our Geographic Information Systems and computer systems, we can begin to take massive amounts of data and make sense out of them. This particular graphic shows the influence of ranches and ranch conservation on the urban boundary of Pima County. As you can see on the graphic, the grazing allotments are shown in green for individual ranchers throughout eastern Pima County and they are contiguously attached to one another. Some of it is federal, state and private land, and if you look around at all of them you will recognize the names, character and probably the land.

If you look a little closer, you will see pink squares which is property we call fee-simple owned by some individual who is paying taxes on it under the categorization of ranch, classified by the Pima County Assessor in that it comprises about 240,000 acres of property in eastern Pima County. You will see around the green boundaries, the presence of State Trust Lands as indicated in blue. I believe the State Trust Lands are allocated as ranching of over 800,000 acres of property.

In eastern Pima County alone, there is about one million acres of property that is either private or State Trust allocated to ranching which illustrates the importance of the element we will be talking about today. There is another one-half million acres of ranch lands on federal lands so if you add them all up in eastern Pima County, there is 1.5 million acres of property devoted to ranching.

Private lands are owned privately and they can be used at the discretion of the landowner, subject only to local zoning rules and regulations. State Trust lands are held in trust by the State Land Department and beneficiaries of the trust which means those lands can be disposed of or used for a variety of purposes.

If you add those two categories together, there is one million acres of property in eastern Pima County surrounding the present urban area that can be converted to urban uses in the future. When you think about it, that is why Ranch Conservation is so important to this process.

That is why we are interested in Ranch Conservation and keeping ranchers ranching so that these properties that surround the urban area in eastern Pima County remain in the form they currently are. With that, we are able to preserve the heritage and culture of the West, protect and preserve what we call a traditional industry of Arizona so that it remains part of a diversified economy that is beneficial to everyone.

Finally, the Conservation Plan chooses to list the goals as being to define the urban area, define where we want lands to develop and not develop, provide open space for the urban area, particularly the 800,000 to one million residents who will be living here in the next 20 years and at the same time, achieve what we call habitat preservation of endangered species.

I think that sets the tone as to why this particular element is very important, it is perhaps one of the more important elements of the Conservation Plan and I think with the speakers we have today, you are going to get an idea as to the diversity of Ranch Conservation and how it can be achieved. In addition, you will learn about its compatibility with the Conservation Plan that the Board of Supervisors has endorsed in concept and form to date.

With that let me stop and introduce the Chair of the Board of Supervisors, Sharon Bronson who will be introducing our speakers today.

INTRODUCTION: SHARON BRONSON, CHAIR, PIMA COUNTY BOARD OF SUPERVISORS

Thank you Chuck, it is a delight to be here today in the fourth of our education series on the Sonoran Desert Conservation Plan. It is particularly delightful because of 7,403 square miles in the district I represent includes many the ranches we will be talking about today.

I want to take a moment to recognize a few people who are here in the audience today; I want to welcome from the U.S. Fish and Wildlife, a new member, Sherry Barrett; Joe Joaquin from the Tohono O'Odham Nation once again, I think you have been here for all the sessions, thank you so much sir.

It is my pleasure to introduce another District 3 constituent, Tom E. Sheridan. Dr. Sheridan is the Director of Research of the Research Division of the Arizona State Museum and professor of Anthropology at the University of Arizona. He has conducted ethnographic field work and historical research in the Southwestern United States and Northern Mexico since 1991. He is currently directing a series of grants funded by the Udall Foundation and the National Oceanic and Atmospheric Administration on Contemporary Ranching and the Transition from Ranching to Real Estate in Arizona. Dr. Sheridan lives in Altar Valley, he is a founding member of the Arizona Common Ground Roundtable, an ongoing dialogue among ranchers, scientists and environmentalists. He is president of the Canoa Ranch Foundation, and is a member of the Board of Directors at the Empire Ranch Foundation. He will be talking to us about a shared sustainable landscape, ranch conservation in eastern Pima County. Please welcome Tom Sheridan.

AN OVERVIEW OF RANCH CONSERVATION: THOMAS SHERIDAN

Thank you Sharon and thank you all for showing up today. In August 1997, the Arizona Chapter of the Nature Conservancy asked the University of Arizona's Udall Center for studies in public policy to help them establish a dialogue with Arizona ranchers. The Nature Conservancy was tired of the rancorous debate that pitted ranchers and environmentalists against one another, and wanted to see if they, or the ranchers could find common ground. What eventually became the Arizona Common Roundtable, met for the first time in September of 1997 at two o'clock in the afternoon. The discussion was still going strong at 10:30 p.m. that evening. Over dinner, we realized that we did indeed share common ground which was a passionate desire to keep the open spaces of Arizona open and free of the rampant real estate development that is tearing grasslands like Prescott Valley into strip malls and subdivisions.

We also found our mantra by paraphrasing James Carville: "It's land fragmentation stupid!" The Nature Conservancy knew better than the rest of us how quickly ranches were being sold to subdividers. They also knew only too well that there was not enough private money to buy all those ranches and keep them from being developed. During subsequent meetings it became increasingly clear to all of us that Arizona has to keep good ranchers on the land if we want to preserve what is left of Arizona grasslands, and nowhere is this need more acute than in eastern Pima County.

Pima County, like the rest of Arizona, is a strange and schizophrenic place. Most of the western half belongs to the Tohono O'Odham Nation, people who have lived in the Sonoran Desert for a millennium or more. Except for the ranchers, however, eastern Pima County is a typical sunbelt society: urban, mobile and often rootless. Most of us were not born here and most of us will not die here, we come and we go, but as we pass through the region we leave scars. In 1900, 84% of Arizona's population lived in rural areas dominated by a tract of industries, particularly cattle ranching and copper mining. By 1990, the trend had more than reversed itself with 88% of us living in cities and towns, but the urbanization of Arizona has not been kind to the wide-open spaces. On the contrary, our cities consume the desert around them while commuter subdivisions and second homes leapfrog beyond metropolitan borders. The Sonoran Desert Conservation Plan tells the story.

In 1950 there were 141,00 people in Pima County. By 1999 our numbers exceeded 800,000. Despite this explosive population growth, however, population density plummeted from 5,200 persons per square mile in 1953 to 2,400 persons per square mile today. We grow by sprawling outward rather than infilling urban areas and pretty soon, unless we have the political will to restrain ourselves, the only rural areas in eastern Pima County will be a few state and county parks and the 28% of the region controlled by the federal government. Western Arizonan's often lulled themselves to sleep by taking comfort in the fact that so much of the region consists of federal lands or Indian Reservations that will never be developed. In eastern Pima County, this bedtime story is a lie. As Indian Nations gain more sovereignty they will make their own decisions about how to manage their own lands.

In eastern Pima County, only 9% of the land belongs to the Tohono O'Odham while 33% in contrast are State Trust Lands, and as Chuck pointed out, the Arizona State Land Department is mandated to seek maximum revenues from those lands and a lot being leased by Arizona standards, 31% of our lands are private. Private lands are subject only to zoning restrictions. In other words, 64% of eastern Pima County is, or could become part of our urban sprawl. To prevent that from happening we need to develop creative legal, political and economic tools to keep our open spaces open. Ranch Conservation financed in part by purchase of development rights is one such tool. There is a growing movement across Arizona in the West that sees sustainable ranching as a key factor in the preservation and restoration of rural ecosystems and rural communities.

Organizations such as the Malpais Borderlands Group, the Diablo Trust, the Santa Maria Mountains Group, the Quivira Coalition, the Arizona Common Ground Round Table and the Altar Valley Conservation Alliance are part of this movement, a movement consisting of what rancher Bill McDonald, a founder of the Malpais Group and a recent MacArthur Foundation grant winner calls the "radical center."

These groups bring ranchers, scientists and environmentalists together to establish long-term goals for particular landscapes. These goals include *both* the conservation of biodiversity *and* the preservation of the Southwest's ranching heritage. In the words of James H. Brown, a biologist at the University of New Mexico and past president of the Ecological Society of America, "If history tells us anything, it's that for thousands of years before Europeans got here with their cows and their sheep, there were vast herds of grazing animals and people manipulating the landscape."

Brown, who has carried out extensive research in ecological research in southeastern Arizona and southwestern New Mexico, points out that despite a century or more of intense cattle grazing, there are still a greater variety of reptiles and amphibians in the region than in any other area of the United States. According to Brown, "Far more habitat has been destroyed to provide water for cities, subdivisions and irrigated agriculture than by even the heaviest grazing pressure. The most serious challenge facing the West is keeping ranches intact," and it is a daunting task.

Except for the handful of ranchers that originated as Mexican Land Grants, Arizona ranches are a complex mosaic of public and private tenure. Most ranches comprise a small nucleus of deeded land, often a section or less, combined with federal and state grazing permits. These permits allow ranchers to run a specified number of animal units, defined as a mother cow with calf or their equivalent," for a specified amount of time on an allotment of federal or state land. According to Jack Mercer, one of the founders of the Diablo Trust and a former president of the Arizona Cattle Growers Association, there are about 5,800 grazing allotments on public lands in Arizona.

One-third of all Arizona ranches have allotments administered by two or more public lands agencies, particularly the Bureau of Land Management and the State Land Department. According to range scientist, George Ruyle, "The value of a ranch is directly tied to the ability to use the forage on a grazing allotment. Although public lands grazing permits are considered by the agencies to be a granted privilege rather than private property, they are commonly bought and sold along with the rest of the ranch." If any of these allotments are lost or if the number of animal units on them are significantly reduced, the economic viability of the ranch may be destroyed. In recent years, grazing on federal and state lands has been increasingly challenged by some environmentalists.

Lawsuits charging non-compliance with the Endangered Species Act affect allotments on Arizona's National Forests. Recently, some groups are also attempting to replace preferential grazing rights on State Trust Lands with competitive bidding. Such pressures make ranchers politically vulnerable at a time when declining cattle prices and a four-year drought have subjected them to severe economic stresses. Farmers and ranchers across the United States, not just ranchers on public lands in the West, are facing hard times. Food producers are going bankrupt and agricultural lands are disappearing under concrete. I, for one, do not believe our nation can afford these losses. Like Wendell Barry calls, the unsettling of America, one major, if unintended consequence of such pressure is the escalating transition from ranching to real estate development across much of rural Arizona.

Faced with rising land prices, unstable markets and unpredictable climate, enormous estate taxes and increasing political uncertainty over their access to public lands, many ranchers are forced to sell their private lands to developers or to subdivide it themselves. This transition has profound ecological consequences. Because they are located around springs or along rivers and streams, the private holdings of a ranch, most of which originated as homestead or Desert Land Act withdrawals typically encompass the most attractive and most biologically diverse habitats in a region. Once these private lands are developed, human demands upon local environments grow exponentially, local aquifers are depleted, reducing or eliminating surface flow.

Exotic plant and animal species proliferate off of crowding or killing off native species. More roads fragment wildlife habitat and more traffic kills more wildlife. Recreational use and illegal activities including wildcat dumping, poaching, offroad vehicle use and fuel woodcutting accelerate. Recreation is not necessarily ecologically benign or "Non- consumptive."

A second unintended consequence is a growing constraint on true large scale ecosystem management. Wildlife habitat and wildlife corridors are fragmented or destroyed, particularly for large predators like mountain lions and black bears and ungulates like pronghorn antelope and elk. The reintroduction of fire as a natural process or as a management tool becomes difficult, if not impossible. For the last century, fire suppression has been a consuming, even an obsessive goal, of federal public lands agencies.

Recently, however, scientists, ranchers and land managers have recognized the beneficial role fire plays in the preservation of grasslands and the maintenance of forest health. Working in close collaboration the Malpais Borderlands Group, the Forest Service and the Nature Conservancy have developed a fire plan for more than 100,000 acres of the Peloncillo Mountains on the Arizona/New Mexico border. The U.S. Fish and Wildlife's concern over two endangered species, the ridgenosed rattlesnake and the lesser longnosed bat have repeatedly delayed implementation of the plan. Nonetheless, the reintroduction of fire in that isolated rural area should become a reality because the number of private landowners are small and consensus regarding the reintroduction of fire has been achieved.

Once subdivision occurs, however, fire is perceived as a threat to private property, not a tool to restore the ecosystem. Controlled burns cannot be carried out and natural fires are suppressed. Shrubs continue to invade grasslands while forests continue to build up biomass until truly destructive "crown fires" occur. Meanwhile, the protection of grassland habitat and the creation of wildlife corridors that link mountain ranges from crest to crest become ever more elusive. Some human impacts can be reversed, but subdivisions are more or less forever.

One of the most dramatic ways to see the contrast between ranching and real estate development is to visit Sonoita and the San Raphael Valley southeast of Tucson. The San Raphael is largely a landscaped subdivision, thanks in part to the Nature Conservancy's purchase of the San Raphael Ranch earlier this year. In order to see what the future of the San Raphael might have been if the Nature Conservancy had not intervened, however, all you have to do is drive north over the Canelo Hills.

Like the San Raphael Valley, the Sonoita-Elgin area is plains grassland, a highly restricted life zone in Arizona occurring at elevations of 4,500 to 6,000 feet. Unlike the San Raphael, however, numerous ranchers have been subdivided in Sonoita during the past thirty years. A once-open basin has been fragmented into smaller and smaller parcels. In 1989, the Sonoita-Elgin area had about 600 homes. By 1995 the number had grown to 930 homes, an increase of 55% in less than a decade.

There were about 2,400 people in the Sonoita Valley in 1994. Conservative growth estimates project a quadrupling of that population during the next four years. When development occurs, the size of parcels vary considerably depending upon County zoning regulations and subdivision deed restrictions. At present, the minimal lot size in Sonoita is one to three acres although grassroots community efforts have tried and failed to raise the minimum to at least 18 acres.

The resulting land fragmentation impacts wildlife, native vegetation and soil erosion more heavily than ranching, a land extensive activity. Parcel owners may enclose parts or all their properties and the fencing that inhibits the movement of wildlife. They may remove native vegetation, accelerating erosion or replace it with exotic species. They may also introduce domestic animals. Cats that prey on birds, reptiles and rodents, dogs that chase wildlife, horses that remove all vegetation and trample the soil.

Finally, of course, they may rearrange local topography to build houses, corrals and outbuildings. Certain wildlife species like javelina, coyotes and even deer may be attracted to residential areas during times of food and water shortages, but other species like antelope and many predators are displaced. And finally, there is the visual fragmentation of the landscape. Houses are usually constructed on the highest and most visible part of the property. Many people do not like Sonoita's chronic winds so exotic trees are planted around the houses as windbreaks, and it provides shade. A driveway is built and often lined with exotic trees like Italian poplars. All of these modifications of the natural landscape disrupt the unique visual nature of the grassland, one of the features that attracted new residents in the first place. Please keep in mind that Sonoita represents a largely middle class or upper middle class developments with deed restrictions that are much more protective than county zoning ordinances. Missing are the wildcat subdivisions with their single wides, their double wides or their dead or dying cars.

Even more critical is the rising consumption of water. The Sonoita Valley relies completely upon rainfall stored as groundwater. A study conducted by the Yale School of Forestry and Environmental Studies drew up an annual water budget for the western portion of Sonoita Valley, the only portion for which there is good hydrological data. According to the study, a cow/calf animal unit consumes about 15 gallons of water on a hot, dry day. A single person in Sonoita on the other hand, consumes about ten times as much water as a mother cow with calf. The two subdivisions in the area with water meters averaged 150 gallons per person per day, probably an underestimate of average per capita water use in the valley because these two subdivisions encourage water conservation.

Present water use, which includes recharge that helps maintain baseflows in Cienega Creek where three threatened or endangered fish species live, currently remains below safe yield; the amount of water an aquifer will yield without depletion. Nonetheless, future growth will likely exceed recharge within the next forty years. Yale hydrologists estimated that the safe yield development density in Sonoita is one residence per 12.62 acres. Current zoning ordinances classify much of the available private acreage as General Rural with a minimum lot size of 4.13 acres. That means without a change in zoning, the western portion of the Sonoita Valley alone could accommodate 8,200 homes which would conserve about 3,900 acre feet of water a year. That figure is three times greater than the available recharge. More than one house per 12 acres means that Sonoita would have to mine its groundwater. To insure safe yield, the minimum size of a parcel would have to be tripled.

As we all know, however, downzoning is an extremely difficult undertaking, despite the Pima County Board of Supervisors recent decision to deny the rezoning of Canoa Ranch. Zoning in Arizona has rarely proved to be an effective tool to control or restrict growth. On the contrary, developers usually manipulate County administrations to increase residential densities and accelerate real estate development across the state.

After living in the Three Points area for seventeen years, I know on a visceral day to day level, the cows are better than condos. My family and I live in a subdivision with stringent deed restrictions, yet few of those deed restrictions are ever enforced. As anyone who has every belonged to a homeowners association knows, divisiveness often overwhelms consensus, especially if people are attempting to regulate their own behavior rather than mobilizing against an outside threat. Moreover, newcomers, no matter how well educated or well intentioned are usually ecologically naive about the natural systems into which they are moving. Many, perhaps most of our individual decisions, contribute to the degradation and fragmentation of the landscape.

Growing up in Arizona, I have also seen good ranches and bad ranches. After the cattle boom began in the 1880's, Arizona's ranges were disastrously overstocked because there were no legal mechanisms to regulate livestock numbers. In my book, Arizona History, I call this period the tragedy of the commons on the open range, but with the establishment of the national forest in the early 1900's and the passage of the Taylor Grazing Act in 1934, grazing has been increasingly regulated. Some ranches continue to be overgrazed, but more and more ranches are developing grazing rotation systems that are sustainable and that restore ranges damaged in the past. For those of you who doubt me, I urge you to visit the ranches owned or managed by my fellow presenters today.

Our challenge with the Sonoran Desert Conservation Plan is to work towards what the Arizona Common Ground Round Table calls shared sustainable landscapes. In the past, rural Arizona consisted of networks of ranching families that were true communities, who relied upon one another for both work and play. Ranching was and is, a distinct American culture with a distinct set of knowledge, values and beliefs. Many of those communities have been weakened by the relentless urbanization of Arizona, but now is the time to create new communities where environmentalists, hunters, birdwatchers and hikers partner with ranchers to preserve and restore the open spaces we all cherish. We also need to step back a moment from our present conflicts and controversies and look forward as well as backward. Right now, many people do not believe we need to produce food on our public lands in the West today. Once you dismantle an economy and a way of life, however, it is extremely difficult to reconstruct it, if and when times and needs change.

I will never be a vegetarian so I thought a lot about recently about what it would mean to be a truly, ethical meateater. Should I continue to participate in the globalization of the beef industry? Eating meat from regions where environmental regulations may not exist? Or should I attempt to do what my friend and neighbor, Gary Nabhan is trying to do; eat foods grown within a certain radius of where I live, where I know the people who raise the food and how they raise it. Over on Eagle Creek in eastern Arizona, within the area where the U.S. Fish and Wildlife Service is reintroducing Mexican Gray Wolves, Jan and Will Holder are raising and marketing predator friendly, hormone free beef. They now have a hard time finding a slaughterhouse that meets their standards and outlets that sell their beef, but I do not believe that all of us who do want to be ethical meateaters need to support innovators like the Holders.

My vision of the future is a shared, sustainable landscape where responsible ranchers, environmentalists, hunters and hikers take a personal responsibility for the landscapes that they share and love. Thank you.

QUESTIONS AND ANSWERS

Q How do you balance the reintroduction of the wolves with the needs of the ranching community in the area?

A: Well, I think that's the million dollar question and it is obviously a very difficult question. Defenders of Wildlife has established a degradation fund, we will see how it works out. That is a question that is facing eastern Pima County and is certainly a question I hope can be resolved. I have hunted and backpacked the Blue River country for thirty years now and I would love to see wolves there.

Q: Someone passed this printed information out that states ranching on public lands has destroyed more native vegetation, wildlife and wildlife habitat, caused more soil erosion and soil damage and has destroyed more riparian areas than any other land use. Do you agree with that?

A: I think you have to look at landscapes as historical texts and the fact that there was tremendous overgrazing in the past. There has been increasing regulation of grazing and I do not think you can take snapshots at a particular time and make sweeping judgements on that. Yes there has been destruction but as for that claim, I doubt it. I think for a lot of riparian areas, groundwater pumping, damming and given the manipulation of the floodplain itself has been a much more significant impact than grazing in the uplands.

