

*Evaluating recreational access on ranching lands in southeastern Arizona*

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## *Introduction*

Protecting public access to public lands is a significant challenge to land managers in the western United States, particularly so in light of the spectacular recent growth that shifts land use from an agricultural to a residential base. Other times in the past 150 years have been marked by equal or greater growth, but the magnitude and the extent of the landscape change today is startling. The public land pattern throughout the ten western states has become fragmented through historical lands actions including issuance of homestead patents, patented mining claims, railroad grants, state in-lieu selections and other grants. The mythic appeal of recreational access to Western public lands persists in attracting record numbers to these lands while access shrinks. As an exceptionally high proportion of Arizona lands are public and held in trust as State Lands, Bureau of Land Management, National Park Service, Forest Service, Wildlife refuge, and Tribal lands, a current concern exists for a coordinated plan. Based on quantifiable data, the agencies are moving to partner on issues of preserving green space, restoring degraded lands and providing increased recreational opportunities. In 2003, a memorandum of understanding entered into by federal land management agencies and sportsman's groups alerts officials to access restrictions and recognizes the benefits recreational access can bring to wildlife management and fee revenue for resource protection.

There are many categories under which access problems fall. Briefly, without assigning any priority to the degree to which they limit public access to public lands may be any of the following situations. Federal Wilderness proposals may limit recreational access, particularly with respect to motorized vehicles. Federal land management staff may limit public access through personal interpretation of federal regulations or other concerns.

Environmental groups may work to restrict recreational access due to concerns for biodiversity protection or other agenda. Private property owners bordering public lands may attempt to privatize access by excluding and/ or discouraging public access points to these lands. Developers that own land adjacent to public land may wish to capitalize on this proximity by providing exclusive access to these lands for their clients only. And, ranchers through the common positioning of their deeded lands near public lands and their use of nearby federal lands for grazing, may discourage and/or preclude public access. This last category is the heart of this thesis.

The rancher has played more than a symbolic role in the history of the West holding dominion over the majority of privately held lands and their attached grazing allotments of public and state lands. Although this legacy is changing as development is converting many of these agricultural lands into ranchettes, ranchers continue to serve a key role in shaping the future of the west. The geographical positioning of ranch headquarters in the valley lands leads to surrounding public lands, up slope. During primary settlement, a small number of ranchers often came to dominate the land and water use of entire watersheds. And, as principal holders of large expanses other than public lands and because their grazing fees help to maintain these lands, with improved integrated management practices, they have a role as stewards of open space. Yet many are struggling financially, while the looming threat of development on their lands persists. Granting access through their lands to public lands may often present an additional burden to an already precarious practice. Public agencies such as Arizona Game and Fish have been very active in developing a triad of programs for

landowner relations in response to conflicts that have arisen among recreationists and private landowners.

The first part of this thesis is a historical review explaining how Arizona has arrived at its present point where the state's citizens and visitors exercise a high demand for recreational access while in some cases ranching landowners are increasingly reluctant to grant it. The review documents historical and current issues of recreational access for the American public. The cause of diminished access and current conflict for remaining points of public access were also explored. A discussion of the historic role of ranching to the West and collaboration with these landowners to protect access and the natural resources of Arizona completes the chapter.

The research goal of this thesis was to identify current access issues of public lands in Southeastern Arizona and examine them from as full a range of perspectives as possible: as seen by land managers, environmentalists, recreation groups, local government, planners and development interests as well as the most relevant private landowner (for reasons to be discussed later in the thesis) in southeastern Arizona, ranchers. After these issues were identified, a further objective was to pose possible solutions to problems these issues presented.

There were three different research methods used in this thesis. Interviews were conducted with various users and land use planning groups addressing recreational access. Relevant local presentations and symposia on strategies for partnering in Arizona were summarized to

emphasize current ideas for promoting access. The third method focused on use of a survey to assist land management agencies in furthering their current efforts by identifying issues ranchers have related to granting public access. The survey also sought to measure relative levels of concern for these issues.

## *Historical review of recreational land use and ranching*

Over 25 years ago, in a report proposing a new model act for access liability and trespass, Church (1979) introduced his report with words I include here as a fitting way to introduce this paper: “it is ever more obvious that there are finite limits to the natural resources of the United States. As the country’s human population continues to grow, and individual affluence and leisure time increase, so too will uses of and demands for natural resources.....Perhaps the most precious of all natural resources is the land itself. This is where the gravest competition for use is likely to occur.... There was a time in the United States when pressure for recreational use of rural lands was not great, but that time clearly is past”. Numerous reports suggest that public access to federal lands is inadequate, but there is relatively little quantitative information to refute or verify this perception (Congressional Sportsmen’s Foundation and the Wildlife Management Institute. 2002). The phrase “access to public land” refers to a complex array of intermingled issues. As populations have increased more attention and value is placed on recreational and other uses of the public lands.

The issue of access is not new and concerns have been expressed in various forums for more than 40 years. More than a decade ago, Congress requested that the General Accounting Office (GAO) review the adequacy of public access to land managed by the USFS and the BLM. The GAO subsequently published a report, estimating that 50.4 million acres (14%) of these lands had inadequate access (GAO 1992). Throughout the West there are indications that some purchases of private properties are done so with the deliberate intent of controlling access to adjacent federal lands for fee hunting and other for-profit or personal motives (The

Foundation for Public Lands 2002b). Past studies recommended that agencies systematically collect information on access trends and types of restrictions as well as solutions to access issues. Unfortunately, this information has not been collected at a national or regional level. As a result, most information available is anecdotal or limited to small, specific areas (Congressional Sportsmen's Foundation and the Wildlife Management Institute 2002).

Much of this recreational access occurs on land managed by the U.S. Forest Service (USFS) or the Bureau of Land Management (BLM). Collectively, the USFS and the BLM manage over 455 million acres, with 191 million acres of national forests under the jurisdiction of the USFS and 264 million acres of BLM controlled land. It is expected that approximately 150 national forest plans and 160 resource management plans for lands managed by BLM will be developed during this decade and since these plans typically remain in affect for at least 15 years before revision, the time is neigh it seems to address access in these plans for the vast expanse of lands in question.

### ***Recreational values of public lands***

#### *Philosophical perspectives of our natural resources and recreation*

Only in the last moment, in terms of the scale of human history, has the idea prevailed that people could flourish apart from the rest of the living world (Wilson 1992, 349). E. O. Wilson originated a new term to describe our attachment to the earth that we still carry as part of our evolution from nature, biophilia. Nature persists in our hearts, in our souls and in our heads. In his writings, Aldo Leopold, like William Wordsworth before him, conceived of

outdoor experience as not a mere diversion but as a portal or perception through which man might enter, a link to a world of nature “of necessity for the human animal” and a way to engage upon a more balanced relationship with the land. Recreation offers the chance for querying the “transitory and contingent nature of culture” (Oelschlaeger 1995).

The American Southwest interested Leopold in terms of how boundaries and survey lines arbitrarily divide the American people (Knight 2002b). Federal, state, local and private jurisdictions as they exist now cross ecological boundaries in random ways leaving private and public lands “entwined ecologically, politically, culturally and economically” (Knight and Landres 1998). For Leopold, boundaries of ownership may dissolve as one walks across property lines between private and public lands. That some lands are public is a right all citizens have inherited by virtue of our country’s independence. Private lands exist by the additional decree of the Bill of Rights, are imbued with privilege and so are different (Knight 2002b). Americans have traditionally viewed land as property: in the Constitution Knight (2002b) points out the word *property* is used but the word *land* is not. If land is conceived of in terms of ownership then the emphasis is from the very beginning focused on one’s rights to that land.

But Americans may be rethinking our connection with the land. Knight (2002b) writes of his ranching neighbors, the Roberts, who have been on the land for five generations in Livermore, Colorado. Their goal like many is to keep their ranch in agriculture and out of development. Catherine and Evan’s reply to a question of how they view their ranch reveals this sentiment: “We have never felt like we owned the land, we have always felt like it

owned us.” The Roberts believe that there are two kinds of Americans today, the “takers” and the “caretakers” It is the caretakers in which category the Roberts would place themselves and other conscientious rancher who place the land out of reach of exploitation.

For Richard L. Knight, Professor of Wildlife Conservation at Colorado State University and acclaimed activist for land stewardship, we are at a turning point for determining how we as a nation interpret the inherent values of property. Knight considers that for Americans issues of rights and responsibilities toward our land in the public domain have always been controversial. For much of the country’s early history the government was interested in settling the land and so intent on giving lands away. Ever afterward, judging the appropriate use for these public lands has been on ongoing debate. Whatever recreation means now to Americans it might instead become part of a vital process for re-creating ourselves and our culture, an opportunity for entering into the land community of Leopold (Oelschlaeger 1995).

*Studies linking recreational access with stewardship of natural resources*

Access to public lands is seen as significant as a possible tool for realizing human potential for self-understanding. In speaking of the importance of the Americans Outdoors Program, a bipartisan legislation to protect the nation’s fish and wildlife programs, John Baughman, Executive Vice President of the International Association of Fish and Wildlife Agencies, addressed the connection between the practice of outdoor recreation and stewardship of our resources: Baughman stated that wildlife-related recreation fosters a greater public understanding and appreciation for conservation (International Association of Fish and

Wildlife Agencies 2004). Surveys by Roper Research have for years shown widespread recognition on the part of the American public for the contribution to quality of life that participation in outdoor recreation brings. The public links recreation to overall happiness, family unity, health, improved educational opportunities and deterrence of crime and substance abuse (Roper Research 2004).

The Keystone Center (1989), a non-profit organization in the Rocky Mountains of Colorado which facilitates resolution of national public policy conflicts through a dialogue process for consensus, writes that while many Americans are fiercely protective of natural resources, even though they might not have the opportunity or ability to use them directly, for others the “inability to reach federal lands will eventually result in their caring less about that land and the resources it supports.” In fact, significant utilitarian recreational use may limit the vulnerability of wilderness as seen by one of the most egregious examples: the dam and reservoir on the Tuolumne River in Yosemite’s Hetch Hetchy Valley voted by Congress in 1913 to bring water to San Francisco. Sellars (1997, 17) believes the National Park idea persisted and took hold because it was in fact fundamentally utilitarian. Preservation of the large expanse of public lands has seemed to be contingent on their development for public use and enjoyment. Consider this within the framework of access to a public land. What drives most people’s choices concerning resource preservation is a concern for resources that they personally enjoy consuming, viewing, or simply knowing exist (Loomis, 2004, 6).

If support for resource management lessens neighboring communities and regional economies could be affected: especially where they are heavily dependent on utilization of resources such as timber, minerals, wildlife or perhaps, most likely, tourism (The Keystone

Center 1989). An ancillary repercussion could be a drop in land values for those private lands whose value is now enhanced by wildlife and other resources nurtured on adjacent federal land.

### ***Recreational access to public and state lands in response to rising outdoor recreational interest across the nation***

#### *Economic and other benefits that accrue with access*

Recreational access brings an array of practical benefits such as economic stimulus and, through hunting, the maintenance of healthy wild- animal populations. Wildlife-related recreation is one of the most popular forms of recreation in the United States. The U.S. Fish and Wildlife Service (USFWS) is gearing up for increased recreation in the future: a 50% increase in public recreational visits to USFW service lands is expected by 2009 (USFWS/DOI 2002). In 2001, 82 million people participated in hunting, fishing and wildlife watching. [By comparison, total attendance in 2001 for all major league baseball and professional football games was not substantially more at about 89 million (USFWS/DOI 2002).] Over 66 million people took part in some form of wildlife watching such as observing, feeding and photographing wildlife (in contrast to consumptive wildlife recreation such as hunting or fishing). This figure understates the interest since it includes only *primary* participants in wildlife watching, an activity for which the primary reason for the trip, activity or expenditure is wildlife-related (USFWS/DOI 2002). In Arizona, the number of participants in wildlife watching was found to be 1,465,000: 367,00 recreationists were local; and, more than one million were from out of state, a strong indicator for the destination

status of Arizona for recreation and the importance of the recreational interest there (USFWS/DOI 2002). This interest is expected to continue: tourism indicates the proportion of Americans who hunt or fish has fallen with respect to those that pursue non-consumptive recreation such as swimming, hiking or birdwatching. Adventure-, eco-, and *agri-tourism* (of particular value to ranchers, as discussed later in the paper) have all risen as have historical and cultural heritage tourism. These are the fastest growing segments of tourism for Europeans and Americans alike (Rottman and Powell 2003). Trends toward non-consumptive recreation may be troublesome given the role sportsman play in maintaining federal lands.

Federal public lands are an important destination for millions of America's hunters and anglers each year. Federal agencies and others recognize that these hunters and anglers help fish and wildlife management agencies to accomplish specific wildlife management goals. Particularly in regions such as Arizona, where federal public land is a large percentage of the land base, public access to that land seems significant in helping agencies such as the Arizona Department of Game and Fish manage wildlife. Increasingly, some hunters and anglers are reporting that problems with access has lessened their enjoyment of hunting and fishing resulting in a less vigorous pursuit of their sport (Sportsmen's access MOU 2003). Sportsmen anticipate that issues with access will be increasingly problematic in the future (Sportsmen's access MOU 2003).

The benefits of hunting for balancing wildlife populations can be significant. According to research conducted at Utah State University's Jack H. Berryman Institute, wildlife

overpopulation can have dramatic negative economic impacts (Kenyon et al 1999). White-tailed deer in the Northeast have caused more than \$665 million dollars in damages annually. In the Southeast, public employees have logged in more than 211,000 man-hours to repair damage caused by beavers. And, across the country, more than six million is spent each year to reduce, alleviate, compensate or repair damage done by coyotes. Wildlife professionals have said that without the ability to hunt or trap, the current population of some species would increase phenomenally. In fact, in response to queries of how much additional funding they would need in order to manage these populations without the help of recreational hunters and trappers, most wildlife professionals report that “no increase in funding would make up for the loss of those two methods” (Kenyon et al 1999). Further, the fact that most recreational hunters and trappers provide their services free of charge [in fact, contribute to the state budgets through licensing fees] predicts that other state wildlife services would suffer a shortfall since officials would had to scramble to find alternative methods for leveling a balance between people and wildlife (Kenyon et al 1999). A different interpreter might ask if one should ‘manage’ at all. However (disallowing for how much nature is left within the human-made matrix of our country today), reminders of letting nature take its course point to harsh alternatives: for the bison in Yellowstone National Park, starvation during tough winters is a reality. Wildlife overpopulation of snow geese in this country is reputedly a potential disaster for the tundra ecosystem as well as for its own species (Kenyon et al 1999).

The direct monetary values of wildlife-based recreation appear to be significant at the local, regional, state and national levels. The findings of a comprehensive survey conducted by

the Department of Interior in 2001 of fishing, hunting, and wildlife-associated recreation presents us with statistics gleaned from over 40,000 detailed interviews (USFWS 2003). In 2001, more than 66 million people 16 years of age and older spent over \$38.4 billion on trips and equipment in pursuit of these activities. This expenditure generated \$95.8 billion in total industrial output, the direct, indirect and induced effects of this spending. So, for each \$1 of direct spending, an additional \$1.49 of economic activity is generated. In terms of employment and employment income, the total industrial output of \$95.8 billion resulted in 1,027,833 jobs with total wages and salaries of \$27.8 billion(USFWS 2003) .

Wildlife-watching brings tax dollars at both the state and federal levels. Direct and indirect expenditures can produce state sales tax. Second, employment earnings are taxed at both the state (again, with the exception of states which do not tax income) and federal levels. Based on 2001 expenditures on wildlife-watching, associated total industrial output and associated employment and employment income, 2001 tax revenue is estimated as follows: (1) total state sales tax revenue: \$2.1 billion; (2) total state income tax revenue: \$712 million; and (3) total federal individual income tax revenue: \$3.3 billion. Bruce Eilerts of the USFWS assesses the monetary contribution, “ The sheer magnitude of its economic impacts prove that wildlife watching is a major force, driving billions in spending around the country. These economic impacts can be the life-blood of a local economy. Rural areas can attract thousands of wildlife watchers each year, generating millions of dollars.... If wildlife watching were a company, its sales of \$38.4 billion would rank it 33rd in the Forbes 500 list for 2001— placing it just ahead of Motorola and Kmart (USFWS 2003). Wildlife watching is a significant portion of this total and its continued popularity gives evidence to the importance

that people attach to “diverse, accessible and robust fish and wildlife populations” (USFWS 2003).

In Arizona the importance of wildlife watching dollars is seen by the size of the nonresident economic output of \$388,600,000 driven by 185,000 visitors for 2001, placing Arizona tenth in the country for economic output generated by these recreationists (USFWS 2003).

In sum, Arizona received: \$820.7 million for that year in terms of expenditures and sales; 17,939 jobs; state sales tax revenues of \$39.8 million; and income tax revenue of \$7.0 million (USFWS 2003). If one were to look at the contributions of another type of recreationist, the off-highway vehicle enthusiast, one might find an equal, if not greater economic stimulus, one that gives pause to appreciating the political sway of the OHV users. OHV contributions to the economy in Pima County bring \$84.3 million in income (salaries/wages) for Pima County residents and support 3,307 jobs. OHV recreation creates a statewide economic impact of \$403.5 million through the multiplier effect, contributing \$323.6 million to local economies through OHV-related expenditures and adding \$17.7 million to annual state tax revenues (Arizona State Parks/ OHV campaign).

A caveat to these heady numbers must be a consideration for the resources which attract these dollars. As natural resource planning is shifting to focus on ever larger scales of watersheds and ecosystems, planning for the human component, including the social and recreational access to these resources must be upheld as a vital interest (Halffter 1985, 15). For Halffter (1985, 15) ‘the great challenge of world conservation policy [is] to address the apparent dichotomy between protected areas and regional development by developing new strategies having a solid, social and economic foundation.’”

## ***Factors influencing diminished access to public lands***

### *Historical land use in the Southwest*

Ensuring that the public has access to public lands is considered by many to be a significant challenge to Western land managers (Loomis, 2004, 29). The lands acquired through the Mexican War of 1848 and Gadsden Purchase of 1853 were allocated in different ways. Some were transferred to individual citizens through the Homestead Act of 1862 for farming and ranching. The Homestead Act encouraged an intermixing of private and state lands that continues to affect land use and planning for public access today (Loomis, 2004, 29). Typically, homesteaders and other settlers chose river valley lands for development. This settlement pattern gave private landowners control over access to the public lands above their property. What was termed the “cattle kingdom” was structured in the following way. Even with the early days of ranching when the grasses were healthy and nutritious a ranch required thousands of acres as each single cow required from 3-10 acres depending on the nature of the landscape (Wilkinson 1992, 83). The General Homestead Act of 1862 allocated parcels in terms of 160 acres which although perhaps sufficient for richer lands of the East and Midwest was an insufficient allowance in the arid West. Addendums to the act raised the acreage to a full section of one square mile, or 640 acres, but for most ranches this still fell short (Southeastern Arizona NRCD and Coronado Resource Conservation and Development Area, Inc. 2004, 7). To extend the practical size of their ranches, settlers built in the locations of rivers and springs and used the public domain for grazing. These inholdings remain as remote small acreages, less than 1 km<sup>2</sup>, and perforate the ownership of public lands (Theobald 2000). This is particularly true of land patterns in Arizona. Texas for example is

85% private land while Arizona is only 18% private: in Texas ranches were built on land ownership. Here in Arizona, ranches were built on small pieces of land that created access to public lands. Less than 150 acres of private land could control as much as 40,00 acres of public land. With the private holding much smaller than public land lease, “one can see that the private land owner has the opportunity for creating a very lucrative business in providing recreational opportunities on private land” (Kerry Baldwin, per. comm.). So, although the total acreage for these holdings is relatively small, fewer than 100,000 acres, their scattered pattern and key configuration in terms of access complicates matters for public land managers and can fragment landscapes (Pearson 1993).

Other lands were held in trust for Indian tribes. At the turn of the century many of the higher elevation lands were transformed into the National Forest (Southeastern Arizona NRCD and Coronado Resource Conservation and Development Area, Inc. 2004, 7). And, lands were granted to the states to fund “the common schools’ including an agricultural and mechanical colleges also known as the ‘land-grant colleges” (Southeastern Arizona NRCD and Coronado Resource Conservation and Development Area, Inc. 2004, 7). In Arizona, 4 of the 36 sections in each and every township were set aside as state lands (Southeastern Arizona NRCD and Coronado Resource Conservation and Development Area, Inc. 2004, 7). If these designated lands were already used as Indian Reservations, national forest, national parks, military reservations, or other purposes, the State chose other government lands. All other lands left were allocated to the ‘public domain”. When Arizona gained statehood in 1912, many of the lands had already been appointed to these specified uses and so the state ended up claiming remaining lands in the Southeastern part of the state (Southeastern Arizona

NRCD and Coronado Resource Conservation and Development Area, Inc. 2004, 8). The historical result is that of Arizona's 72.7 million acres just 18 percent of the lands are privately held, some 13 million acres. The rest of the state is divided up in the following ownerships: Forest Service, 11.5 million acres; BLM 12 million; Indian reservations, 19.3 million; and the State land department, 9.3 million. The remaining 7.2 million acres is federal land managed by the National Park Service, Fish and Wildlife Service, Department of Defense and other federal agencies.

Contributing to the complexity of the landscape quilt were the disposition of lands to the Transcontinental railroads. Starting in 1862 grant acts to the rail lines such as the to Central Pacific, Union Pacific, Northern Pacific and Southern Pacific, carved out east-west routes of enormous proportions in the landscape: in the case of the Central Pacific-Union Pacific road of 1869, 40 miles wide. The routes were composed of full 1 square mile sections of land that alternated so that even numbered sections remained in federal hands. (These like many portions of the railroad lands and were open to grazing (Wilkinson 1992, 84).

Particularly in Southern Arizona, river bottoms and valleys are privately held with the rugged terrain behind part of the public domain. This determined a pattern of roads through the valleys with private land on both sides of the roads. Lands for public recreation were thus positioned beyond the privately owned lands that lined the roads (Quimby 1992). Related to this alignment of public and private lands is the residual effect of fences along highways. When first built, fences protected drivers from crossing livestock. Initially, the fences had

gates for roads and trails. But as the highways evolved into interstate freeways, the gates disappeared cutting off those access options (Quimby 1992).

### *Increased demand for access*

While the above factors contribute to funneling access desires onto ranchlands, the recent escalation of Western populations in the past century from 4.3 to over 63 million people contributes to overall demand. And, of these millions more than 22 million live within 25 miles of public lands (BLM 2003). In Arizona, the U.S. Census Bureau figures, for April of 2000, read over 5 million. Just a decade earlier, the population rested at 3.6 mil, representing a 40% expansion (USDA/NRCS 2000). Since World War II public demand for outdoor recreation has grown at the rate of 10% a year (Walsh 1986). At the same time, a general rise in affluence over these years has paralleled a growing allegiance with a conservation ethic (Clawson and Harrington 1991) as seen by the birth of such organizations as: Natural Resources Council of America (1946); The Conservation Foundation (1948); Defenders of Wildlife (1947); The Nature Conservancy (1951); Natural Land Institute (1958); World Wildlife Fund (1961); Rachel Carson Trust (1965); American Birding Association (1969); Greenpeace (1971); Trust for Public Lands (1972); Wildlife Heritage Foundations, statewide, (1980s-2000); and The Ecotourism Society (1990). While the interest in environmentalism is positive, in recent years conservation of natural resources and preservation of wilderness has often evolved to conflict with outdoor recreation (Nash 1982, 316).

Wildlife-related recreation is one of the most popular forms of recreation in the United States. In 1996, 77 million people participated in hunting, fishing and wildlife watching,

including feeding and photographing wildlife. (USDI/FWS 1998) In fact, research shows that 94.5 percent of the U.S. population participates in some form of outdoor recreation. In 1997, on Bureau of Land Management (BLM) land alone, people paid 61 million visits equaling nearly 72 million visitor days of recreation use (USDI/BLM 1998). These studies point to an increasing demand for recreation as America's population expands.

### *Changes in land use*

Total lands used for farming and ranching peaked in 1964 at 268 million acres. In the late 1970s concern over the conversion of farmlands to development was brought to the national level. In response, the U.S. secretary of agriculture launched a study of the situation whose findings goaded Congress to enact the Farmland Protection Policy Act (FPPA), written to reduce the unnecessary conversion of agricultural land. Many state and local governments began programs and policies to protect farmland from development (American Farmland Trust 2005b). However agricultural acreage has continued to decline at a rate of approximately 1 million acres per year. In Arizona alone, losses have been at over 300,000 acres per year (Sullins et al. 2002). Over the past ten years, the Rocky Mountain West census data shows a yearly loss of grazing land of 1.6 million acres (Sullins et al. 2002). Those ranchlands first sold are the heartlands of the ranches for these are the flat open meadows and scenic riparian areas most attractive for development (Alexander and Propst 2002). As mentioned earlier, this rapid transformation is expected to continue: the Rocky Mountain West has grown in the 90s at a rate treble that of the rest of the country with rural population growth surpassing urban growth in over half of the counties in the past decade (Sullins et al. 2002).

The urban-rural gradient of McDonnell and Pickett (1990) describes an urban-rural landscape in terms of quantifiable means such as population density or housing density. Although housing density is actually measured on a continuous scale, Theobald (2000) identifies 5 levels of density: *Urban*, greater than 123.5 units per km<sup>2</sup>; *Exurban*, between 6.2 and 24.7 km<sup>2</sup>; *ranchette*, between 3.1 and 6.2 units per km<sup>2</sup>; and *rural*, with fewer than 3.1 units per km<sup>2</sup> (Theobald 2000). Using these terms we can examine the recent rapid net loss of agricultural lands that has occurred at both the larger regional and smaller landscape scales. Losses of about 28% of agricultural lands and 17% of forested lands are the direct result of conversion to urban use (Theobald 2000).

By 2025, the projections are for another 6.5 million to move in (U.S. Census Bureau 1998).

Succinctly defined as the phenomenon where the density of the city decreases while the overall population rises (Diamond and Noonan 1996), urban sprawl describes the common development of permanent residential and commercial properties in forested and other open spaces at edges of urban hubs. A premier example of this shape of development exists here in Pima County whereby a 1950 population of 141,000 grew by 1999 to over 800,000 and remains in 2005 thousands greater. Compounding the environmental repercussions of this development is that coupled with this explosive population growth, has been a drop in density from 5,200 persons per square mile in 1953 to a current low of only 2,400 persons per square mile. Most of the demographic shifts in the Sonoran Desert Region of Arizona of which Pima County is a part, are associated with the newly high populations of the major metropolitan areas of Phoenix, Tucson and Yuma. The upward spiral of immigration

characterized all of the post-war Southwest as people from small towns moved into urban areas to work in the factories and defense plants of WWII. But, as early as 1950 for downtown Tucson, disinvestment in the inner city propelled growth outward (Mayro 1999, 57). In Tucson, the urban boundary pushed north and south along the river and then eastward, as small farms and ranches along the Santa Cruz and Rillito rivers gave way to some of the first conversions to real estate that continues today (Mayro 1999, 58). The growth of the industrial, high-tech, retirement and service economies associated with these cities have attracted people from throughout the United States and world (Ilahiane, McGuire, and Stoffle 2000).

In terms of local pressure on ranching lands, Tom Sheridan, Professor of Anthropology at the University of Arizona fears that “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” (SDCP 1999). Sheridan warns of that a false assuredness of living in a “public lands state” has taken hold of Arizona residents who are “lulled 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. But, as Indian Nations gain more sovereignty they will make their own decisions about how to manage their own lands.” (SDCP 1999). In eastern Pima County, while 33% of the lands are held by the State as State Trust Lands these are not shielded from eventual development. Thirty-one percent of Eastern Pima lands are private and subject only to zoning restrictions. In other words, 64% of eastern Pima County is, or could become part of our urban sprawl (SDCP 1999).

With the goal of setting containment boundaries for urban sprawl, many local and state governments are now spending significant resources to retain farmland on the edge of metropolitan areas. Yet some, including J. Dixon Esseks, University of Nebraska contend that "The real issue is even though we have set aside land through agricultural conservation easement programs, zoning or because of land use constraints , do we have enough other conditions, such as agricultural economic development tools, present for a viable agricultural sector to flourish?" In Colorado, the state purchases development rights on agricultural land to prevent others from buying it (Nieland 2005). In Lancaster County, Nebraska, are zoning policies that try to protect farmland with 20-acre zoning (Nieland 2005). The temptation to cash in for real estate development is problematic for farmers and ranchers alike. In Pinal County, Arizona lands are saleable for the purposes of ranching at a mere fraction, *one-twentieth* , of the value of the same land for development (pers. commun. Schwennesen). A further goal then is to determine not just how farmers can continue, but how they can gain a reasonable level of income. The trick may to answer Essek's question, "How can you have farming and turn the high money value of your land into an investment at the same time?" (Nieland 2005). For example, as we have seen with viable ranching techniques, "Farmers can sell an acre of their land for a very high price and they can take that money and invest it in the rest of their land. Various efforts can make farming profitable and if it's profitable, perhaps it can survive" (Nieland 2005).

### *Exurbanization*

While urbanization in the conventional sense occurs when people move into cities from the countryside or from smaller towns, counter-urbanization happens as people migrate from

central cities and suburbs back into the countryside. This counter-urbanization is forging a new development pattern termed *exurbia* that is altering the character of the American landscape. The exurbs are already home to nearly 60 million people and are the fastest growing component of the continental landscape (Davis, 1994). The Rocky Mountain states, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming, are undergoing the shift from agricultural to residential land use at a dramatic rate (Theobald 2000). Although other times in the past 150 years have been marked by equal or greater growth, it is the “magnitude and the extent of the landscape change” that is “unprecedented” (Theobald 2000). Maricopa, Pinal and Pima counties have undergone large-scale changes in land use following the shifts of the greater Rocky Mountain area. Looking at statistics, one finds that irrigated farmland in Arizona dropped 26% from 1964 to 1992. Most of this loss was in proximity to Phoenix and Tucson with some rise in cropland and Yuma and Pinal counties offsetting this shift (Ilahiane, McGuire, and Stoffle 2000).

What characterizes the exurban lifestyle? Although exurban rural home buyers are similar to suburban home buyers in terms of occupations, income, and job locations, their locational choices are determined by the desire for more space and a rural environment. Current impetus is fostered by: the growth of secondary and tertiary economy services, recreation and information businesses (Cromartie 1994) a new or renewed? appreciation for the quality of life found in small or rural towns (Nelson 1992) and amenity migration where residences are chosen not in relation to job location but in terms of recreational and aesthetic appeals ( Nelson 1997, Gobster, Paul H. and Mark G. Rickenbach. 2004 ). As suburban areas become

built out, more suburbanites may opt for exurban living building further pressure for recreational access to public and state lands.

Urban sprawl and exurban development have led to the acceleration in the diminution of larger lands into smaller units or parcels. This *parcelization* of lands surrounding National Parks has led in turn to an increased number of jurisdictions around lands which complicates management practices (Gobster and Rickenbach, 2004) in general, including the negotiations for ensuring access to these lands. The subdivision of lands into smaller parcels has continued on private forestlands since the 1900s but in recent years both the rate and extent of this phenomena have accelerated (Sampson and DeCoster, 2000).

National woodland owner surveys conducted by the USDA Forest Service in 1978 and 1994 show that between these years the number of private owners of small parcels 10–49 acres in size has more than doubled, from 1.2 to 2.8 million owners (Birch, 1996). The greatest change is among individual (non-industrial) private owners where the average parcel size in the years from 1978 to 1994 shrunk from 27 acres (to 25 acres. If these trends continue, Sampson and DeCoster (1997) estimate that by 2010 average parcel sizes will be reduced to 17 acres.

Parcelization is one example of the generalized trend for all of our lands toward increased fragmentation. Fragmentation may be thought of as an all-encompassing term used to describe any number of “processes related to the disruption of continuity in predominantly natural landscapes” (Lord and Norton 1990). In the context of this paper, the principle

context for fragmentation will be thought of as human caused. The very “act of being human seems inevitably to draw administrative lines across the land” (Knight et al. 2000, xi). As we use the land these public regions undergo a transition from natural areas with human-altered habitat embedded within it, to managed landscapes that contain natural habitat remains” (Knight et al. 2000, xi).

In the Rocky Mountains, the forests are naturally “patchy” or fragmented comprised as they are of island remnants of Pleistocene forests (Buskirk 2000). Additionally, elevation and topography contribute to the heterogeneity of the landscape. So human-caused fragmentation can be especially detrimental to the environment when it is superimposed on a patchy or heterogeneous framework (Buskirk 2000). Although naturally occurring fragmentation is part of many ecosystems, contributing to the ecological heterogeneity of that system, human induced fragmentations can perilously endanger those same systems in terms of spatial considerations (e.g. devastation of Eastern old growth forests) and temporal legacies (e.g. roads once built rarely every disappear) (Lowsky and Knight 2000).

Much of the analyses on fragmentation in the Southern Rocky Mountains focuses on Colorado because not only are most of the Southern Rockies in Colorado, but also because Colorado is seen as “bell weather” for the Rocky Mountain region in general in terms of looking at land use trends (Theobald 2000). In Colorado, nearly  $\frac{3}{4}$  of the forest is public, yet exurban development is a significant part of forest fragmentation. Private land infiltrates the pattern of public ownership. Spatially it follows a dendritic pattern by tracing the valley and stream bottoms and moving up the mountain to forest public lands above, complicating

access to these lands (Theobald 2000), as described earlier in terms of the patchwork pattern of landownership in the West. Fragmentation is problematic on a number of levels concerning recreational access. Fragmentation brings complexity to the question of reaching public lands through the sheer increase in the number of landowners to be addressed for access, and, through the perspective of putting an already fragmented landscape at further risk by the activity of outdoor recreation itself.

### *Recreational impacts on access*

Although casually blamed are logging, livestock grazing, water use and infrastructure, and mining and development for the loss of habitat and endangering species, outdoor recreational use of our public lands may also threaten their ecosystems (Knight 2000). Outdoor recreational use of wilderness areas has risen by a factor of ten in the past 40 years with a particularly strong rise in the wildernesses of Alaska and the desert areas of the West (Cole and Landres 1996). Outdoor recreation is of concern for the many ways in which it affects wildlife. Wildlife viewing in and of itself may also be destructive during times of the year that are sensitive for certain species (Gotmark 1992). The direct impacts of the aforementioned and related activities include, depending on the particulars of the activity, nest abandonment, change in food habits and physiological effects such as higher heart rates from flight response (Knight and Gutzwiller 1995). The greatest effects may be influences on the competitive, facilitative and predator-prey relationships that have a further potential for affecting community structure and dynamics (Gutzwiller 1995). Among the more common recreational impacts is trampling of vegetation which can lead to invasion of non-natives and soil change that reduces plant vigor, reproductive potential and species richness (Hester et al

1999). Recreation can reduce numbers of species through: harvest- death by collection, hunting, fishing and trapping; disturbance- agitation, whether intentional or not, [e.g., by snowmobiles or cross-country skiers in Yellowstone]; habitat alteration-- change of vegetation, soil water and microclimates; pollution-- degradation of habitat by human food, refuse such as tangled fishing line [or plastic six-pack holders] (Knight 2000). Some of these impacts are short-lived and may for example stress an animal. Other impacts are longer lived and change feeding habits, [e.g. bears at human trash receptacles], and still other impacts may permanently alter the natural composition of animal communities (Knight 2000).

A variety of outdoor activities may fragment or perforate habitats. Fragmentation occurs through the creation of roads for motorized activity, building of trails, (internal fragmentation), and campsites (perforation). The presence of new forest edges exposed by roads and recreational trails contribute to the decline of nesting neo-tropical migrant birds, resulting from predation (Knight 2000). In fact, the decline of 258 federally threatened and endangered species may be attributed to outdoor recreation hiking!, second only to off-highway vehicle use (Knight 2000). Trails internally fragment an area by breaking up an area into smaller parcels. An important component of the impact of a trail is the “trail distance effect” or the band of effects radiating outwards from the trails (Knight 2000). Trails can introduce invasive species. Trails also interfere with the movement of certain species, particularly those species which dwell on a smaller scale and can subject species to predation while crossing a trail. And, even where wildlife may have become habituated to people on trails, people leaving trails may create an elevated response in wildlife (Knight 2000). To alleviate adverse effects resource managers may control trail use by spatial, temporal, visual

and behavioral means, even closures. (Knight 2000). A 1994 study of birdwatchers suggest that wildlife may often be the principle driver for outdoor recreation and that people's desires can change as their education about and appreciation for nature develops ( McFarlane 1994) . This capacity for greater understanding may be useful in ensuring a growing acceptance of recreational restrictions for the benefit of wildlife (Knight 2000).

### *Changing character of recreationists*

Reduction in hunting can limit the availability of funds and support for access.

Aside from shrinking national budgetary allocations, national agencies and recreation industries are facing a decline in licensing and other fees. Fish and wildlife agencies, among others, are concerned as their base of traditional sportsmen moves away from hunting and angling to a non-consumptive enjoyment of wildlife (Wildlife Management Institute 1997). For example, in the decade from 1980 to 1990, the number of people who traveled more than 1.6 km from their homes to visit wildlife: observe, photograph, or feed, shot up nearly 15 mil. Representing a proportional increase beyond that for all other wildlife recreation. (Flather and Cordell 1995.) The loss of consumptive users of these resources could cause agencies to lose historically supportive constituencies with strong conservation and environmental attitudes (Dann and Peyton 1996). Trends in wildlife recreation point to an increase in fishing, particularly in freshwater, with overall levels of hunting unchanged while numbers of those in pursuit of small game and migratory birds have fallen in contrast with big game hunting (Flather and Cordell 1995). Land access to private lands may account in part for this trend. In 1985, for example, only 51% of big game hunters hunted on private lands while 63% of small game hunters and 62% of migratory game hunters hunted on

private lands (USDI/FWS 1988). A new cultural climate in the West may contribute to recreational preferences.

### ***Conflicts for recreational access to public lands***

#### *Changing demographics*

The BLM (1999) in the design of its new training manual for a cooperative approach for resource management, describes the nature of the changing West in terms of certain assumptions. Using the ‘cultural descriptors’ of James Kent (a resource management specialist and author of new approaches for resource competition yet to be discussed in this paper), the BLM manual articulates some insightful analysis for looking at the present day context for recreational issues. The “Old West,” was characterized by European settlement which viewed the land in terms of production: farming, ranching, minerals, oil and gas and timber. Recreational activities were second to work and tended to be family experiences connected to work: 4-H, County Fairs, rodeos, and hunting, fishing on the working landscape (BLM 1999). In contrast, the “New West” houses people who have built their income around recreation and ‘quality of life’. People came in search not of jobs in natural resources but of a new ‘quality of life.’ Beginning in the sixties with recent accelerations, many of these new migrants came from urban areas and valued the ‘pristine character’ of the rural western landscapes as a frame for recreation. This shifted economic resources toward tourism and ultimately resort and real estate development (BLM 1999). Recent immigrants entered the West during the 60s and 70s at the same time new federal management styles moved in to navigate the environmental regulatory wave of the National Environmental Policy Act (NEPA), the National Forest Management Act (NFMA), and the Federal Land

Policy and Management Act (FLPMA). The newcomers to the West may be generalized as seeing these acts as the means for supporting recreational use and protection of the environment (Starrs 2002). The “New West” is commonly seen to be predominant in the west today in terms of urban, high-density oases of city people and their production of ranchette developments. Once viewed as a “curiosity”, the New West is now a powerful source of landscape change (Starrs 2002). These two faces of the Western community may not have similar views for resource and recreation decisions, adding a complexity of philosophical differences to ones of historical land use, ownership and growth patterns.

#### *Mandates for multiple-use*

Perhaps the most important idea to recognize when looking at public lands is the context of the particular type of land, whether it be National Forest, BLM, or state lands for instance, remembering that each designation brings a given federal or state mandate for management, commonly including one for multiple use. Aside from the more politically visible conflicts for multiple use such as grazing (to be discussed later) and timber harvesting, mining claims may interfere with recreational access. The Hardrock Mining Law of 1872 allows that the federal public lands are “free and open” to mineral exploration. Although some lands have been withdrawn for military and recreational use, some 400 million acres, over half of the federal lands including most National Forests, remain open to mining. In terms of functional use for ranching, the Mining Law created so-called *split estates* by giving *surface* ownership rights to the private landowner while *subsurface* ownership remains with the federal government and open to mining claims. This right of entry persists over about 5 percent of all private lands in the west and Alaska (Wilkinson 1992, 62) and can legitimately and

otherwise interfere with recreational access. Sham mining claims characterize an estimated 3000 structures on Forest Service and BLM lands (Wilkinson 1992, 59). At the turn of the century a senator, Ralph Cameron, used a chain of claims to block access on the Southern Rim of Grand Canyon to non-fee paying hikers. It took more than thirty years to rid the state of these claims (Wilkinson 1992, 59). At congressional request, the General Accounting Office (GAO) reviewed unauthorized non-mining surface activities on mineral mining claims on federally owned land managed by the BLM and Forest Service. The GAO found that of 662,000 mining claims in Arizona, California, and Nevada, about 1,600 have known or suspected unauthorized activities occurring on them (GAO August 1990).

New public demands for alternative land use, such as for recreation, environmental preservation and real estate development, has affected change on some aspects of the 1872 law. There has been transfer of some minerals from “right to mine” status to leases and sales, withdrawal of some lands, and closer administrative scrutiny of the claims to limit environmental damage (Wilkinson 1992, 50). However, some 400 million acres, over half of the federal lands including most national forests, remain open to mining (Wilkinson 1992, 50).

### *Balancing recreational access with conservation*

Recreational impacts embrace a full circle of issues beginning with preservation of the resources that the recreation exploits, to the influence of crowding. On Earth Day of 2003, Forest Service Chief, Dale Bosworth, delivered a talk to the Commonwealth Club in San Francisco with his view of the four "great issues" facing today's Forest Service. Absent were

the historical “environmental bugaboos of grazing, mining and logging worries”, says Skinner, “After all, those other multiple uses on the public lands are pretty much gone, much to the regret of many Westerners....” (Skinner 2004). Chief Bosworth spoke instead of fire and fuels, invasive species, habitat fragmentation, and, "unmanaged recreation." Chief Bosworth specifically stated, "OHV use alone affects more imperiled species than logging and logging roads combined" (Skinner 2004). The impacts of recreation vary greatly according to the environmental context: impacts of hikers, equestrians and motorcyclists for example showed complete recovery after 5 years on grasslands while similar impacts on forest understory recovered only 50 percent in the same time period (Weaver et al 1979).

Those groups with the greatest presence in Arizona and those most likely to use private lands to reach public lands include hunters, trail users such as hikers and equestrians, wildlife viewers and off-highway vehicle (OHV) users. Of most relevance to this discussion concerning conflicts over their use of ranching lands, to reach public and state lands are hunters and OHV users.

### *Hunter access*

Federal public lands are an important destination for American hunters. Nearly half of all hunters travel onto federal public lands as some or all of their hunting program (USDI/ FWS and US Department of Commerce 1997). Of these, 17 percent hunt exclusively on public land, while 30 percent hunt on both public and private land. Hunters claim that hunting access to public lands has been cut during the last ten years through road closures, lack of access across private land, area restrictions, policy changes, etc.

A meeting was convened among the various stakeholders in 2001 to address this issue. Included were informed individuals from the BLM, Congressional Sportsmen's Foundation (CSF), National Rifle Association Forest Service Public Lands Council and others including Colorado State University, the Wyoming Game and Fish Department and Theodore Roosevelt Conservation Alliance. The intent of the CSF was to continue to work with the hunting/conservation community to write detailed studies of specific, critical issues identified in this report. Further the CSF has meant to convey recommendations to Congress, federal agencies and the hunting/conservation community to achieve better access to federal public land. Those issue honed by the participants as the most critical to access are discussed herewith. The first concern was the public land management agency planning process: Hunter access to federal public land was seen as largely determined during the planning process at the local level with little or no direct involvement from the national level of the FS and BLM agencies. The best, and often the only, opportunity hunters have to influence access was judged to be by becoming involved during the planning process (Congressional Sportsmen's Foundation and the Wildlife Management Institute 2002). Second, participants found that since healthy wildlife populations are key to a quality hunting experience, it is important for sportsmen to understand decisions made to manage or benefit wildlife and habitats and the repercussions these decisions may have on hunter access (Congressional Sportsmen's Foundation and the Wildlife Management Institute 2002). Third, the checkerboard pattern of land ownership was shown to be confusing to hunters seeking access. There appears to be a need to better identify and post key access points and boundaries. Also needed, as possible, is for agencies to address or modify ownership

patterns through land exchanges, conservation easements. Fourth, in addition to having land available for hunting, information pertaining to these opportunities on federal land needs to be made readily available. Follow-up must consider how information on hunter access is provided, if this information is adequate and if there is a need to improve the dissemination of this information. And, interestingly, does the fact that BLM lands have no formal name, are not signed on the ground and are not considered part of a national public lands system, affect hunters' opportunity for hunting on BLM lands? (Congressional Sportsmen's Foundation and the Wildlife Management Institute 2002).

The Congressional Sportsmen's Foundation and the Wildlife Management Institute (2002) found, like the hunters before them, that in many areas, the only access to federal land is across private property. In some areas, private outfitters and guides lease private land for the exclusive use of their clients and thereby gain exclusive use to adjoining public lands. Understandably, roads are often the central way for hunters to reach federal land. Yet, in many areas an accurate inventory of roads, particularly county roads, does not exist. This leaves hunters unsure if certain roads are public or private and whether or not these roads may be legally used to access federal lands.

#### *Off-highway vehicle impacts*

Commonly viewed as the most problematic, widespread and high impact recreation on private and public lands in recent years have been off-highway vehicles (OHV). The urgency of recognizing and better understanding the effects of OHVs is indicated by the dedication

of a summit meeting in February of this year to address the problem, “Building a New National Campaign to Protect Public Lands from Off-road Vehicles” held in Golden, Colorado. The participants came to seek a new approach, one that would devise innovative, effective solutions to address off-road vehicle use on public lands in a way that would be “relevant and engaging to a broad range of audiences “ and plan strategies to get desired behaviors (Building a New National Campaign 2005). Despite common misconception, it does not appear that the majority of riders want to ride cross-country without limit (Building a New National Campaign 2005).

Although OHV clubs are numerous, fewer than 10 percent of off-road vehicle enthusiasts are members, a problem in terms of lost opportunities for educating the public toward responsible use. High membership in Wheel-sport clubs is also important in terms of the source of labor to repair OHV impacts and otherwise contribute to responsible recreation as members of these clubs donate hundreds of thousands of hours for trail maintenance and repair (Skinner 2004 and pers. commun. Rebecca Antle).

Extent of use judged from recent sales of OHVs is phenomenal. The Motorcycle Industry Council reports that 886,000 ATV's were sold in 2003 representing the 12<sup>th</sup> consecutive year of sales increases. More than 7 million ATVs are estimated to be currently in use in this country. Although specific figures are not reported by the same council for dirt bikes, the total of all motorcycle sales reached 996,000 in 2003. Given these high sales, the political clout of OHVs at the local level is a potent one. OHV recreationists tend to be well-

organized, highly vocal, and aggressive (Building a New National Campaign 2005). They proclaim the values of maintaining access to public lands for family recreation while characterizing efforts to limit their use “as an elitist lock-out” (Building a New National Campaign 2005). Importantly, environmental groups have been largely alone in calling for limits and so there has been little incentive for members of Congress representing rural areas or land managers at all levels to support limits or oppose local riders and other important constituencies (Building a New National Campaign 2005). But users perhaps justly may protest with Dave Skinner, that “Selfish environmentalists seem to think "multiple use" means two people hiking the same trail. .. That I washed my bike before loading up to prevent seed spread, that I have a quiet muffler, that I stay on the trails (that I’ve helped maintain) ....doesn’t make any difference” (Skinner 2004). From the perspective of the Audubon Society, although funds may be available to rebuild OHV trails, they do not cover the damage that rugged vehicles do to streams, hillsides or habitat for wild life (Wolf 2004). The Forest Service has moved forward with a national rule for banning large-scale cross-country travel by ATVs, dirt bikes and trucks and restrict wheeled vehicles to designated roads and routes (Building a New National Campaign 2005). This rule would require forests across the country to revise their management policies accordingly. The revised plans, including the current process for the Coronado National Forest plan in Arizona, offer opportunities to influence off-road vehicle management and usage across tens of millions of acres. But participants argue that “Without a diverse set of voices pressing for real limits, these processes could simply give the official stamp of approval to the spaghetti network of user-created routes that criss-cross so many National Forests.” (Building a New National Campaign 2005). Many National Forests have already banned cross-country travel and gone

to a designated routes only system. Unfortunately, in many instances that has done little to alleviate the problems with off-road vehicles on those forests (Building a New National Campaign 2005).

OHV use and the BLM may be influenced by a longstanding public indifference over “the public lands that nobody wanted” (Building a New National Campaign 2005). Planning for OHV use on BLM lands presents a different challenge from Forest Service lands, in part, because the BLM avoids applying a single ruling concerning land use in favor of greater flexibility toward local needs (Building a New National Campaign 2005). That said, BLM, in some Western states including Arizona, is working to stop cross-country travel with a system of designated routes. Current revisions of Resource Management Plans (RMPs) offer the opportunities for these reforms.

Several states including Arizona and California have published studies calculating the direct and/or indirect economic impact of off-road vehicle use. Arizona considers the economic affects to be \$4.25 billion annually, supporting 36,951 jobs, and generating more than \$1 billion in salaries and wages (The Economic Importance of Off-Highway Vehicle Recreation, Arizona State University West, 2003). With the perceived economic gains to be in this order of magnitude, there is little surprise at the significance of OHVs’ in influencing statewide and federal policies on public and state lands. What may be ignored are the considerable costs to manage use and restore damage of OHVs. Isolated estimates of these costs to taxpayers suggest that in fact these costs are considerable (Building a New National Campaign 2005). This past July, the Forest Service released a new rule to manage OHVs on

its 155 national forest and 21 grasslands, in response to skyrocketing OHV use across the country. Forest Service rules at present are a jumble of regulations with some forest allowing use only on restricted trails, and others permitting unrestricted cross-country riding (Peterson 2004). If OHV is one of the four biggest threats to American forests, per Forest Service Chief Dale Bosworth, two of the other three, loss of open space and invasive plants, are also aggravated by OHV users (Peterson 2004). The new ruling proposes that each forest takes its own inventory of trails and roads and then conduct public meetings to determine which trails will allow OHV users. Maps of the allowed trails will then be accessible to the public from ranger stations, kiosks and the internet. The Forest Service has not had success with signs posted on trails to regulate OHV use.

Despite fundamental access issues, and that dirt bikes, ATVs and jet skis, and other motorized vehicles, have a range of negative impacts, interest in this form of recreation remains on the rise. The Natural Trails and Waters Coalition evaluated recent efforts to reform OHV use. Specific strategies, political dynamics, conditions, and other factors that participants in these efforts viewed as most critical are found in the following case studies (Building a New National Campaign 2005). In the state of Washington a multi-year effort directs a portion of state gas taxes to grants supporting development and maintenance of off-road vehicle routes and facilities. Other states have had success with similar programs that fund a single recreational activity with a stream of funding specific to that activity (Building a New National Campaign 2005).

### ***Role of agencies in access management***

The West has had a tradition for the public's participation in resource regulation and is now bringing higher levels of participation to the debate over local resources. In recent years resource users have been working to formalize this precedent as a legalized part of the decision making process termed *comanagement* (Berkes 1996). Federal and state agencies have abetted this trend by bringing new perspectives to resource management from their end, as well. In fact only within the past decades has public access to federal lands come up as an issue. Until the 1940s the land management agencies focused on access in terms of commercial use of the land as in timber harvests and mineral development and for administrative reasons such as fire fighting and trail maintenance. Recreational access along these roads was an afterthought. But after WWII, recreational demand rose for exploring remote areas for hunting and fishing and the issue was framed. Public access to these remote areas had not been built and the recreationist had to use crossings on private lands to reach the public lands. Private landowners reacted by sometimes blocking the public from crossing their land. Other private landowners began charging access fees (GAO 1992). The government is investing in increased use of the internet to better serve the public with respect to a wide range of issues including information about access on governmental lands. E-Government initiatives focus on a wide variety of services, to simplify and unify agency work and information flows with one-stop services to citizens. For example, Recreation One-Stop is a Web portal for a single point of access to information about parks and other federal, state, and local recreation areas.

### *The Forest Service*

The 191 million acres of Forest Service land offer more recreational opportunities and records more recreation visitor use, about a quarter of a billion visitor days per year, than any other federal lands (GAO 1991, Forest Service). On these lands are 13,000 developed sites with more than 4,400 campgrounds and 1,400 picnic grounds (GAO 1991, Forest Service). Yet, in the early 970s, the Forest Service still believed that its role was primarily to produce timber and, more generally, to serve as a steward of the land. The Forest and Rangeland Renewable Resources Planning Act of 1974 gave the Service a new mandate for preparing a land and resource management plan for each of its forest units. (Similarly, the BLM under the Federal Land Policy and Management Act (FLPMA) of 1976 is required to write land – use plans for its areas.) Plans for both agencies necessarily included not only timber, wildlife, and grazing, but also recreation (GAO 1992). The Forest Service is now in the process of revising many of its forest management plans in accordance with current requirements for revision at least once every 15 years. And, to this effect, the agency is employing new planning tools, such as geographical information systems and is engaged in increased collaboration with the public and other federal agencies, tribes, state government, and other interested groups or persons. The Forest service is also committed to using independent scientific review more frequently (Federal Register 2000). Regional ecosystem assessments have become the foundation for more comprehensive planning, sometimes involving multiple forests and other public land management units. The Northwest Forest Plan, for example, affects 17 national forests and 6 BLM districts in a three states. (Federal Register 2000). In recent years the number of federal, state and local agencies, Tribes, members of the public, and interested groups wanting to be involved in planning decisions

and share stewardship responsibilities has “skyrocketed”. The Forest Service has moved to “create new understanding, build trust, obtain new resources for implementation and monitoring, and diffuse potential conflicts by engaging these parties more effectively in the planning process through collaboration.” (Federal Register 2000). Within the “ecological sideboards” imposed by legal thresholds and land health, a wide range of management options exists, with planning as much a social decision as a scientific one (GAO 1999).

Federal courts have supported the Forest Service’s ecological approach to land management (GAO 1999). The Forest Service has noted that recreation as well as timber will likely be affected (GAO 1999). Chief Boswell has likened recreation to timber 20 years ago and cautioned that, to avoid what happened to the timber industry, recreation must occur within those same ecological sideboards imposed by land health (GAO 1999). The Forest Service has in fact begun to restrict some recreational uses on its forests due to concerns about the recreational impacts of overuse. Further, the Forest Service may, by adopting its expected utilitarian stance, justify exclusion of damaging recreational use in terms of dampening tourism dollars for local economies (USDA/FS Local economies).

In terms of local issues for access, the least accessible National Forest lands are those in The Coronado National Forest. The Coronado “has the most significant set of public access problems of any Forest in the Southwestern Region and quite possibly the nation” (unnamed FS document on Coronado Forest access, 2004). The proximity of the Coronado to the Tucson area highlights the importance of obtaining permanent legal access in this area. The

Service's Forest Land and Resource Management Plan (LRMP), which was finalized in 1986, identified more than 1,000 miles of road right-of-ways needed to insure adequate access for public and administrative use (unnamed FS document on Coronado Forest access, 2004). Recently, approximately 300 public and administrative access points from outside the Forest boundary were identified, with fewer than 100 having permanent legal access as traditional access routes through interior and adjacent private lands, and State Trust lands are gated and locked (unnamed FS document on Coronado Forest access, 2004). The Service estimates that approximately two-thirds of the Coronado National Forest, which translates into well over 1 million acres, does not have what they construe as adequate permanent legal access (unnamed FS document on Coronado Forest access, 2004). Although landowners may currently permit public access through their private land unless permanent access is secured, that access can be gated and locked at their discretion. From the Service's perspective discretionary access means that landowners are essentially turning the National Forest into private "back yards" with little benefit to the general public (unnamed FS document on Coronado Forest access, 2004).

The sky island nature of the Coronado compounds access problems. The county and state roads which crisscross the Coronado are generally flanked by private or State Trust lands, effectively curtailing access into the Forest (unnamed FS document on Coronado Forest access, 2004). Arizona's rapid growth has in the view of the Forest Service lead to "a much greater need for access to public lands, and at the same time leads to increased development of adjacent private lands, resulting in more restricted access" (unnamed FS document on Coronado Forest access, 2004). In the view of the FS, there is no permanent legal access to

the Galiuro, Whetstone, Santa Teresa, and Winchester Mountains with the other Arizona mountain range units have very limited permanent legal access (unnamed FS document on Coronado Forest access, 2004). Restricted access is also seen by the FS to interfere with the Forest's own transportation system which has "deteriorated dramatically over the past twenty years while use has increased" interfering with effective management (unnamed FS document on Coronado Forest access, 2004).

In terms of who is responsible for rectifying this problem, the Service believes that "the primary responsibility for access across private lands within the proclaimed Forest boundaries lies with the Forest Service, while getting people to the proclaimed Forest boundaries is the primary job of State and local agencies" (pers. commun. George McKay). The FS interprets most recreationist/landowner conflicts and wildcat roads as the result of attempts to reach national NFS lands via the private and State Trust land after traditional access routes have been blocked (pers. commun. George McKay).

The FS believes "cooperation of all is required to meet access needs, wherever they may be" (unnamed FS document on Coronado Forest access, 2004). The FS has been working with the Arizona Game and Fish Department (AGFD) in seeking solutions to the Forest's more pressing legal access problems, particularly those outside the Forest boundary. Although the FS has been "willing and even anxious to work with other Federal, State and local agencies as well as public land user groups to develop a coordinated program to provide reasonable access to public lands. To date, other than the AGFD, no interest in such a coordinated rights-of-way program has been expressed. State and local agencies as well as some Federal

agencies are reluctant to actively assist in securing needed rights-of-way from private landowners” (unnamed FS document on Coronado Forest access, 2004).

### *The Bureau of Land Management*

The Bureau of Land Management has also moved to a closer involvement with the greater public for planning (BLM 2003). Stewardship of public lands today does not from the BLM’s perspective entail more government but a wider range of public participation in deciding their use (BLM 2003). The Bureau of Land Management describes itself as a ‘small agency with a big mission: to sustain the health, productivity, and diversity of the public lands for the use and enjoyment of present and future generations.’” The scope of the BLM is truly enormous comprising nearly one-eighth of the total land of the United States adding up to 261 million acres and an awe inspiring *700 million acres* of below the surface mineral rights. The BLM regards the lands as contributing to the quality of life of the American people but also for safeguarding our national interests (BLM 2003). BLM lands are meant according their promotional materials to offer a balance for the public of grazing, timber, energy development and mineral extraction with recreation and adventure opportunities.

The Taylor Grazing Act of 1934 birthed one of the most comprehensive programs ever attempted for the public lands of this country. The Grazing Service arose from this act and the Service merged with what was once the General Land Office to become in 1949 the great overseer for the settlement of the vast public domain. Lands within grazing districts are managed according to the Taylor Grazing Act of 1934, as modified by the Federal Land Policy and Management Act of 1976 (FLPMA). Lands outside of grazing districts are

managed solely under FLPMA lending minor differences between how the two categories of land are managed; for example, grazing permits are awarded on rangelands within grazing districts, while leases are allowed on rangelands outside of grazing districts. Nearly all BLM public lands not classified as reserved, both those within grazing districts and those without, are deemed as grazing lands (pers. commun. to Thomas C. Roberts, Jr., Washington Office Range Management Staff, USDI BLM).

The BLM (1999) believes that in the West differing perspectives have created disruption over land issues in many rural western communities. In the agency's perspective, The Sage Brush rebellion has loosely evolved into the "Wise Use movement" with the "county supremacy" movement and those welcoming regulation linked to the environmental protection movement (BLM 1999). James Kent, has worked with the BLM to handle land-use issues before they become disruptive and are difficult to handle from a management perspective. Kent has adopted the attitude that disruption is based on fear and lack of knowledge. To avert disruption the BLM is now engaged with community-based ecosystem stewardship as the integration of 'ecosystem management' and 'community stewardship' philosophies to break into a new dynamic for partnering. In the past, the attitude of the BLM may have been described as "agency driven" with a focus on compliance. Today, overall, the idea of *management* is being replaced at the BLM with the notion of *stewardship*. This is a change connoting responsibility and sustainability (BLM 1999). The typical views of *community stewardship* was expanded with the term *ecosystem* to strengthen the perception of science-based decision making. And, the new use of *community* as applied to stewardship opens up the planning process to both 'place-based' and 'interest-based'

communities (BLM 1999). The Arizona Resource Advisory Council (RAC) is an example of the new approach for BLM. Throughout the country RACs are 15 member teams which talk with BLM managers concerning all resource management programs. Here in Arizona, the RAC has assisted with the agencies strategic plans for the wild horse and burro (BLM 2003) and is working with them today to determine recreational access issues.

*Studies and strategies for more effective and/or increased access on federal lands*

The federal agencies have both a formal "access acquisition" program and a more informal and opportunistic means of pursuing access to public lands. The formal process can result in the purchase of all rights and interests of the land with a fee simple purchase. Or, the purchase of a perpetual easement grants limited controls over land use that are binding on all current and future owners of the land. This easement may give the agency road access across private or other lands for agency purposes or most commonly, public access. The easement document is recorded in the county courthouse and is usually perpetual in term, though other types of easements are sometimes acquired as a result of limitations placed by the landowner. Easement needs that have been identified are placed on a prioritized list and work is completed as time and personnel are available. The agencies may acquire fee simple obtainments and perpetual easements through purchase, donation, exchange or condemnation (GAO 1992). The work of the agencies in this direction is extensive: in 1989-1991, the FS and BLM together purchased permanent, legal public access to over 4.5 million acres of federal land (GAO 1992). In addition, land attained for conservation and other purposes may allow access as a secondary benefit.

Informally, federal agencies are always looking for opportunities to insure or increase access to public lands. A reciprocal right-of-way is one tactic for handling a private landowner who needs a right-of-way to cross public lands when the agency in turn needs to cross that landowner's property. Easements can sometimes be acquired as the result of land exchanges, where an owner is willing to give formal access in exchange for a particular tract of public land. (These, of course, must be equal value exchanges and the difference in any value must be made up through a cash payment on the part of the private party, or more land in the case of the government.) If a landowner wishes to obtain a certain public tract, county records can indicate if that tract would yield landowner control where public access is warranted (GAO 1992). The exchange parcel could then be negotiated alongside the easement acquisition.

Lack of adequate access is of course also a concern by land management agencies in terms of the effective management of their land. In 1991 the Service and BLM directed their field offices to better their access planning efforts. Each forest and resource area since then has to include a transportation plan identifying the access rights necessary to work with the resource objectives of the plan. The FS requires each forest to renew their objectives every 15 years. The BLM rewrites its resource area plan every 20 years. Access needs are meant to be highlights in the transportation plans for each update.

In terms of general access to Federal lands including the FS and BLM lands, questionnaires in 1992 found that access to about 50.4 million acres or about 14 percent of the lands in the contiguous United States was by agency managers considered to be without adequate access

(GAO 1992). Although an extensive problem, the issue of public access is relatively new for federal agencies (GAO 1991, Forest Service).

Until the 1940s land management agencies directed their efforts toward building roads for commercial purposes, such as timber and mineral exploitation, and administrative access, fire fighting and trail maintenance. Without adequate roads, the public was forced to cross over non federal lands. Problems with landowners granting access has grown to the extent that by 1991 direct funding for easement for the FS was over 6 million and well over a million for BLM (GAO 1992).

A 1992 federal survey addressed the extent of the problem on FS and BLM lands. The findings found public access to large expanses of federal land inadequate with overall, landowners less likely to grant access than they had been the preceding decade [see [GAO Report Tables 1 and 2, Appendix C](#)]. Access to over 50 million federal acres, mostly in the West were judged insufficient. The Southwest region had the highest proportion of acres with inadequate access: almost 5 million acres out of 20 million total acres in terms on Service lands. As defined within the context of the report, inadequate access doesn't mean physical preclusion from federal land but "that the federal government has not acquired the permanent, legal right for the public to enter federal land at the point(s) needed to use the lands as intended by the managing agency". Using this definition, if non-federal landowners grant permission to cross their land to reach the public land this is still regarded as "inadequate access". The managers' rationale for classifying access in this way is that the private landowner may revoke this permission at will (GAO 1992). Suppose, the public may

legally enter a parcel of federal land at a point A. But, the land manager may determine for any number of reasons including wildlife habitat or environmental sensitivity, that a point B is more appropriate. Other circumstances may yield no access to federal land at all from any point.

The questionnaire found that factors contributing to a lessened willingness to grant access included worries about vandalism and potential liability, privacy and desire for exclusive personal use (GAO 1992). Inadequate access of course limits the public's opportunities for using federal lands but the extent to which recreational activities are affected varies according to the type of activity in question and by geographic location (GAO 1992). The predominant reductions of access documented were for hunting and off-road vehicle use.

#### *Arizona State Trust Lands*

The third most important presence in terms of recreational access in Arizona, after Forest Service and BLM lands are Arizona State Trust Lands. Arizona is one of only two states that has kept control of a sizeable portion of its original state trust lands. State Trust Land policy is led by its mandate to provide revenue to the beneficiaries of the state trust. State Trust lands may then be "improved" or developed to maximize revenue. Although there are proposals being advanced regarding how State Trust Lands are administered so as to give the State Land Department more flexibility in choosing alternative management policies, these would require changing both the Enabling Act of the State of Arizona and also the Arizona State Constitution. One has recently failed in Arizona, but The State Trust Lands Program with a leadership role played by the Sonoran Institute continues on a collaborative reform of

state trust lands management and policy in Arizona and other key Western states. Change may be difficult to navigate for with opposition by ranchers, for instance. In letter published in the Arizona Star, June 2004, the media was said to be delinquent in terms of publishing ranchers' opposition to state trust lands reform. Ranchers feared regulatory devaluation and condemnation of land by the government (Coping 2004) Ranchers had estimated deeded ranch lands could lose value from a current average of \$2,000 per acre to \$200 per acre as a result of the plan (Coping 2004). The Arizona Preserve, signed into law in 1996 allows for the sale of urban state trust lands at full market value to other public offices, mainly cities and counties, in the interest of keeping open spaces within or near the urban borders (Emanuel 2000). Changes of ownership for State Land can be unpredictable since a small amount of valuable state land may be sold or exchanged for a large area of less valuable land somewhere else (Mayro 1999, 55).

Federal agencies remain involved with these interfaces since their mandates include governing any nearby federal lands for wildlife or recreation (Loomis, 2004 , 29). And, since a 1979 court case (Utah v. Andrus) requires the federal government to provide reasonable access to state lands (Bryner, 1998), ensuring the ability of State Land permit holders to reach and cross over state lands also generally becomes a part of the Forest Service or BLM's responsibility. Harking back to an earlier discussion of the patchwork nature of land ownership, particularly in the Southeastern corner of the state, State Trust lands are very much part of most access issues, particularly so because of their vulnerability to development.

### *Arizona Game and Fish Department*

In response to complaints and incidences of violence concerning the restriction of access to public lands by private landowners, the agency conducted research into the problem. In 1986, John Holcomb, formerly with the Arizona Game and Fish Department sent questionnaires to wildlife managers throughout the state to quantify public and state lands where reasonable access was prohibited. The closures had “strained” relations between ranchers, hunters, land management agencies and the department. In some cases the closures had become “very emotional issues” resulting in highly controversial encounters (Holcomb 1986). Holcomb focused his research on access closures faced by hunters, also applicable to other recreationists. Holcomb found that closures resulted in significant blocks of public land closed to hunters. At the time of the survey in 1986, 12.5% of public lands were forecasted to be potentially denied for reasonable access (Holcomb 1986). The land status with the highest level of access problems was State Trust Land, followed by Forest Service and then BLM lands.

The questionnaire also solicited solutions. Responses fell into two categories: coordination with land management agencies on access issues and line items for the Game and Fish department. Ideas for intra-agency cooperation were: 1. Right-of-ways across private land. 2. Avoidance of land swaps where access might be lost and acceptance of swaps where access might be gained. 3. Maintenance of 2-track roads in areas where very few roads exist, even at additional costs; where excess roads exists, close as needed to enhance wildlife values. 4. Education of management and agency personnel concerning the value of wildlife

to the state, and 5. Agreements with Game and Fish and management agencies for access (Holcomb 1986).

Specific actions proposed for Game and Fish were: 1. Obtain right-of-ways. 2. Elicit ability through legislation to condemn lands to gain access. 3. Build alternative access routes. 4. Minimize conflicts by altering hunter attitude and image. 5. Increase field personnel for adequate patrol of hunts, reducing hunter-rancher conflicts. 6. Compel management agencies to secure access to their lands, and 7. Charge access fees to the hunter and apply these fees to projects for benefiting wildlife, the lessee on the land and the managing agency (Holcomb 1986).

Western lands outside the state were also judged through the questionnaire results to be grappling with access problems. Seven of the ten states surveyed responded with access closures; several had already attempted to better the problem. Roughly these efforts were: coordination with land managing agencies; acquisition of right-of-ways; construction of new access routes; and legal action to open up illegal closures. In sum, access appeared to be an important issue to the department in light of the economic and social demands for perpetuating and enhancing recreation. Ultimately too, fees contribute to the solvency of the agency itself (Holcomb 1986). Research pointed to the importance of the Arizona Game and Fish Department becoming the lead agency in coordination of access issues with the land management agencies. In circumstances where other agencies lack cooperation or interest, then the Arizona Game and Fish Department was to pursue access on its own.

*AGFD landowner relations incentive program*

In 1990, the Arizona Game and Fish Department responded with their access stewardship program to assist in acquiring public access to federal lands that had been closed by private landowners. The access stewardship program, under the umbrella program, the Landowners Relations Program, benefits the private landowner by entering into a Cooperative Stewardship Agreement with the State of Arizona through the Arizona Game and Fish Commission to decide access issues. Through cost-sharing, the Arizona Game and Fish Department makes improvements on the private landowner's property in exchange for short-term or perpetual access agreements. Projects address specific landowner's and wildlife habitat needs and have included: brush treatments to restore grasslands, dirt tank clean-outs, installing water distribution systems and drinkers, fencing and grassland reseeded. After the term of access expires, the improvements on the signatory's lands become a permanent part of the private property. More than 400 thousand acres participate in this program. A variety of other programs in The Landowner Relations Program (LRP) bring mutual benefits to the landowner, wildlife and recreationist through Heritage Funding. The Landowner Incentive Program is designed to benefit wildlife habitat on the private landowners' property. Wildlife populations benefit from the restoration of natural balances, and the public benefits from decreased costs of species conservation programs and increased opportunities to enjoy restored wildlife populations vicariously or through direct recreational pursuits. Each project requires a simple cost-benefit analysis to assure that State gifting restrictions are not violated. The Adopt-A-Ranch and Landowner Respect Programs focus on sportsmen's ethics and offer opportunities for recreationists who use private lands to offer assistance with landowner projects or litter clean-up for example, in exchange.

Shortly after the introduction of the Landowner Relation Program, in 1993, the Arizona Game and Fish Department issued a short query in the form of a four-question survey to ranchers, the principal landowners of concern with respect to access are in Arizona, concerning hunters. In brief the results suggested that the optimal scenario for access was to limit the numbers of hunting in the field with the same number of weekends open for hunting ([see appendix d: 1993 Arizona Game and Fish Department Four-question access survey and results](#)). The comment section of this survey reflected concerns for educating hunters that Arizona Game and Fish Department had begun to address through their Sportsman Respect Program begun in 1989.

The initial findings of Holcomb (1986) hold true almost 20 years later, perhaps more so because of the phenomenal growth of the state. Currently access into Arizona's public lands is considered one of the most important issues for managers to address. The financial benefits of ready access and better coordination to achieve access remain a priority (AGFD 2002). Meeting notes show the financial risks of poor access. An access point of little use into the Galiuro Mountains, at Long Hollow Canyon was estimated to contribute \$70,000 a year to the local economy. By contrast a more popular site such as the Charouveau Gap in the Catalina Mountains was said to be conservatively estimated to bring \$500,000 a year. The Southeastern section of the state as earlier documented by Holcomb (1986) remains a key area of concern as the most restricted in the state (AZGF 2002). Hot points of restricted access included the Dos Cabezas Mountains. Access at the time of the meeting in 2002, was said to be closed on the north and south side of the mountains. More than 40,000 acres of State and BLM lands were found inaccessible to the public.

Although access problems persist, the programs have met with success. Thirty-two percent of all state and federal lands, other than military reservations and wildlife preserves, are playing a part in these programs which have been recently aired on statewide television and met with other high-profile publicity. At present, The Landowners Relations Program is also working on the first acquisition project specifically for access. Funding from the Arizona State Parks Department is being used to purchase a 30-acre parcel in order to establish a permanent right-of-way to Peck Canyon. And, another first indicating the positive momentum of the program's efforts is the completion of the Department's first conservation easement. This project, at the O Bar O Ranch will benefit the landowner, public, and at-risk species of wildlife (Arizona Game and Fish Commission 2005). OHVs have been for the Arizona Game and Fish Department, like for the BLM and Forest Service, a heightened issue in recent years. Recently, complaints from landowners have prompted a discussion of enforcement strategies and the need for more officers, suggesting that the programs have yet a lot to accomplish. A group of more than 10 landowners have just this spring closed their gates and filed suit against the Arizona Game and Fish Department for damages inflicted by OHV users and wildcat shooting. At present, the Arizona Game and Fish Department is addressing the idea of setting up a voluntary enforcement team. But landowners have expressed conviction in the only solution being the designation of areas sacrificed to OHV use. A Legislative Workgroup of the Arizona Game and Fish Department is currently working to create uniform laws to allow for better law enforcement. The plan may address the suggestion of sacrifice areas by using monies collected from citations for their development (Arizona Game and Fish Commission 2005).

Another example of an incentive program with private landowners is the Habitat Partnership Program of Colorado's Division of Wildlife (CDOW). Colorado started its Game Damage Program back in 1931 with payments for wildlife damage on private lands including crop, rangeland forage and fence conflicts between big game animals and livestock on private and public lands. The program is intended to foster relationships among landowners, land managers, sportsmen, the public and the Division of Wildlife to help resolve those conflicts. Although many states have no legal responsibility to compensate for damage by wildlife, the CDOW views the payment of damages as a cost of managing wildlife. In 1995, the CDOW hoped to please landowners by updating the Program through a simplification of the claim process. And, linked to the claim process was an on the ground response for preventing the recurrence of future big game damage on the property in question. These updates have helped the program to be one of the more successful wildlife damage compensation programs in the United States (Colorado Division of Wildlife 2000).

In terms of cost, the Game Damage Program spends about \$1.5 million each year: approximately \$450,000 for the purchase of preventative materials, and up to \$685,000 for the payment of validated claims; with the remainder for operating and manpower costs.

Other detailed changes are underway to better, for example, the investigative process for bear and mountain lion damages to livestock; to address increases in non-agricultural payments to landowners (campers, tents, hot tubs, coolers, houses, vehicles, sheds, garages, etc.

(Colorado Division of Wildlife 2000). The flexible approach of the program has been important, especially as the state's population continues to grow and development encroaches upon and diminishes more critical wildlife habitat. The CDOW expects damage

management will be a major challenge for the next decade. The Program hopes to promote both a higher tolerance level for, and higher populations of, big game animals (Colorado Division of Wildlife 2000).

As of 2000, the ranching for wildlife program has opened up over a million acres of prime private wildlife habitat to both paid hunting and to limited public hunting. The number of licenses available on these ranches is set through negotiations between the landowner and the CDOW. Hunters obtaining a license to hunt on these ranches are given access to private property that would otherwise be closed to public hunting. The agreements impose additional conditions on the public hunters so that the ranchers are not as concerned with security and liability.

Have landowner incentive programs clearly demonstrated their success in furthering recreational access? A group of approximately ten ranchers are at present threatening to sue the AGFD and close off access due to damages caused by wildlife and/or sportsmen. Several of the ranches on the list are however continuing to work with the Department (Arizona Game and Fish Commission, 2005). Currently judged successful, The Wyoming Game and Fish Department's incentive program pays landowners small sums of money in exchange for opening their land to the public. The landowner also gets the benefit of law enforcement. Will these fees escalate to the point of unfeasibility? In Texas, the results are unclear. Texas Tech's study shows that 66 percent of large landowners in Texas are interested in Parks & Wildlife programs that assist landowners. Yet a nearly equal 64 percent 'are not interested in opening up their land to provide more outdoor recreational opportunities' (Tyer 2002).

Thirty-three percent of private landowners are hoping to generate revenue from hunting rather than other outdoor recreation. Without public supervision and subject to no real agency oversight since the programs are voluntary, the program is difficult to assess (Tyer 2002).

### *Issues of liability*

Landowner responsibility and liability issues have often been cited as limiting factors for granting access and state and federal agencies have working to contain landowner vulnerability to lawsuits. Recreational user statutes have been adopted in each state to limit the liability for a landowner who permits a person to enter and use the land for recreational purposes without charge. In this instance, a landowner has no duty to keep the premises safe or to warn of hazardous conditions (BLM 1998, Handbook). Further, many statutes specify that recreational use of the land does not bring any greater legal status than would be granted a trespasser. These statutes are designed to encourage landowners to open up their land for public recreational access. However, the statutes do not give a landowner complete immunity, as this would violate public policy. That is, they do not limit a landowner's liability for a willful or malicious failure to guard or warn against a hazardous condition, use, structure or activity (BLM 1998, Handbook). Also as noted earlier, the laws are written to protect a landowner for free access. If a fee is charged, the rules change. For landowners, including agencies, if a fee is charged, even a related fee such as for parking, the scenario is completely different in terms of any protection under the recreational user statute (BLM 1998, Handbook and pers. commun. several land management personnel). The risk of liability related to recreation for most land management agencies is relatively insignificant (BLM 1998, Handbook and pers. commun. several land management personnel). However,

the degree of protection afforded by the Recreational User Statuettes depends upon the specific language of the statuette and the interpretation of that language which can vary court to court and state to state (BLM 1998, Handbook). And, the fear of liability on the part of the landowner persists (Keystone Center 1989). There is a *perceived* increase in exposure to liability when a landowner provides an access corridor across his or her property whether or not a true increase in liability exists or not. There is, along with the perceived greater risk, a “sense” on the part of the landowner that liability insurance will be more expensive. The problem may be worsened by out-of-court settlements which may push up insurance rates even without litigation. The Keystone group decided that a fee was necessary to cover the landowner’s administrative expenses related to the provision of access and attendant use (Keystone Center 1989). Alternatively, federal and state agencies could write laws or regulations for ways in which the public agencies themselves, rather than the landowner granting access, assumes additional liability and related litigation costs. States might contribute to an insurance pool that could be available to landowners for liability expenses. The user groups might give the landowner liability insurance.

### ***Ranching and recreational land use***

#### *Significance of ranchers as a private landowners for access to public lands*

In the West the private landowners of most significance with respect to access are the ranchers. The legacy of the Homestead Act has left private ranching lands held in high recreational demand due to the scenic positioning at valley bottoms along the rivers and streams and valuable wildlife habitat. The Forest Homestead Act gave access to smaller

operators.: forest homesteads, unlike the traditional homesteads could be irregular in form as long as they fell within a mile's length (Hadley and Sheridan 1995,113). This enabled ranchers to claim lands along the valley bottom rather than grids of township and range (Wilson 1987). In the Southwest, ranch lands are often situated above the deserts but not too high up in the mountains, strategically placed for productivity and recreational appeal. "If the public land is the body of the West, its circulation system is the private land" (Christensen 2004). If one were to survey the overall picture of ownership one might look at it this way: the interior west is one million square miles. Public lands amounting to about half, or 470,000 square miles are mostly grazed. The cattle reside on privately held ranchlands to the tune of 170,000 square miles or about 100 million acres in the west. Most of this privately held land is adjacent to the public lands or state lands that ranchers use through federal or state grazing permits (Christensen 2004).

#### *Past roles of ranching in the history of the Western landscape*

The extraordinary history of the modern West as compared with frontier lands elsewhere is the unique "essential simplicity" of its settlement pattern (Wilkinson 1992, 17). The *laissez-faire* attitude of federal and state government gave the Americans "the opportunity for proving its capitalistic economic ingenuity to the rest of the world" (Wilkinson 1992, 18). Before the rush of modern settlement, the West of course had already been managed. James H. Brown, a biologist at the University of New Mexico and past president of the Ecological Society of America writes, "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"(SDCP 1999). Anthropogenic fires

set by American Indians with their suppression of shrubs and trees and the promotion of perennial grasses were probably the most significant factor in shaping the grasslands of the Southwest until the late 19<sup>th</sup> Century (Hadley and Sheridan 1995, 257). An official entry for southern Arizona into the cattle industry may be 1696 with the cattle Francisco Eusebio Kino drove into the Santa Cruz Valley and distributed to Indian rancherías (Clemensen 1987, 59).

The open lands of the public domain stimulated territorial conflict. As a way of staking out territory, ranchers crowded the land with stock to preclude others from coming in to browse on any remaining grass. This practice led to the overstocking of the range in the next century (Southeastern Arizona NRCD and Coronado Resource Conservation and Development Area, Inc. 2004, 7). The real competitors, Wilkinson, writer of *Crossing the next meridian: land, water, and the future of the West*, explains were neither the Indians, nor the railroads but the sheepherders and the “yeoman farmers” or homesteaders that had benefited from the intentions of Jefferson and the General Homestead Act which sought to enable settlement of the West by the small family farmer (1992, 85). These settlers were seeking the same lands as the ranchers since all federal land, with the exception of military bases, Indian lands or eventually, lands that were part of the National Forest or National Park system, were eligible for 160-acre homesteading (Wilkinson 1992, 85). But ranchers had already been using these federal lands without any formal permission from the government. Since their demand for water had brought the heart of most ranches to the valley lands, cattle and sheep were set loose to graze on the vast acres of higher land above to the tune of tens of thousands of acres. During this primary settlement, the rangelands in the public domain were

unregulated and without fees. In this way, a small number of ranchers come to dominate the land and water use of entire watersheds (Wilkinson 1992, 83).

During the 100 years following the Civil War, the second great wave of immigration after the gold miners were the cattlemen. U.S. rangelands were almost exclusively used for livestock grazing. In Arizona, not long after the truce of 1872 with the Apaches, pamphlets and books wrote of the veritable stock grower's paradise for the quality of the grass of the Santa Cruz Valley and adjacent tableland. While only a few thousand grazed there at the time, one author felt that there was room for "millions of cattle in the state" (Safford 1874). These publications helped to translate the fame of the area's grassland into a burgeoning cattle industry (Safford 1874).

#### *Regulation of the cattle industry to protect multiuse*

As early as 1877, President Rutherford Hayes had asked that Congress work out a system for 'leasehold tenure' for the arid lands west of the hundredth meridian to legalize 'the business of cattle raising' on public lands (Hadley and Sheridan 1995, 103). The report drawn up by the famous explorer John Wesley Powell urged for the regulation of grazing by creating districts with stock raisers therein having exclusive grazing rights. Yet although cattlemen were aware of the pitfalls of unrestricted access, small ranchers through fear of being supplanted by larger outfits continued to oppose regulations or government involvement (Hadley and Sheridan 1995, 103). First efforts toward regulation were drawn for the National Forests. Ranchers already using Forest Service lands were required to have both

grazing permits and fees with a cap on stocking rates. This program had no effect on other public lands until the Taylor Grazing Act of 1934 (Southeastern Arizona NRCD and Coronado Resource Conservation and Development Area, Inc. 2004).

The extreme conditions of the Dust Bowl, brought soil erosion caused by farmers and cattlemen to the national stage. The Taylor Grazing Act organized 80 million acres of land into grazing districts. But a very tight budget necessitated the use of grazing fees to pay the salaries of BLM range employees, giving ranchers a proprietary relationship with the very institution that was supposed to be regulating them (Mayro 1999, 51). But with subsequent changes in leadership came a new mission for multiple use, one that replaced the previous belief in managing for maximizing the highest value. For Western ranchers, grazing fees began to grow as a necessary evil in exchange for the guarantee of priority use (Mayro 1999, 50). Today the debate over grazing fees continues with those who claim that fees should be minimal, just sufficient to cover the land management's costs for the leasing program. Others claim that fees should be based on the true value of the land in order to maximize monies for the public and limit overgrazing. Wilkinson believes that past philosophies that supported practices such as the rancher's code, a so-called "Lord of Yesterday" must be realigned for a greater symmetry with current values for Western resources (1992, 22).

A discussion of how the West has allocated its common resources must necessarily include a discussion of *subsidies*. A subsidy may be thought of as a stroke of government action that provides capital, commodities, or services below their market worth (Wilkinson 1992, 19). This is normally an acceptable approach in case of a market's inability to meet a need, as in

the lack of necessary monies for mass transit or where “a diffuse constituency is not organized, in market terms, to provide benefits;” such as government funding for the arts. There are of course other instances where subsidies may be appropriate as to small ranchers. But what is not appropriate are large scale subsidies given with little thought, for Wilkinson the “crux of subsidy policy is continuous and vigilant reexamination” (1992, 19). Our government has done more than allow open access to resources, it has encouraged an exploitation by individuals or corporations free of charge, or for a minimal fee, to the tune of a more than 1 *billion* acre give away (Wilkinson 1992, 18).

Large scale ranching has thus in some respects long benefited from a disproportionate share of the Western resources; granting public access may be a return in kind for subsidies and other opportunities ranchers have seized since their first exploitation of western lands almost 400 years ago. Today the rancher might be allied with his or her new neighbor who has in the case of a part-time or hobby rancher largely appeared for reasons such as recreational opportunities (Brunson and Wallace 2002). The rancher of the “Old West” may have to accept the pricing disruption new neighbors bring by selling their beef at lower prices than the established ranchers can afford. But the new ranchers could actually serve the full—time ranchers thru the support of shared interests by bringing in financial and political aid (Brunson and Wallace 2002). These smaller ranches can buffer ranchlands by insulating them from more intensive developments (Brunson and Wallace 2002). The life experience of Richard Knight on the Colorado Front Range illustrates how collaboration with full-time ranchers may work from the neighbor’s perspective. Knight and his family work with neighbors and friends, those on ranches and those on ranchettes to “chart a common ground”.

They meet to dance, eat and pursue inclusive neighborly interests. They work together in a weed cooperative, devising education programs for their children that instill a sense of place, and put up fences in overgrazed riparian areas. They together create a place that is communitarian in spirit through collaboration and cooperation. As Knight muses, “we understand that we belong to the land far more than we will ever own it” (2002).

*Perspectives and case studies on ranching and recreational access*

Ranchers may best be viewed as approachable by the public in terms of problem solving done within the context of personal relationships and connections because these are values which have traditionally always been a part of ranching (Starrs 2002). Ranchers are used to arriving at solutions with cooperative management agreements such as collaborative fencing and riding (Starrs 2002). In terms of current ranching practice, permits for public lands are usually issued only on whole spreads in order to maintain accountability (Southeastern Arizona NRCD and Coronado Resource Conservation and Development Area, Inc. 2004, 8). And since these public lands are usually open to the public for hunting or other recreation without special fees or permits given on the part of the landowner (Southeastern Arizona NRCD and Coronado Resource Conservation and Development Area, Inc. 2004, 8) granting access may be a necessary part of ranching. However there does exist precedent for limiting access by private landowners to publicly held lands.

The National Natural Landmarks designation, administered by the National Park Service, recognizes and encourages the protection of nationally significant natural areas in the United States. The National Natural Landmark designation does not require that public access be

granted. Some Landmarks are located on federal and state property where permission to visit is often unnecessary, while other are on private property where owners openly allow access to public visitation. Other landowners require advance permission, while yet other landowners do not allow any access to the public and prosecute trespassers. The reasons for this viewpoint vary: potential property damage or liability, fragile or dangerous resources, and desire for no publicity or solitude (National Landmark FAQs 2004). Other historically valuable sites located on public lands without guaranteed access are battlefields.

Most of the battlefield land in the Shendoah Valley is privately owned (USDI/NPS 1992). Only two battlefields offer public access with interpretive facilities for visitors. Limited public access to other sites is possible through the auspices of preservation groups who have purchased battlefield lands. These groups allow public access to their properties, but entry points are neither marked nor advertised limiting visitation of these properties to the organizations' members or to serious students of the Civil War who come as part of a guided tour (USDI/NPS 1992). Access to private property at these sites is often discouraged under current arrangements. Local landowners have repeatedly expressed anger over trespassers in search of battle relics who have left a field full of unfilled holes or a gate open for livestock to escape.

Often access is resolved through negotiation between a responsible agent and private landowners. Like other private landowners, battlefield landowners wish to maintain their privacy and security. Many, however, would allow limited or scheduled access to their property if concerns over liability and related matters could be resolved. In some cases, right-

of-way easements are purchased to allow visitors to follow a hiking trail across portions of a battlefield or to reach a vantage point from where the field could be studied (USDI/NPS 1992).

The Trails for Vermont program offers precedents for granting this type of access for hiking and nature trails. Private landowners in Virginia also seem satisfied with state law there which waives liability for persons who allow fox hunters on their property. These and other models could be studied for their applicability to ranching lands.

In terms of the ranching landowner there are a ready cache of justifiable reasons for limiting recreational access.

*Rancher operations that may be affected by recreational access*

From the recreationists' perspective, ranching can interfere with their enjoyment of the lands in a number of ways. Reducing stocking levels of cattle, fencing riparian areas and rotating the pasture grazing season might visually improve the overall appearance of riparian areas and uplands. Reduction of grazing might improve wildlife habitat, resulting in additional hunting opportunities and wildlife viewing. Spring wildflower displays might be enhanced. Increasing the number of fences in the allotment would add additional obstacles to people visiting the area. Numerous fences already divide the grazing pastures, and additional fences would be a hindrance to travel, disrupt scenic vistas, and further interfere with the feel of the open range. They would also increase the amount of maintenance needed in this area.

Removal of barb wire from abandoned fences would reduce the hazards associated with crossing these areas (USDI/BLM 1999).

A countervailing perspective puts the livelihood of the rancher at risk. Increased knowledge of rangeland management has led many ranchers to erect pasture cross-fences and water devices for pasture rotation and overall rangeland health (Mayro and McGibbon 1999, 65). These type of improvements are naturally enough expensive and not always in the best financial interests of the rancher. Also, the likelihood of an improvement crossing leased lands is high. Any work on leased lands requires costly permits and project approval by whichever land management agency owns the range (Mayro and McGibbon 1999, 66). If successful, meetings must be attended and resolved concerning any possible archaeological sites, and endangered, threatened, or valuable flora and fauna (Mayro and McGibbon 1999, 66). Each land agency has different regulations concerning how installations are made and once the improvement is made it is considered a rancher's private property and thus taxable even if it rests on leased land. Moreover, it is up to the rancher to maintain any improvement on leased lands he makes. With this type of costly investment and proprietary interest, it is not surprising that ranchers voice concern over possible damage to these improvements by recreationists. Limited seasonal access may be appropriate for the rancher to dictate since certain parts of the year are more labor intensive for the rancher such as busy round-up periods.

Proximity to human settlements and activity can be problematic in terms of additional labor for the cattleman. Gates left open/closed into pastures that have been set aside to regenerate as part of either short duration grazing, short use in conjunction with longer periods of non-

use, management or rest rotation grazing are obviously problematic as is closing off access to water for cattle and wildlife.

Ranchers are often operating on a thin margin with uncertainties that influence their reluctance to take on more obligations such as recreational access. Ranchers are busy: steep terrain and the number of washes on their lands contribute to fence washouts. The nature of water: distribution and type of water as wells, or stock ponds, natural water, etc as well as number of water sources affect the amount of labor necessary to supply herds with daily water. Pipelines, tractors, trucks and trails all need to be maintained while most ranchers carry out routine animal health care for their animals (Mayro and McGibbon 1999, 62).

Forest Service range conservationist Wayne Butts, Harlowton, MT, notes the tension between ranchers and recreational users in the forest centers on the use and condition of the creek bottoms (Peck 2004). Both parties, he says, use the riparian areas of the Lewis and Clark Forest very heavily. To alleviate this conflict, on the steep Comb Butte Allotment in the Lewis and Clark National Forest of central Montana, the Forest Service has spent thousands of dollars developing water systems to improve cattle distribution; and practiced locating salt on the higher ground to keep cattle away from the creek bottom. But, these methods were insufficient to better distribution on the allotments with the result of reduced livestock and shorter grazing duration. Until the use of Crystalyx® moisture blocks, one of a few available types of blocks, cattle were allowed another week of grazing because of better cattle distribution on the allotment.. Range conservationist Butts, thinks the idea can be used effectively in an overall management plan. He stresses that the system is just a tool, “not a

silver bullet” (Peck 2004). “With the use of this supplement, the permittees bought themselves 10-20 days extra grazing on the permit (in 2003) when used ... in combination with herding, they really do a good job in getting cattle off the creek bottoms.” (Peck 2004).

Derek Bailey, Havre, MT, a Montana State University range scientist, has been tracking animal movement and grazing behavior using collars fitted with global positioning system (GPS) technology. He's found low-moisture blocks are a stronger attractant than water to cattle during fall and winter grazing. Cows spent more time within 200-600 yards of low-moisture blocks than within similar distances to water. These blocks may then be a successful lure for cattle to graze rugged upland terrain and avoid conflicts with other users below. His analysis shows that in one case the practice yielded forage utilization rates of 25% near the block site, and 21% at  $\frac{1}{3}$  to  $\frac{1}{2}$  mile away from the site. This is compared to nearly zero utilization without the combination of blocks and herding (Peck 2004).

#### *More balanced perspectives toward ranchers*

Perceived conflicts between grazing and risk to threatened and endangered species, overall biodiversity and water quality have “led some environmental organizations to employ lawsuits and other mechanisms to limit livestock numbers on federal land” (Kenworthy 1998). These proposals for the end of grazing on large tracts of semiarid and arid public western rangelands work against agency and other plans to increase forage for livestock (Donahue 1999, 352). Van Tassell et al. (1999) predict that the Rocky Mountain and Pacific Coast (PC) Assessment Regions of the FS are more likely to depress grazing than other regions. Steps to limit livestock grazing on public lands persist despite evidence by Vavra et

al. (1994) and Holechek et al. (1999) that most rangeland landscapes and plant communities can tolerate some grazing. Holechek et al found that a stocking rate that consumes only 30–35 percent of available forage (with lower numbers during drought) will maximize profits for the rancher while sustaining desert Southwest grazing lands. Other grazing experts have stated that managed grazing although ecologically sustainable, may not be sustainable from an economic or social viewpoint (Mitchell et al.1999b).

*Arbitrations for land use by the courts and electoral processes*

“What is legally right is not necessarily what is ecologically right” expresses the voice of Leonard and Elmore ( 2002) and many other environmental writers. They find it “doubtful that [the courts] will bring an efficient resolution to conflicts over resources since most judges and lawyers are not well informed about issues of ecology: they are trained to look at the facts in light of the letter of the law, not on the basis of what is best for the environment (Leonard and Elmore 2002). And, once in court nothing changes until the verdict is reached, a process which can take several years. Further, the costs of a court battle can push a rancher, often on a thin profit margin, to the ultimate decision of selling out for subdivisions (Leonard and Elmore 2002). Finally, if he wins, there is no incentive left to improve the grazing situation, if there is one (Leonard and Elmore 2002). In *Our common lands*, edited by David Simon, Simon explores how the court system might appropriately be considered in terms of deciding land use: ‘Litigation can cajole, command, or compel. It can force analysis where analysis has been cursory. Litigation sometimes resolves an issue when negotiation fails, but frequently it does not; the courts are simply not suited to make complex land choice uses.’ (Simon 1998).

### *Issues of enforcement on private property*

The enforcement of private property may be expensive, particularly so if the local people do not view property rights as legitimate (Berkes 1996). Also, sustainable use is feasible under private property regimes but may not be economically rational for resources which regenerate very slowly, such as Berkes' example of the harvesting of whales. Desert landscapes may be another example. State property resource management regimes may be vulnerable to the interests of powerful user-groups (Berkes 1996) as perhaps true of BLM and Forest Service acquiescence to recreational demands of the highly popular OHVs. Another potential difficulty of state governance of resources is a proliferation of rules such as licenses, quotas, allocations, seasons, and trip regulations. A danger of adopting too many regulations is widespread noncompliance (Berkes 1996).

If lands shared by grazing and recreational use are conceived differently from common notions of private property, in terms of a voluntary communal management, for instance, greater care of the public resource by recreationists and ranchers alike might happen. Evidence seems to lead to the general idea that if a group of people has some sort of territorial or jurisdictional claim to a valuable resource, this connection will motivate them to better management (McCay 1996). Institutions have been seen to fail to the extent which they are slow to respond to clues or signals from the resource which is generally true of large, monolithic, old and 'brittle' institutions (Holling 1993). It is the institutions that are nearer to the resource, flexible, diverse and receptive to feedbacks and clues from the environment that are more likely to work (Berkes 1996). Where a diversity of local systems have been replaced by a monolithic scientific management view the outcome in most cases has not been

a sustainable one (Berkes 1996). In fact, in Berkes' estimation, there are many examples of resource depletion or degradation on the heels of the replacement of locally adapted, subtle and complex common-property systems by government management. This type of thinking suggests, that local interactive management for recreational access might best be accomplished directly between the rancher and the recreationists, without agency involvement.

#### *Tools for conflict resolution*

In determining whose rights should take priority with respect to competing interests, a principle called the *principle of non penetration* may be applied. The principle was drawn as a tool for communities to settle the dispute between smokers and non-smokers. In essence, one person's liberty should do nothing to penetrate the space of another (Lovett 1998, 66). The arbiter might determine if the activity should be stopped. That is the activity of the subgroup that is penetrating the space of the other should be ended unless that subgroup is judged to be serving a larger or more important common good. In applying the principle of non penetration ecological and social carrying capacities of the area in question must be assessed. If one allows the penetrating activity to continue then some compensation is required.

#### *Compensation approaches*

Debate over "regulatory takings" actions which diminish the value of the property are still very much in progress in this country (Lovett 1998, 62). At one side are those who believe

compensation is required only when a property is physically taken away, e.g. used to build a public sewer. A policy that has a harmful side-effect is deemed a “mere” regulation. At the other extreme are those that argue any lessening of value caused to a property because of a side effect constitutes “taking.” In this view, progressive taxation is regarded as a taking. A moderate approach holds that compensation is appropriate when the costs of not compensating or “demoralizations costs” such as for example the frustrations created by not compensating, are higher than the costs of “settling” or the compensation itself. Appropriate compensation for the landowner seems to make sense in many cases where resources are valued. In Wales, the Nature Conservancy has arrangements with farmers to both help support farming and ensure hikers access to trails crossing farmlands (Huntsinger 2002). The aforementioned conservation easements to minimize estates taxes are again appropriate to mention, although some ranchers, fearful of losing their independence, refuse to consider these if the easements are publicly funded (Huntsinger 2002). Western writer on ranching interests, Weeks (2002) believes that Estate Law Reform is the single most important policy measure to preserve agriculture and the western landscape by lessening the onus of the intergenerational transfer of agricultural lands. Weeks proposes that keeping the ranchers’ lands in agricultural use should bring the ranchers a concessionary property tax rate (Weeks 2002). The arrangement would be conditional with a penalty of at least five years of back taxes at the development rate if there is development (Weeks 2002) with maybe a guarantee by the taxing authority of a low rate for a long term if there is a commitment to agriculture against subdivision (Weeks 2002). Further Weeks proposes exempting from estate taxes any land permanently committed to agriculture or conservation use (Weeks 2002). And, Weeks favors a recent proposal by a Senator for replacing farm supports with a system of

stewardship payments or lowering of grazing fees (Weeks 2002). Ranchers in Arizona and forest landowners in Wisconsin advocate for the direct pocketing by the landowner of fees for hunting licenses similar to a program like Montana's where part of the license fees are returned to landowners who give access to hunters, fishermen, etc.

### *Looking at shared values*

An alternative to monetary compensation for framing land use is a technique for focusing on shared values in resolving subgroup conflicts. With this technique subgroups explore finding a higher-level value on which both sides can agree, such as the value for keeping lands protected for open space. This may be a shared value that can form a starting point for discussion among subgroup users. If it is commonly believed that precedence should be given to stopping development, for instance, then preservation of the land as a working landscape could become an agreed upon beginning from which to step back from in addressing various differences.

Another goal for land managers might be the potential savings in management costs private lands can provide. For example, when conserving resources and providing for multiple use, such as recreational access to rivers, private lands may be part of their management plan. Water quality or wildlife may be less expensive to protect on private lands than to conserve on public lands. For example, it might be more effective to preserve fish by paying a rancher to keep cows out of a valley stream bottom than to spend money on improving fish habitat in upland first and second order streams on public land (Loomis, 2004, 538).

*Realigning conflicting perspectives on land use*

A recent letter of Wednesday, September 22, 2004 by Jim Unmacht, President of the Arizona Antelope Foundation addressed road closures at Skeleton Canyon Road, reiterating a commonly held belief that road closures are becoming commonplace across Arizona. Wrote Unmacht, “ It's time for all outdoor enthusiasts to get together and get the attention of not only the local folks, but also our state legislators, and congressional delegation. The actions in Skeleton Canyon are very similar to other closures taking place across our state. These closures have effectively shut the taxpaying public out of our National Forests, State Trust land, and BLM land. While we respect the private property rights of the ranchers and landowners, maybe it's time to require a public land lessee to keep his/her gates open to public access as a condition of the lease! Candidly, anything less is a loss to the public, and for all practical purposes, seems to be a conversion of public land for private use.” The environmental perspective remains concerned about specific wildlife issues. The locally held Cameron allotment, for example, is seen as extremely valuable for the Sonoran pronghorn recovery and grazing and its need for fencing of the livestock there very much viewed as a potential threat to the species by the U.S. Fish and Wildlife (USFWS 2002).

And, the ranchers' view in turn of “radical” environmentalists, may be described as meddling at the very least. This is indicated by the much applauded finding January of 2005 this spring against the Center for Biological Diversity, an environmental activist corporation. Six hundred thousand dollars was awarded in actual and punitive damages to Arizona rancher Jim Chilton and the Chilton Ranch and Cattle Company “false, unfair, libelous and defamatory statements” against Jim Chilton, a fifth generation Arizona rancher. According

to Chilton, lawsuits such as the suit filed against his ranch have stopped school construction, terminated thousands of lumber production jobs, put Arizona and New Mexico communities into economic distress, and driven many western ranchers to the verge of bankruptcy.

Chilton said the suit was filed to challenge the way the Center for Biological Diversity consistently does business. ““They routinely use endangered species to raise money and fund their attacks on the cowboy and the western culture.” In the news release published by his attorney (and pers. Commun.) Chilton was quoted as planning to donate award money to the Arizona Cattle Growers Association to “help spread the word that modern ranching conserves habitat for wildlife, increases biodiversity, and reduces threats of wildfire” (News release, March 2, 2005). According to Lynn Huntsinger, at the University of California-Berkeley who has studied the changes in California ranching for the past 15 years, while ranchers are committed to core environmental values like “enjoying natural beauty and feeling close to the earth” about 88 percent of those Huntsinger surveyed in California, consider environmentalism a ‘threat to ranching’. Moreover more than two-thirds claimed ‘society’s hostility to ranching’ cause for abandoning their business (Huntsinger 2002).

And the rancher’s perspective of government agencies may be described as uneven at best. Huntsinger sees the avoidance of overregulation as a priority for negotiating with ranchers since it violates core-values of the ranching community “Ranchers will tell you that one reason they chose ranching is because they can make their own decisions, and they are not interested in deferring that power to the government.” (2002). This is supported by the fact that more than 80 percent of the ranchers in a three-county survey agreed that ‘overregulation is an important reason to quit ranching.’ (Huntsinger 2002). Huntsinger’s observations

suggest that some of the conflicts in public-range states come from cross-cultural misunderstandings (2002). She describes that while corporate employees working outside the U.S. are educated in cultural differences, land managers such as Forest Service employees may have an equally sharp divide “educationally, politically, and in life experience.” (Huntsinger 2002).

As we have seen, successful collaboration that bridges group differences over ranching and recreational concerns is possible. The Sonoita Valley Partnership reflects the voluntary partnering of agencies, groups and individual people who are alike in wanting to secure community-wide planning that address local and national issues in the Sonoita Valley. A land-use plan for Washoe County and Carson City, Nevada, illustrates initiative on the part of the BLM for venturing something new. BLM and Carson City together launched public hearings and planning for a combined land use plan to address land use decisions, acquisitions and for recreation and opens space on public and private lands. An historic 700-acre ranch, Silver Saddle Ranch was targeted for a joint acquisition to preclude a development plan that the city worried would destroy open space. The city agreed to buy the water rights and BLM to buy the property. The ranch was set to be jointly managed for public recreational access, as an historic cultural site, environmental education. The city’s water rights were planned to be used to keep a haying operation on the ranch and riparian habitat. In other plans for preserving open space, a departure from the existing Resource Management Plan (RMP) around Reno has resulted in agreement to curtail the sell off of BLM lands and refocus those lands for preserving open space. This will be done with the help of the Washoe County Sheriff’s Department for greater law enforcement effort and the

county's Park's and Recreation department's assistance in supervising and managing recreational use (USDI/BLM/SI). After a partnership training course by the Elko and Battle Mountain BLM Field office, the newly minted Northeastern Nevada Stewardship Group (NNSG) of 100 plus landowners, ranchers, university professors, agencies and others rallied round pressing issues such as the decline of local sage grouse (USDI/BLM/SI). The group developed training for the community on the sage grouse and NEPA process and worked to write a joint habitat management plan for the sage grouse.

### *Land use precepts for the future*

As Wilkinson writes, the West has historically been and continues to be settled on a pattern of resource exploitation (1992) Fortunately, travel and tourism can bring wealth in a usually much more sustainable way than the more dramatically consumptive uses of natural resources. The conflicting approaches of the Old West and the New West might be guided to a new balance expressed by an adherence to the following precepts: 1. Sustainable development allows for the preservation of resources for future generations. 2. Roughly balanced with the traditional extractive use of resources should be more recent ideas of nonconsumptive resources. 3. Wildlife, wilderness, [open space] and recreation are a valuable resources. 4. Resource development should be interpreted for the good of healthy, stable and lasting communities. 5. Federal and state governments are entitled to a fair share of profit from resource use. 6. Government subsidies should be handed out only sparingly to private industry under compelling and well-documented circumstances. (Wilkinson 1992, 17).

Arizona is but one of the Western states facing this crisis of change. In Texas, conservation means preserving wildlife, habitat, and open space; access means providing Texans with a place to enjoy those things. They are not the same, and they are increasingly becoming mutually exclusive concerns under the direction of Texas Parks and Wildlife (Tyer 2002). The conflicts for land use in Texas are like elsewhere in the West a result of fragmentation of large habitats—as more family ranches and farmlands are subdivided for development. Writer Brad Tyer of Texas believes that this “is the key conservation issue of the day.” In brief, he forecasts that given Texas projected growth for 14 million more in the next 30 years, there is simply not enough public land to satisfy the growing demand for recreational access.. This drama will play out in public lands.” “The greatest threat yet to wildlife in Texas is the continued breakup of family lands,” wrote executive director Andy Sansom in his farewell editorial in the December 2001 issue of *Texas Parks & Wildlife* magazine. “We must continue the struggle to keep rural landowners on their properties and to strengthen their capacity as good stewards” (Tyer 2002). His successor concurs: Bob Cook, believes that it is critical for the Department of Texas Parks and Wildlife to work with private landowners, “Let’s face it, if you really want to have an impact on fish and wildlife in Texas, you’re going to have to do it on private land. We could do everything on public land perfectly, absolutely totally perfectly, and it’s still not enough” (Tyer 2002). It remains in everyone’s interest to safeguard the working rangelands of the West. The rangelands and the rancher who manages them are an integral partner for both the modern western dweller and the traveler from afar who comes to reestablish his or her chthonic need for a union with the landscape.

## ***Conclusion of historical review***

This review describes, in part, how we in the West arrived at this present juncture of limited access to public and state lands and continues to explore issues of access in the West relevant to Arizona's lands today. It is in the West where federal land ownership is high and public land policies have built a complexity of ownership patterns. Many conflicts for access arise from the multiple-use mandates of Forest Service and BLM lands. The changing character of recreationists from hunters and anglers to hikers and birders reduces the availability of funds and support for access. Further conflicts between the "Old West" and the "New West" may frustrate land use planning. These two faces of the Western community may not "be on the same page" for resource and recreation decisions, adding a complexity of philosophical differences to ones of historical land use, ownership and growth patterns.

Barriers to access may result from interwoven multi-jurisdictional ownership or in other cases federal lands are insulated by surrounding private lands. Development and other interests increasingly compete for open space with a high demand for recreational opportunities commensurate with explosive growth in the population and the tourism industry: the population of the West has escalated in the past century from 4.3 to over 63 million people. Urban sprawl and the desire for the exurban lifestyle have effected dramatic changes on the recreational landscape: This counter-urbanization is forging a new development pattern termed *exurbia*. Aside from the lands devoted to this development and the services demanded by it, the prime demand for development is for the land surrounding our most attractive open spaces and wilderness refuges. This threatens not only the integrity of the ecosystems these lands are intended to protect, but changes historically open access to

these lands into a debatable proposition. A corollary shift in land use from agriculture to development and other uses (total lands used for farming and ranching peaked as far back as 1964) heightens the demand for recreational use on private leased or deeded ranchlands. Parcelization through development is one example of the generalized trend for all of our lands toward increased fragmentation making it more and more difficult to plan routes of contiguous access to public and state lands. In some instances, the only access to federal and state lands is via a right-of-way through private land. Public land users may be frustrated when they cannot find access to federal lands and landowners may be equally or more so when they find trespassing, and vandalism on their property.

Highlights of conflicts for recreational access to public and state lands include largely incompatible users such as equestrians and OHV users. Also the needs of the working rancher should be considered when access routes are planned. Weighed against recreational desires of hikers and others who may leave gates open and otherwise interfere with the day to day operations of the ranch should be respect for a livelihood that may need to rotate cattle or close off wet areas during a monsoons season to protect the landscape from vehicular impacts. Part of the problem is perhaps an unrealistic expectation for access. Educative efforts toward a better understanding of the local ecosystems in Southeastern Arizona and rural ranching might unite the recreationist with the ranching landowner.

Ranching is increasingly seen by Western governments as a way to the means to protect open space by virtue of setting containment boundaries for urban sprawl. Many local and state governments are now spending significant resources to retain farmland on the urban edge.

But a further goal is to determine not just how farmers can continue, but how they can gain a reasonable level of income.

The historical review focuses on ranching as the most significant private landowner of Arizona lands. It is the leased and deeded lands of the rancher that afford the greatest opportunity for recreation not only in and of themselves but also as a means of reaching public and state lands beyond. Ranching has historically been integral to the business and cultural traditions of the west. Respect for this coevolution could offer further solutions for bettering relations between the rancher and the outside recreationist. Although oft called “rancher’s code” of the West exerted unbalanced influence on resource decisions of the past ranchers today may be said to be perched on the other end of the seesaw. For perhaps outrageously but truly enough, as a western newsmen writes, the “Effects of globalization are making any pretty place vulnerable to national visitation and exploitation”. To counter these dangers many see the need for the government to step in and support responsible land use. Governmental support could insulate local communities from outside economic forces beyond their capability to control.

As access has been disappearing its value is better understood by agencies and organizations such as for instance, the Keystone Center of Colorado. Keystone found that there was little direct connection between the planners and specialists who acquire the easements or between the planners and the landowners. Lack of direct communication was seen to foster frustration on all accounts. Access issues were seen to be often handled too generally at the land management planning level and too narrowly (and too late) at the time

of actual acquisition. Recognition of the importance of access has prompted Federal and state agencies to develop stronger strategies for access. The federal agencies have both a formal "access acquisition" program and a more informal and opportunistic means of pursuing access to public lands. More formal approaches include the purchase of easements and right of ways through such programs as the Arizona Game Fish Department's Landowner Relations Program and the Habitat Partnership Program of Colorado's Division of Wildlife. The Bureau of Land Management has been particularly proactive in recognizing the significance of community participation in land planning decisions.

At the grassroots level many partnering efforts are in place to ensure access. Locally significant contributions have originated from the Pima County Trails Association. More recently on board is the Sonoran institute which partners with communities to help with the restoration and conservation of landscapes. The partners are diverse including landowners, government agencies, and non-government organizations. An example of BLM collaboration with the Sonoran Institute is The Sonoita Valley Planning Partnership. The Sonoita Valley Planning Partnership (SVPP) is an organic stewardship groups that is currently busy implementing strategies they have developed over the past several years. In order to assist in effectuating this progress forward, meetings, interviews and a survey were employed to better understand current problems and possible solutions for bettering access.

## *Methods*

### *Meetings*

Public meetings, local conferences and seminars were attended for the purpose of identifying issues of concern and discovering local partnering opportunities for promoting access to public lands. A list of meetings attended:

- Focus groups, for Saguaro National Park's general management plan. Fall 2003.
- Cienega Corridor Conservation Council festival and information day. March 27, 2004.
- Presentation of the open space bond issue in context with the Sonoran Desert Conservation Plan and other issues with Pima County Administrator Chuck Huckelberry. Spring 2004.
- Public hearing for Platinum Farms equestrian event arena development proposal. March 10, 2004.
- "Working across scale and boundaries: forging effective cooperation between local, county, state, and Federal Conservation Efforts" conference hosted by Center on Impacts of Urban Development in Southern Arizona's Desert Environment. University of Arizona, June 3, 2004.
- NRCS Conservation District Meeting of local council members, City Council members, County supervisors, Conservation District Members and ranchers from five Southeastern counties of Arizona. Follow-up with site visits to observe works in progress of the local NRCS in Wilcox, AZ, June 3, 2004.
- Private Lands Conservation Workshop "Opportunities and Incentives for Wildlife Habitat Enhancement." Presentations, consultations, and informational displays by the following sponsors: U.S. Department of Agriculture; Natural Resources Conservation Service; Arizona Game and Fish Department; U.S. Fish and Wildlife Service; Southeast Arizona Land Trust; Malpai Borderlands Group; The Nature Conservancy; Center For Desert Archaeology; Arizona Open Land Trust; Defenders of Wildlife; Wildlands Project. Wilcox, AZ. Saturday, July 31, 2004.
- NRCS Plant Materials Workshop: "Native Grasses for Crops on Ranches". San Xavier Mission. September, 2004.
- Southwest Strategy Meeting. Numerous Federal and state agencies including US Border Patrol, BLM, NRCS, Forest Service, Arizona and New Mexico Tribal Representatives, National Park Service US Fish and Wildlife, Mexican

government and law enforcement officials. etc. Three day seminar discussing interagency coordination and management strategy for safeguarding border lands and protecting environmental and cultural resources. August 2004.

## ***Interviews***

Interviews were held with over 50 persons with a direct interest in recreational access, public lands management and/ or ranching to understand current issues of concern for access in southeastern Arizona. The interviewees spoke from a wide-range of perspectives from government agencies, hunting groups, mountain bike organizations, environmental stewardship groups and developers. (Ranchers were included in the interview research, but are also further represented in the survey, since their motivations and or disinclinations for granting or withdrawing access are a particular focus for land managers). In a few cases, such as with Charles Pregler, Project Manager for the Partnership Series with the BLM and Todd Bryan, Consultant to the Colorado Division of Wildlife, interviews were conducted elsewhere in the West to pursue relevant topics for problem solving as urged by initial contacts made in Arizona. For a general interview template, please see [Appendix A: General interview template.](#)

### Agencies and Government personnel

#### *Arizona Game and Fish*

Josh Avey: *Landowner Relations Program*  
Troy Christensen: *Landowner Relations Program*  
Jim Heffelfinger: *Regional Game Specialist.*  
Sal Palazollo: *Conservation Stewardship Coordinator*  
Matthew Walton: *Access Coordinator*

#### *Arizona State Lands Department*

Jody Lattimer: *Natural Resource Conservation Section Manager*  
James Rees: *Real Estate Division, Right-of-Ways Section*

#### *Colorado Division of Wildlife*

Todd Bryan: *Consultant to Colorado DOW and other resource managers*

#### *Bureau of Land Management*

Thomas Bickauskas: *Transportation and Access Planning Coordinator*  
Lorraine Buck: *Public Affairs Specialist*

Lorraine Eiler: *Resource Advisory Council Member for Tohono O'odham Tribal Nation*

Charles Pregler: *Project Manager for Partnership Series*

Steve Saway : *Resource Advisory Council Member*

Frances Werner: *Resource Advisory Council for Tucson and past President and Founding member of Pima County Trails*

*Farm Bureau, Humboldt County, CA*

Katherine Ziemer: *Executive Director*

*Forest Service*

Bob Magon, *Recreational Forester*

George McKay

*Moffat County Resources Department, Craig, CO*

Jeff Comstock: *Director*

*National Park Service*

Sarah Craighead: *Superintendent, Saguaro National Park*

Natasha Kline: *Biologist, SNP*

John Williams: *Park Ranger for Volunteer Program and Law Enforcement, SNP*

Larry Gamble: *Rocky Mountain Park*

*NPS: Rivers and Trails Program*

Cate Bradley

Joe Winfield

*Natural Resources Conservation Service*

Kristen Egan, *Rangeland Management Specialist*

Donna Matthews, *Coordinator, Coronado Resource Conservation and Development Area*

*Pima County*

Steve Anderson: *Department of Natural Resources, Parks, and Recreation*

Kerry Baldwin: *Division Chief for Natural Resources*

Don Carter: *Police Officer*

Cynthia Henry: *Department of Natural Resources, Parks, and Recreation*

Linda Mayro: *Cultural Resources Manager*

Ranchers

Sue Chilton: *Game and Fish Commission* and Jim Chilton

C B Lane: *Arizona Cattleman's Association, Director of Natural Resources*

Deborah Moroney

Bob Sharp

Eric and Jean Schwennesen  
Gene Williams (also BLM advisor)

Recreation groups

*Desert Archers and Southern Arizona Sportsman Alliance:* Harry Stadie,  
*Pima Trails Association:* Sue Clark, President  
*Tucson Mountain Bike Association:* Mark Flint  
*Tucson Rough Riders and the Arizona State Association of 4-Wheel Drive Clubs:*  
Rebecca Antle  
*Tucson Saddle Club:* Becky Tucker

Developers

*PB Trading:* Peter Backus  
*Diamond Ventures:* Kenneth Abrahams,

Planning consultant

Barbara Strelke

Conservation and Land Trust Organizations

*Arizona Open Land Trust :* Diana Barnes Freshwater  
*National Wildlife Federation:* Jake Scott, Education Specialist

*Nature Conservancy:* Peter Warren

*Sonoran Institute*

Michele Zimmerman  
Emily Brott  
Ben Alexander  
*Southeast Arizona Land Trust:* Stuart Leidner, Executive Director,  
*Sky Island Alliance:* Trevor Hare

## ***Survey of Arizona Ranchers***

Research identified a need for a tool to measure landowner concerns with respect to recreational access. For land and wildlife management agencies, managing access is a sensitive and complex issue. The historical review, meetings and interviews, as illustrated in previous sections, assisted in selecting salient issues of interest both to Arizona agency and land managers and the ranchers themselves. The survey is an attempt to uncover what *are the real problems* and *at what level* do they present themselves. The survey was designed to capture core reasons behind what seemed at times to agencies inexplicable behavior and the underlying cultural and social issues that govern recreationist - rancher relationships.

### *Obtaining mailing lists*

The Director of Natural Resources, C B Lane, of the Arizona Cattleman's Association realigned my first efforts in terms of tone and language toward a more objective survey. Andrew McGibbon of the Southern Arizona Cattlemen's Protective Association included a copy of the survey in their group's monthly mailing of approximately 250 notices which contributed to a relatively high response rate. This audience dovetailed nicely with the area that the Arizona Department of Game and Fish judged to be one of the most problematic regions for access. After attending a meeting of the Malpai Borderland Group, whose members include the Douglas area, (cited as the most restricted corner for access) and neighboring regions of New Mexico, Mrs. Glenn, a founder of the group and office manager, offered to forward my surveys to their board of directors listing of 20 members. Additional surveys were sent to the 125 Conservation District Directory Board members

listing gathered by the Natural Resource Conservation Service and made available to me by Donna Matthews who has been working with Game and Fish to help distribute information on Federal funding opportunities to ranchers. The Farm Bureau membership listing of approximately 150 completed the targeted group, (but many of the members in this listing were returned as “not applicable” by respondees since they were not currently in ranching). The total number of surveys sent was approximately 545.

## ***Results and discussion***

### ***Relevant issues emphasized at/ or discovered from meetings***

Findings were summarized and are listed based on the frequency a particular issue was mentioned (those mentioned most frequent are discussed first) during the researcher's observations and secondly, its significance related to maximizing recreational access opportunities .

- Control development through comprehensive land use planning which incorporates options for more than one recreation access route to public land destinations. Ranching landowners may be included in the initial planning process by joining Resource Advisory Councils of the BLM and other means.
- Community involvement builds support of community planning for access. If landowners such as ranchers are involved early in the planning process, it was suggested that they would be more receptive to contributing to recreational access.
- Recreationists are often willing to contribute time and physical effort for the opportunity to use a resource, public or privately held. An important example of this are the commitments shown by local mountain biking clubs in physically building trails and for the most part extremely courteous behavior toward fellow recreationists such as equestrians and hikers on multiple-use trails. Equestrian and OHV groups too were willing to contribute time and labor toward trail maintenance and self-policing.
- Allegiances might include development interests, such as that connection illustrated by the Rincon Institute. The trust value of an agreement may be just as important as the

agreement itself. Trust is seen as important not just for the resolution of the problem at hand, but should also be valued for future collaboration efforts.

- Monitoring as an important tool for regulating use of natural resources. Monitoring may be employed not just for an examination of a rancher's management but also as a tool to better track recreation behaviors and impacts. . Findings point to the necessity for a comprehensive approach for monitoring use of public lands. Monitoring impacts of recreational use and the ability to differentiate recreational use from the impacts of livestock also becomes important. Since ranchers must demonstrate care of leased lands for a wide number of reasons, for such programs as the Conservation Reserve Program and monitoring in connection with endangered species, there is a clear need to ensure that ranchers are not held responsible for such recreational impacts as trampled sites that result from camping and so forth. A new focus on proving responsible care of grazing allotments, i.e., new biological opinion for the Forest Service allotments requires monitoring to be done every 3 years necessitates new thinking on the subject of responsibility and regulation of visitation.
- Landowners should be informed s of any privatization of public lands near their property boundaries. The influence of local interests may not necessarily bring the appropriate management for an area. Historical references suggest that proximity to public resources tends to promulgate a privatization of these lands.
- Lobbying interests were often seen to be myopic in their consideration of recreational access. Responsible recreation includes awareness and respect for competing uses of the landscape. It might help advocates to step off the beaten path, so to speak, by moving out

into a larger scale view of the resource map. From this stepping out, interests and needs of others may be better understood. For example, equestrian groups in considering the Saguaro National Park Master Plan were focusing on demands for keeping trail extent and condition finely tuned to their preferences. For the interest of all, they instead might have approached the plan in terms of how they might work together with other groups to accommodate everybody's shared need for the wilderness experience.

- Changing scales of time might also awaken a greater sense of responsibility. Projections of land use patterns might crystallize the effects of present time decisions.
- Duplication of efforts toward resource goals seems to be ongoing problem. The meetings and conferences attended revealed an impressive contribution of professional, governmental and individual commitment and expertise toward preserving Arizona's natural resources. Evidence and findings, positive energy and handwork seemed to proliferate. Better dissemination of certain knowledge and human resources might serve to reinforce the efforts of all and reallocate the time and monies dedicated to start up organizations for furthering good operations and approaches already in place.

***Interviews of land managers, recreation groups, ranchers, local government officials and other interested parties***

Interviews were based on a template and then proceeded according to the particular expertise or experience of the interviewee (please see [Appendix A: General interview template](#) ).

Topics included:

**1. Access restrictions** *Common reasons for landowners denying access, Resource areas with inadequate access, and Resources at risk from recreational impacts;*

**2. Acquiring and guaranteeing access** *Responsibility for acquiring and guaranteeing access; Trust issues between landowner and government and Discussion of possible reluctance of State and local agencies to actively assist in securing needed rights-of-way from private landowners;*

**3. Collaborations for access** *Advice for collaboration from people who have worked to maintain or build access and Perceptions of working toward a common goal;*

**4. Monitoring and enforcement issues** *Top concerns with respect to monitoring and enforcement of recreation on public land; Discussion of a need for educating users toward responsible recreation; and Ideas for monitoring and funding an enforcement program.*

**5. Speculations about the future of access in southeastern Arizona** *Concerns for changing values of new landowners versus traditional ranch families for access; Opportunities for re-allying landowners and recreationists and Ideas for improving future access and Addressing future access needs; and*

**6. Solutions in the interaction between ranchers and recreationists** *What works, what might work.* (Listings avoid repetition of similar facts but do include specific examples for

clarification of issues. (Please see *Appendix B: Detailed responses to interview questions* and *Detailed interview comments* for more complete responses).

## ***1. Access restrictions***

### *a. Common reasons for landowners denying access*

#### Land and wildlife managers and other public officials

Trespassing  
Damage to property and facilities  
Perceived liability  
Legal access vs. permissive access  
Too many permit issues with inadequate enforcement  
Individual character of game manager; personnel-related issues.  
Lack of identification of land ownership  
Fear that livestock will be shot or harassed  
Protection of archeological sites  
Criticism for damage recreationists cause  
Tribal perspectives on tourism  
High numbers of visitors can increase maintenance on rancher's improvements  
Disruption of landowner operations  
Littering  
Off-road activities  
Undocumented immigrants and drug trafficking  
Transients

#### Conservation groups

Trespassing particularly with newer landowners  
Invasion of solitude and peace which are reasons that people have moved to rural areas  
Off-road activities  
Noise such as barking dogs  
Fear of the discovery of any endangered species on adjacent public land

#### Land owners

Basic control and management compromised by public entry  
Cattle lose weight if excited  
Lose of privacy since most access roads pass by ranch headquarters  
Belief that an increase in population will have an increase in impacts  
Destruction of equipment through careless play and target shooting  
Theft of expensive equipment like saddles kept in barns near headquarters and entry  
Noise, particularly of ATVs  
Littering substantial after illegal immigrants, but also hunters leave shells, and campers garbage like plastic bags which can be lethal to cattle

Responsibility to protect wildlife compromised

If a landowner is not given control over the timing of the access then repercussions can be costly

Final responsibility rests with rancher not recreationist, as access is presently structured

### Local development interests

Trespassing is of some concern, people will leave a trail

Response to fears of liability

If allow anything with a motor, no question will have litter

Response to fears of vandalism and drug trafficking issues seen as an excuse on part of rancher

### Recreation groups

Liability fears persist and remain a big problem

### *b. Resource areas with inadequate access*

### Land and wildlife managers and other public officials

No permanent legal access to the Galiuro, Whetstone, Santa Teresa, and Winchester Mountains

Other mountain range units in the Tucson area have very limited permanent legal access.

About two-thirds of the Coronado National Forest ( $\pm$  1.2 million acres) does not have adequate permanent legal access

Game and Fish Region 5 is the most limited

Problems at south side of Santa Rita Mountains

Dos Cabeza mountains and really all of Southeastern Arizona

High Creek

Restrictions to 'general multiple use' land is the most impacting to the general public

Special areas will get more attention than general multiple-use lands and thus funding and personnel time will be allocated to maintain access[on special areas]

Central part of the Sonoran Desert National Monument

Parts of the Agua Fria National Monument

In general, when private lands are interspersed with BLM and State Lands

Holbrook or Ashfork, lands along the I40 corridor more of a checkerboard with every mile surface management changing. In those case more a of a challenge for people to know which is private and which is state.

At Civano development, Tucson trails problems coming in and out wilderness

Advocate for the Tumacacori area to be designated a Natural Conservation Area. More flexible than a wilderness designation. Would like to see two levels, A and B for wilderness designations

### Conservation groups

Hunters typically cross over privately deeded land with permission to get plenty of access on State Lands

Nice if fewer ways to traipse around wilderness areas

### Local development interests

Favor public access thru projects. Given access to: Tucson Mountains, Pima Canyon, The canyons, Madera Reserve, Tucson Mountain Reserve, Casa Contenta. Committed to develop access to: Ironwood reserve, Smith ranch, Swan southlands, Rocking K  
Differences are the degree of access: How much is fair access, how much is necessary  
Catalina Foothills already damaged. Access is "closed, dead."

### Recreation groups

Shift in AZ where population is spreading out. Hunters and ranchers used to having State Lands to themselves. Understand this natural resentment. Problem will only get worse

Access on new which side? side of Whetstones would be very beneficial. The Galiuro is a remote but populated area.

Designated wilderness areas not always accessible such as the Coyote Mountains and Baboquivari wilderness.

Designated national monuments should have to ensure adequate access

Hunters enter Cienega Creek Conservation Area on the power line road but that right-of-way is not a legal public access

In Arizona, riparian access is forever abrogated by State law, landowner owns streambed.

Washes used but not legally, such as the streambed of Rillito River, which is privately owned  
Once development is initiated, historical trails may be closed.

#### *Examples presented:*

Owners close to the on the northeastern side of the Coronado National Forest below Mt. Lemmon highway may block access.

West side of Dragoon Mts. is now subdivided into lots from 4-20 acres. Some participants believe there is a bias against hunting on part of developers in this area

Swiss Helm area, parallel to the Chiricahuas, is regarded as an excellent deer hunting part of Coronado National Forest. But land acquisition has limited archers to a range of only 45 to 50 yards.

Brown's Canyon in Baboquivari Mountains

The subdivision around Tortolita Mts. State Trust Lands

Access to the Sweetwater Preserve

Different designations for land, i.e. wilderness, means that these lands are being closed off

Anyone that is motorized or mechanized seems to be losing access. This holds true for bicyclists too

*c. Resources at risk from recreational impacts*

Land and wildlife managers and other public officials

Public land user and landowner conflicts as well as creation of wildcat roads result of closure of traditional access routes

There are extreme problems of what users groups are doing to land; OHV use increasing  
Since most users are unfamiliar with soil types unaware of protecting soils with respect to when and where they can ride with minimal impacts

It is appropriate to designate some “scorched earth zones”

Need to be vigilant about resource protection. It is not “OK” to let a trail degrade to the point of impacting a resource

At risk are: Public reserves, Santa Cruz River, San Pedro River, Urban fringe with respect to ATVs

Conservation groups

Concern for encroachment of habitat with greater numbers desiring access

Need to think about quality of life for others on lands when we talk about access

Nature Conservancy managed nature preserves do grant access. Yet, the goal is to protect diversity, not give public access.”

Recreation groups

Foreign Forest Service personnel come to the Coronado National Forest from different parts of the country with little understanding of the desert environment

**2. Acquiring and guaranteeing access:**

*a. Responsibility for acquiring and guaranteeing access*

Land and wildlife managers and other public officials

State Lands handles access issues across a mix of state and public lands yet access is not an issue specified in statuettes

The primary responsibility for access across private lands within the proclaimed Forest boundaries lies with the Forest Service while getting people to the proclaimed Forest boundaries is viewed as the job of State and local agencies

Historically, public lands were interpreted as just a way to reach private property, recreation currently has no specific laws that enable it like mining or ranching. So, not a priority  
Where the BLM block of land is contiguous with few private parcels, BLM can seek access across the private land first, but more likely to reroute to bypass the private property  
Phoenix Field Office BLM, as part of travel and transportation planning seeks meaningful route systems for recreation, authorized and administrative uses  
New proposal for AZGFD bases the amount spent to acquire access not on the appraised value of the land by itself, but on its value in terms of lands that that acquisition can open up  
AZGFD given new tool [for acquiring access]....can actually purchase land easements  
Ranchers through EQUIP ( Environmental Quality Incentive Program) receive a 50/50 funding match with the NRCS [for improvements for wildlife made on their lands]. If we, AZGFD , get guaranteed access, we will match that 50%, TNC could do the same

### Conservation groups

Would like to provide for access easement. Eventually landowners decision

### Local development interests

Our involvement is to look at Pima County Trails Master Plan and to participate in large land management agency in their comprehensive plan  
Open space advocacy groups have not reached out to homeowners associations  
Not up to FS [ to secure access to the National Forests] but one of things they can do is to assist in rezoning

### Recreation groups

The public sees the government as responsible for guaranteeing access  
Public disturbed by examples of privileged access without public access  
Arizona Game and Fish Department recognizes that land access is a priority but land agencies need to place access as a high priority  
The State Land Department is a key agency that could help us  
BLM has been more proactive on working with the public on land use, The Forest Service needs to use the same model with access  
Purpose is to prevent wildcat routes but most agencies don't see the importance of connections  
Need a variety of challenge levels, routes, everyday SUV roads and roads with a greater technical difficulty

*b. Trust issues between landowner and government*

Land and wildlife managers and other public officials

AZGFD: Unclear about who specifically do private landowners' trust: FS, State Lands, BLM, Game and Fish, US Dept of Agriculture, or private non profits?

Landowners are skeptic about any monies the government may offer and worry about what they may have to give in exchange

When less than 13% is owned privately, there is inherently going to be mistrust of land managers to protect private property rights

Different expectations of agencies present confusion for landowners

NRCS: For those who distrust the government, federal or county taking of property is probably a major concern

While land owners may trust individuals, may distrust the organizational entity

NRCS sees it as their job to help ranchers jump thru hoops

Ranchers really back off from landowner incentive program, worry about LIP bringing in a new endangered species.”

Land owners

Government is not seen as recognizing that when a cattle owner is working across different jurisdictions of land any decision on one type affects management across all ownerships. True for many reasons such as mobility of cattle, wildlife and plant species

Government “interference” with landholder seen as cause not only for loss of control but also accountability.

Perception that public agency like FS is arbitrary in its decision making in terms of what multiple uses it will allow

Game and Fish now trying to disengage themselves, but for the decade of the 90s were allied with activists such as: Center for Biological Diversity, Forest Guardians, Western Gamebird Alliance

Doubt exists that The Nature Conservancy is operating effectively internally, think they have the equivalent of an old boy's network.

Belief that the FS has a punitive attitude toward its field personnel

Need seen for a cohesive management plan that takes into account the elk and cattle together.

Most western states, other than Arizona, seen as more supportive of ranchers costs to maintain water and fences

Conservation groups

Landowners seen as clearly frustrated with moving management targets and cumbersome public processes

*c. Discussion of possible reluctance of State and local agencies to actively assist in securing needed rights-of-way from private landowners*

Land and wildlife managers and other public officials

An agreement where the State Lands Department shares revenue from licensing with Game thought to boost willingness to help secure access

Recreation access has not been a priority. The federal and state agencies have relied on the public to create their own access opportunities across private land. Without legislative direction to do so, it is unlikely to be a priority in the future.

Seeking access for the public opens the agency to possible criticism from, for instance private property rights advocates and/or those opposed to improving public access to federal and state lands

No long range plans exist for access. County plans for road development are the most organized in terms of access, but rarely provide the breadth of recreation opportunity that unimproved routes on federal and state lands do.

For the State lands Department at issue is lack of funding and little financial incentives other than a minimal fee for a right-of-way for a road

Training in the legal aspects of negotiating and acquiring access is limited in federal and state agencies

**3. Collaborations for access**

*a. Advice for collaboration from people who have worked to maintain or build access*

Land and wildlife managers and other public officials

Use of rotational grazing to share recreational and production uses of land, such as with the Mad River Slough Wildlife Area Ranching Project of Humboldt County, CA

BLM: Can partner for all the wrong reasons. The focus should be maintaining sustainable communities and ecosystems. Partnering is not a goal just a way to get there

Problem solving for success: Stewardship is about the community having a shared vision for that landscape and a collaborative approach for moving forward. How can I get XZ while allowing for QRX to occur?

James Kent Associates, a consulting group with the BLM uses maps to describe nesting scales of human resource and social resource units. These units are connected by networks, informal groups, not chambers of congress members, not elected leadership. A planning goal is to uncover these networks to listen directly to what the patterns of use are

A recent coalition by the FOX group failed in its attempt to restructure the State Land Department . Perceived as falling apart at the 11th hour because Conservationists pushed for to large a set aside for open space

For the BLM the land use plan process is public process: series of public meetings with opportunity for any public members/interest to give input from their point of view  
BLM has worked closely with Pima County, local government seen as very interested in seeing public lands as an integral part of SDCP for sensible growth.

For BLM most successful partnering experiences seen as individual resource management projects where 2 individuals made something happen. Huge memorandums of understanding have been unsuccessful

AZGFD access projects have been around for many years in terms of a small scale courtesy program. Over 8 years ago started seeing the value of investing in access programs.

AZGFD : In terms of negotiating access with developers its been mostly with signage thru the Respect program and sign in stops. Becomes more difficult because more people involved when dealing with developments

Advice from the River Trails and Conservation Program: Converge people to discussion. Frame discussion: Hold to agenda while allowing discussion. Return to agenda.

River Trails and Conservation Program: How the consensus will be built upon is part of the process that is important. Achieving any agreement is important for future consensus building. The trick in building consensus is to select the details that lead to a point of agreement.

And, “strike while the iron is hot”

The Sonoran Desert Conservation Program (SDCP): the SDCP is a recreational opportunity in terms of a land acquisition.

### Conservation groups

The first key is listening to landowner concerns and genuinely trying to solve problems together – not just some instrumental relationship.

One of common conflicts is public access and conservation. In general conservation easements are intended to protect biological resources. Quiet on subject of access which means access is not given.

A lot of conservation easements are private transactions. Most land owners want to maintain privacy. There are situations where public agencies arrange for conservation easements. When spending public money, then public access on the easement is more likely

### Local development interests

Worked on easement in Rincon Valley for specific trail. When hit dead end went around it. If it takes you an extra half or quarter of a mile to do it, still worth it.

Successful coalitions built upon reasonableness and willingness to compromise and listen.

### Recreation groups

Southern Arizona Sportsman Alliance has representatives from diverse outdoor sports clubs.

Tries to be represented at every Pima County Board meeting that might affect them  
Mountain Biking: Trying to get state level meetings going with stake holders, ranchers, hunters and recreation groups. Understand parameters of different agencies and

within these talk about other users, hunting, grazing, motorized recreational users and how they can share without stepping on one another's toes.

4-Wheel Drive Clubs: With BLM did apply for Range Resource Team, RRT out of Tucson office, route inventory group map routes out on GPS. These then go thru an evaluation period, submit maps to agencies and then agencies will put maps out for public comment and then agencies finalize which ones will be used. FS has released a new plan for OHV use, but not actually inventoried routes.

We work with the Forest Service, usually engineers out of the Coronado district. We have a couple of roads we maintain

Helped with Tucson Motorsports Park by applying for a grant thru Pima County . OHV grant from gas tax money.

### *b. Perceptions of working toward a common goal*

#### Land and wildlife managers and other public officials

Thinking that Sportsman groups, hiking groups, birding groups all have to get together to work toward securing perpetual legal access. Needs to be more than government agencies and a single agency, such as Pima Trails, on this issue

Recreational groups together can do things that government agencies may not be able to do such as purchasing a rite of way above fair market value or offering to do things to protect adjoining private lands that Forest Service can't do like keeping trails clean.

Getting people to understand what we do [and participate in the public planning process] is a constant education process because we are a mobile country. Once people understand the process of developing plans they are seen as participating

People work for their picture of how the land should look and be used, not for the land itself. Ranchers are considering that ranchers and hunters have a lot in common in terms of the land and are deciding that they should be allies not enemies.

With a whole bunch of volunteers, ranchers are understanding that people are doing more to help.

There is a natural coalition between recreationists and oil and gas companies. Everybody wants same thing: to use and protect the resource and have it still be there be when they are done.

Tribal government: Belief in people more interested in working together because "I am part of that . Goes back more than 30 yrs: growing up and thinking where we grew up was our home forever but not our land, BLM land. "

## ***4. Monitoring and enforcement issues***

### *a. Top concerns with respect to monitoring and enforcement of recreation on public land*

#### Land and wildlife managers and other public officials

State Lands Department: General problem with monitoring state lands. Only 2 trespass range managers for 9.3 million acres. Hundred and hundreds of miles of illegal roads exist on state lands with new roads being blazed every day. Don't know have a problem until landowner complains.

Many potential monitoring regimes that would be appropriate. Don't know that anyone actually has begun to look at one for OHV use.

One model for generating monies [for monitoring] are OHV fees when all are registered. State Lands has closed some areas under regulations from the EPA when the dust in these areas have been closed because of PM 10 dust particles under 10 microns

Have heard that access has been closed off because of vandalism. Hunters are afraid of going to these areas because of fear of their own personal safety. Lot of drug trafficking and worry about being mistaken for federal agents and/or stumbling into drug camp.

BLM: Wildcat roads and trespass many times are a result of having poor maps available. The recreationists perceive there is a shortage of routes and need to use a particular route, across private land, to achieve their recreation goals. Land owners who block access may be the catalyst to wildcat roads being created to access public lands

NRCS: Nobody at State Land department to write trespass ticket, a rancher can't enforce people trespassing on State Land. Game and Fish can't write tickets. A lot of issues if work with Game warden don't have these problems. Lot of wardens will give ranchers their own phone.

ATVs are always an issue in washes. County's enforcement is not there. Especially a problem on North South flow thru washes. Either way has made landowners more apprehensive

Pima County Police: Attention paid to acquisitions and environmental monitoring and money for conservation management but not enough to funding by public lands managers for Pima County, BLM, Forest Service and Park Service. As these lands are becoming interconnected, enforcement of this interconnectivity is key

Pima County Natural Resources Parks and Recreation Department: Funding will come from increase in county funding. Enforcement and monitoring are cooperative efforts with the county

### Conservation groups

If there is support in managing the users who access the property, then the request [of landowner for granting access] would be more palatable

Most conservation groups need to ask for endowments for monitoring easements. One way is for the developer to fund an endowment to the development's homeowner association. The developer pays an annual fee to help pay for monitoring of property

No rules in place to control where OHV vehicles go. Do have rules about off-trail travel.

But no law enforcement. Proposing greater law enforcement by using other people, such as a hikers who could check if a person had a license.

### Local development interests

First education and second enforcement. It is the responsibility of the public to monitor and educate. User fees may be where we are going.

From a developer's point of view what you don't do is add more activity and more access. .  
Need a potential plan for the operation of these recreational lands and financial plan with a funding mechanism to deal with the management and education of recreational users.

We are partners with BLM: trash cleanups across the state, not even lands we use, major cleanup in Ironwood National Forest, they provide dumpsters trash, county now charges fees for dumpsters, also clean up refuse at illegal shooting range, shooting targets, glass, three rollout dumpsters filled up.

*b. Discussion of a need for educating users toward responsible recreation*

Land and wildlife managers and other public officials

State Lands Department: In working with 32 conservation districts we are still struggling to come to an agreement on OHV education. Schools would be a great place to educate users. But teachers are not interested in teaching anything that will not come up on the AIMS test.

A lot of illegal roads that have been used for decades. Yet State Lands Department afraid of "political suicide" fails to enforce many of its legal claims to trails, etc. that are in use today illegally

AZGFD: Education centers could be gearing education to youth organizations such 4-H groups etc, Appropriate solution to help define scope of the problem for users. This might lead to a greater sensitivity on the part of user groups.

AZGFD: Applying to the State Parks Recreation Trails Program for funding for publications for users with information such as sensitive species, erodible soils, ranchers problems with open gates etc.

BLM: Public-private land owner conflicts are due to a lack of respect for private property and who governs what happens there. Private land is not public access just because access was never restricted in the past.

An RTP grant to BLM, USFS and ASLD is funding some "Tread Lightly!" Training. Other training like "Leave No Trace" is pertinent. This needs to be continuously funded and funding should be increased to include a public outreach campaign. The AZ State Parks "Let your conscience be your trail guide" campaign was successful when it was funded.

Monitoring of recreation is a good tool for implementing the 3E's of recreation management. The 3E's are Engineering, Education and Enforcement. A monitoring program that addresses land health standards, visitor safety and reducing user conflict would be valuable

Tribal government: Tribes need to show petroglyphs. The better informed the public is the more likely the petroglyphs will be protected.

### Land owners

Believe that educating public outweighs the risk [of granting access]

Don't think people are showing greater care than in the past. Understand what the respect programs of the Game and Fish are trying to do where people go listen. But afterward they go off and continue to do what they want

### Recreation groups

Pima County Trails: Education of Government managers is of importance for Trail system.

“Was not on their radar” until 1989. Trail establishment would fall thru the cracks.

Just in the past 5 years is the public perception of trails seen as reasonable.

The trails and river parks system has even farther to go to meet a 1989 county plan's goal of a 500-mile network along washes and creeks. While the county has had a trails master plan since 1989, the city doesn't have one.

4-Wheel Drive Clubs: With reference to disruption of landowner operations, think that happens from minority of uneducated 4-wheelers or wildcatters out there. Have to work hard and prove that we are not of that kind

### *c. Ideas for monitoring and funding an enforcement program*

### Land and wildlife managers

BLM: The Site Steward program has been popular with agencies and the public. Perhaps a similar organization for recreation monitoring could benefit the public and management agencies alike

AZ State office BLM is attempting to start an Adopt-a-Trail program similar to USFS.

Consistent staffing, funding and goals among agencies is necessary. Perhaps an outside entity could provide this consistency and funding

### Recreation groups

4-Wheel Drive Clubs: FS has an Adopt-A-Road program. Clubs throughout the state will sign an agreement to adopt particular roads in area, clean-ups and kind of police them

## ***5. Speculations about the future of access in southeastern Arizona***

*a. Concerns for changing values of new landowners versus traditional ranch families for access*

### Land and wildlife managers and other public officials

AGFD: Outside purchasers of ranches may not honor traditional use : for example, a wealthy business owner from Albuquerque without a ranching background close access granted for 3 generations.

Better conservation between the users and the landowner a cultural issue. For instance, in Nebraska, all farms post “no trespassing”, but that really means “come talk to me.”. That custom is unheard of in state like Arizona where there is so much public land.

BLM: I think there are two main reasons for the change in perspective on access:

1) New land owners may be from more urbanized areas where access to private property is heavily restricted. People move to rural areas to have more control over their environment and be more secluded. Giving access to the general public would be contrary to their motivation for living there.

2) When the west was originally populated, neighbors were known and allowing access was not a problem. Even members of the public who were not known, had similar values from living in a rural environment. With increasing urban populations, there is a lack of understanding of ranching and rural practices.

County government (Moffat County, Colorado): I support any users of the land if they help defend ranchers. Money is not the answer. The real answer is support to keep the ranching industry viable

### Conservation groups

Sonoran Institute (Montana): [Newer landowners] appear to be less interested in historic patterns of access. In part this happens because people buy what they think of as a retreat and because they are often disconnected from local community and users

### Recreation groups

Hikers/Equestrians: People from MidWest and California who are not tuned in to idea of public lands being available to everyone, are “squirrely” about letting people in. Don’t like the idea of public walking through.

### *b. Opportunities for re-allying landowners and recreationists*

#### Land and wildlife managers and other officials

Arizona Game and Fish: One of the good things about the Respect and Adopt a Ranch programs is that they are totally voluntary. It is a handshake agreement from which a landowner can back out at any time.

State Lands Department: Generating fees to pay for public access. Grazing fees could be raised.

Recalculation of Right-of-ways fees would give use greater incentive to work for access.

New fee would be: appraised price per acre x no. of acres tied up in right-of-way x IOU (intensity of use) x the length of lease. Game and Fish can apply to renew right-of- way for another ten year period .Game and Fish would pay for appraisal

stumpage fee, archeological survey, construction and maintenance of road. This way the land will not have to go to public auction. Rancher could ask for grazing fees to be lessened by those 5 acres now converted into a road.

BLM: Where access has been long standing practice and a benefit to the owner, for their own reasons, is the most successful arrangement. Example – land owner gets free maintenance or additional business from allowing access.

Pima County Natural Resources Parks and Recreation Department: With reference to selling hunting permits in the open market, this occurs in New Mexico and other areas don't think it is appropriate here because it is giving a private operator a state resource to sell for private benefit.

Recreational use fees may not work in Arizona: Look at Texas which is 85% private land versus Arizona at 67% public. Private land owner has created very lucrative business in providing recreational opportunities on private land. In TX ranches were built on land ownership. Here in Arizona, ranches were built on small pieces of land that created access to public lands.

County government (Moffat County, Colorado): Charging fees: I know of 3 or 4 ranches that make it because of additional hunting income. Passes break even point. Each [state] wildlife agency has its own regulations and rules it operates under. Some of those laws allow special opportunities for rancher. General public doesn't think this is fair.

I also know of birdwatching and sage grouse viewing and other wildlife viewing tours that give on leased lands or private lands making money [ But] biggest revenue is hunting licenses.

### Land owners

Charging recreation fees: Although many landowners may see charging for recreational opportunities such as selling hunting licenses a quick way to make money “the number of people who have places where people really want to go are far between. In the SE of Arizona have pheasant hunting. For big game hunting either have the habitat or don't”.

If you start charging money the prospects become complicated. Having horseback riders in itself is not profitable, but may develop a lodge or trails. Must do due diligence for legal problems and need to draw up feasible studies first.

### *c. Ideas for improving future access*

### Land and wildlife managers

Arizona Game and Fish: In order to have permanent access in the future have to come with either a lot of money or laws that if public has used road, in a sense then it continues to belong to public. Prescription variant for maintaining historical access. When it comes to state lands, county and people working for the people of the state ought to

be able to say that if there has been historical precedent to use that road for access then Fed agencies should be able to work in cooperation through a streamline process to guarantee permanent access for public

From the standpoint of my job, we are in pendulum swing between everyone being allowed in or nobody is allowed in. Is there anyone in the middle, granting access or hunting by permission?

Value in finding out if there is an overriding issue. Could have statement about ATV use in agreement for example.

BLM: The key in the future will be to retain contiguous blocks of public land that can be managed by one agency, primarily for efficiency of operation and consistent mission across all lands. If leap frog development continues as a result of privatizing public and state lands, the access problem will be compounded.

### Conservation groups

Sky Island Alliance: OHV use could be limited. Forest service like BLM is in the process of mapping roads for these OHVs. Solution we at Sky Island would like to see is for Forest Service and BLM to develop a land use map showing which roads these vehicles would be allowed on. All other roads would not be shown on map.

### Local development interests

Federal and state government and Pima County have to get together as a concerted effort Approaches on how to maintain access are already there. When land comes up for rezoning if developer says want its it to go on the outskirts of the property, that is fine. Trails on development do not diminish value of property. People want trail access.

Developer can charge more money rather than less even if directly abuts property.

Start thinking about access before density is really developed. The master trail plan may or may not be adequate, but is just a line on paper. Need to create the trail piece by piece when areas go up for rezoning

### Recreation groups

Sportsmen: "Its not going to happen as long as we have a tremendous bias against hunting. hunters need to make as much noise as a lot of wildlife activists. ...Because of Rocky Mountain Elk foundation now see many elk, quail and other wildlife in greater numbers."

To improve opportunities for sportsmen, state law must be changed so that Arizona which is currently one of only 6 states that doesn't have protection from lawsuits brought by an individual, does. "Five and a half million has been paid out toward judgments in the last 4 years."

4-Wheel Sports Clubs: Agencies could work closely with organized groups. When work with agencies like the FS there is a 50/50 deal for the rancher in terms of time and labor, so that if we do the labor the ranchers can put these monies toward more projects.

## ***6. Solutions in the interaction between ranchers and recreationists***

### *a. What works, what might work*

#### Land and wildlife managers and other local officials

Forest Service: Wish we had a coordinated program with all federal, local, state governments to develop legal access. A lot of counties don't want to get involved. It is a politically sensitive issue.

Arizona Game and Fish: Have a lot of ranchers and farmers who have always allowed access. Try to work with them to reward them. Flaw with government thinking is that it tends to focus on "bad apples" in dumping money to fix a problem. Get double benefits from rewarding cooperative ranchers: program makes them more financially sound so less likely to subdivide lands; and secondly, all these projects which benefit cows, are also restoring the grassland for wildlife, improving access and building more wildlife friendly fences

Try for short term agreements, of 6 years. Don't go for permanent easements because they are not configured in a way we need them to be. A good rancher is a friend of Game and Fish, if gave him a perpetual easement wouldn't be able to reward him for his friendly behavior. We want to be able to help him again when his contract expires. We are trying to build relationships with these landowners.

Colorado Division of Wildlife (DOW): Ranching for Wildlife Program: ranchers have an incentive to manage ranchland as habitat for big game, in exchange DOW gives them something, licenses to sell.

BLM: Some land owners would be willing to give permissive access rather than legal access due to the control they maintain. They have a strong bargaining tool when the access can be revoked.

Could be some success in dealing with a land owner who wants to provide goods or services to persons crossing their land. The key is finding an amenable solution to both the land owners concerns and wishes and the access seeking entity.

A statewide access program could help create an awareness and education tool for both land owners and the public, which in turn could make federal agencies more effective when seeking access. Unless access is an issue tackled by Southwest Strategy, or other multi-agency team, it is unlikely that federal, state and private entities will work together to solve problems on a statewide level. It is foreseeable that counties will play a pivotal role in claiming county roads, but has not been the case in Arizona up to now. Furthermore, the question of how much access to public lands needs to be answered to define the project.

Possibly a third party could serve to facilitate the agreement between agency and land owners. Such an organization would provide the initial research and contact with the land owners to determine their level of interest in providing access. This way, the agency doesn't have to raise the issue, but can concentrate efforts on the legal process of acquiring access.

Route inventory, analysis and resulting negotiation helped to identify the key access points. Signage, maps and stewardship have been the key to successful implementation. Access to two state land blocks, Desert Wells in Apache Jct and Granite Mtn in North Scottsdale, was preserved by this activity. This approach has given the rancher at

Desert Wells renewed faith to support continued access. At Granite Mtn, the City of Scottsdale and the McDowell Sonoran Land Trust have bought into this approach as well.

NRCS: If they were willing to grant access ranchers would want to know how many people would be coming, at what time of year and when they would have to leave gates open. They would want to know what kind of support for road maintenance, damages, litter left.

### Conservation groups

Understanding on part of people who ask for access that ranchers have a barely sustainable profit margin. Further work to repair/rectify impacts left by recreationists is an additional struggle in terms of their limited resources, both financially and physically since it is very difficult to find affordable competent labor.

### Land owners

On granting access.” If you padlock the gates you are shutting out the people who like to support you when you need support. People have to know its a privilege [to be able to ranch].”

State Trust land have posted land need a permit to go there within the Ironwood National Monument Wild. Needs to be a mechanism to trade out State Trust lands in monument.. Until people East of Mississippi understand about BLM and State lands, not much will change. If people don't know or understand something they vote no.

Importance in reaching point where respect each others' values. Maybe both are, for example, interested in the same thing but for different reasons. Landowner offered analogy of brothers fighting over cookies, “frosting on cookies for one and rest of cookies for the other, an elegant solution where everyone gets to have what they want. Same thing with natural resources, about sharing ranchland. There are a lot of people who like to go out and learn with nature. Yes there are potential pitfalls and problems with sharing ranchlands but can't approach life with a fear of that.”

One of the biggest stumbling blocks is communication. If you explain to people that there are limitations and spell that out as clearly possible, it avoids problems

“First thing would tell AZGFD, the more opportunities they present for landowners to talk directly with hunters to find out common values, the better. Don't automatically assume that they are adversaries. They can be strong advocates for one another, but have to have the opportunity for each to learn what each desires. When I work with them hunters usually become my friends. Difference between someone you've met and talked to and a stranger. If go into something thinking it will be bad experience, usually it will be. Now some people should never try to work with recreationists, they don't have the people skills to make it work. “

### Recreation groups

Funding for parks and recreation departments need to be mandated, just like other services like the police department.

Federal lands take forever to deal with. City and county have direct access to local Board of Supervisors and City Council and Mayor. The final decision makers are local which makes a world of difference. If federal lands could make more (any?) decisions locally would be much better. Recommend land use specialists for federal agencies.

A summary of important themes follows, but the particulars in the words of the interviewees may be most salient and I do not wish to minimize any of the responses through an attempt to present ideas in an abbreviated format. Although a best effort has been made to group responses according to topic, there remains a high opportunity for repetition of ideas into other areas of interest. Many responses are relevant to a number of categories, as they have been artificially designated.

1. Perhaps all interviewees agree that there needs to be a coordinated plan for access since no long range plans exist. Could this be done in the context of comprehensive planning? In light of vanishing opportunity caused by population growth and sales of land for development by both the private land holder and the State, such planning might deserve a high priority. In the past, and federal and state agencies have relied on the public to create their own access opportunities across private land. But new applications of ecosystem management require a large scale approach. Legislative direction may be needed to make this a reality. Coordinated efforts on the part of the recreationists might encourage the process.
2. With a coordinated plan comes the opportunity for consistency. Consistency is avoids “moving targets” set by agencies. Uniform standards simplify work for the land owner in terms of rangeland health and access. A corresponding standard could be

set for the recreationist in terms of recreational impacts and courtesy to the landowner, as begun through landowner relations programs of Game and Fish and such programs as “Leave no trace” set by the land managers. A consistent way to process analyze and present route inventories would help define a universally understood language, reinforced by a consistent presentation of signage and maps. A consistent process would also help to identify the key access points.

Consistency must also be applied in terms of the relationship between landowners and management agencies with thought given to stability of personnel to better opportunities for trust with land owners. Consistent staffing, funding and goals among agencies is a recommended second step after comprehensive planning and the determination of what Arizona’s recreational objectives will be.

3. Voluntary compliance does not seem to be working. In order to manage recreationists, impact fees on all public lands could support enforcement and monitoring programs. These fees could be progressive just like the toll collection systems used by DOTs and the federal tax system. More consumptive use and more destructive use translates into correlating higher fees. These fees could support more ‘sacrifice areas” for motorized use, for example. The explosion of OHVs asks for a realignment of recreationist expectations more appropriate to the impacts of fragmentation by roads, noise and changes in hydrology OHV use can bring. Educating the public to realistic expectations is an idea that might be applied to all resource users. The public might be discouraged from expecting access via roads to

wherever they want to go. For many reasons, biological as well as showing respect to landowners and their ranching business, the public may have to hike there and undergo other restrictions such as seasonal use and limited permits appropriate for wildlife and landowner operations.

4. Provisions for access on leased or private lands might accrue some long-term benefit to the land owner such as increased opportunities to conduct business or enhanced value of property. Customary gratitude and reciprocity which governed landowner relations in the past is perceived as spotty at best given current cultural disconnect and heterogeneity. The recreational opportunities open rangelands provide might justly merit appreciation through monetary remuneration.

## *Survey of Arizona ranchers*

Surveys, as mentioned earlier, were sent to the Southern Arizona Cattlemen's Protective Association (approx. 250), the Board of Directors of the Malpai Borderlands Group, (20 members), Conservation District Directory Board Members (125), and a Farm Bureau membership listing (approx. 150). The total number of surveys sent was approximately 545 with 126 filled out and returned for a response rate of approximately 27 %. (For a copy of the survey cover letter and blank survey, please see [Appendix B Rancher survey cover letter and survey](#)).

Surveys focused on the following issues. 1. *Interactions with user groups on ranch lands*: . Probability of landowner closure, What access means, Who is acceptable?, Time involved for granting access, and E. Guiding recreationists. 2. *Impacts of recreation on ranch operations*: Effects of recreationists on landowner operations. 3. *Feedback on current access programs*: Measuring the success of individual solutions and Time and frequency of visitation. And , 4. *Perception of land* . Results for each are discussed below, including results in a tabular form.

### *Interactions with user groups on ranch lands( Table1)*

#### *Probability of landowner closure (questions 1-5)*

Survey respondents seemed evenly split in terms of whether or not they had ever restricted access to their private or leased land. Commentary suggests that predominant reasons for closure were damage and theft of equipment. Many ranchers said that they restricted access on their private lands, but not on their leased lands. At present, fewer than half restrict

access although a high number of no clear answer responses for Question 5 suggests, that many landowners may be considering closing access. (In retrospect, throughout the survey I should have separated private from leased lands.)

*What does access mean (questions 6-7)*

The vast majority, 98 versus 12, of those that have limited access, don't believe that their closure had any effect on preventing access to the land in question by a different route. In support of this belief is the high proportion, 66 versus 9, of those who trust that *access* really refers to *ease of access* rather than a literal way to reach the recreationists' destination. One commented that ease of access is the crux of the issue since "people use roads that ranchers have put in".

*Who is acceptable? (questions 8-9)*

Responses suggest that preferences are clear: Yes to hikers, bird watchers, wildlife viewers, hunters, and (when applicable), anglers. No to OHV users and target shooters. By a factor of nearly 3 to 2, landowners prefer smaller groups of 1-2. And by a ratio of more than 3 to 1, landowners prefer the smallest group to those of 6 or more. Often ranchers mentioned that all non-vehicular traffic was welcome. Hunters were considered by many to be conscientious and respectful. One rancher pointed out the fact that hunters were more knowledgeable than others [about open space] because of the greater likelihood of their having read rules and regulations published by Arizona Game and Fish concerning National Forests and Recreation Areas. Campers, hikers, bird watchers, and others were considered unlikely to be familiar because of mistaken assumptions that these regulations did not apply

to their own behavior. Yet hunters were chided for using "very large travel trailers" that camped and parked en masse leaving a lot of destruction. Size limitations for these trailers were suggested. Many comments reflect the idea that all of the above user groups may be considered legitimate and appropriate to the recreational use of private and leased lands dependant upon their behavior. One rancher likened the user to a barrel of apples: ninety percent of the apples are good but the ten percent who are not...

*Time involved for granting access ( question 10)*

Time spent arranging for access doesn't appear a definitive reason for closing access: only 12 responded with checks in the *very time consuming* category with 44 finding the arrangements *somewhat time consuming* while more, 56, declaimed time as *not a factor at all*.

*Guiding recreationists (questions 11-13)*

OHV users again appeared here as a primary reason for determining the rancher's decision of whether or not to grant access. Hunters, although shown to be far more acceptable, were not considered to be behaving: 92 respondents clearly doubted that hunters remained on the roads with their vehicles irrespective of the issue of retrieving downed big game.

Landowners showed an evenly mixed response to a willingness to work with user groups directly concerning recreational access.

<b>Table 1. Interactions with user groups on ranch lands</b>	
<i>1. Have you ever restricted access to public and/or state trust lands by way of your private or leased land?</i>	
	No. of responses
Yes	50
Seasonally	6
No	63
no clear answer	7
<i>2. If so, why? (Selected commentary)</i>	
<i>Restrict access when leave for a few days, otherwise people will steal things as they drive by headquarters</i>	
<i>Concern regarding liability issues and public's disregard for private property</i>	
<i>People driving though at all hours and not always sober</i>	
<i>Alternative access routes exist through public lands</i>	
<i>Restrict access only on personal driveway to and past headquarters</i>	
<i>Wet conditions</i>	
<i>The public steal everything that is not tied down</i>	
<i>Shootings at buildings, tanks and people</i>	
<i>Nasty attitudes</i>	
<i>Homestead has been robbed</i>	
<i>During the fire season of 2003 people flocked to our land and stayed for weeks on end</i>	
<i>To protect the landscape and habitat for wildlife</i>	
<i>Did not want biologists to conduct a diversity study</i>	
<i>3. Do you presently restrict access to public land and/or state trust land through your private or leased land?</i>	
	No. of responses
yes	43
Seasonally	2
No	77
no clear answer	5
<i>4. If so, why? (Selected commentary)</i>	
<i>We never turn anyone away but require them to sign in</i>	
<i>Wet conditions</i>	
<i>To protect newly released condors</i>	
<i>We limit numbers according to what we in terms of wildlife numbers. We may allow scientists is but we use seasonal and practical knowledge in timing their stays</i>	
<i>Don't like people driving through my yard</i>	
<i>Seasonal deer hunting and fishing</i>	
<i>Access gates are locked to deter public at large but local land officer and others can access thru gate</i>	
<i>Open to non-vehicular traffic during hunting season</i>	
<i>Foot access only with exceptions made for handicapped and elderly</i>	
<i>Campfires have spread over onto pastureland</i>	
<i>We don't restrict access but have seen poaching as a problem</i>	

<b>Table 1. Interactions with user groups on ranch lands (cont).</b>							
<i>5. If you do not now limit access, are you thinking of it in the future?</i>							
				No. of responses			
yes				34			
Seasonally				8			
No				45			
no clear answer				39			
<i>(Selected commentary)</i>							
<i>Yes, because more and more people abuse the privilege</i>							
<i>No, we find more vandalism and cut fences if we attempt to close access</i>							
<i>6. Has your limiting of access prevented anyone from accessing the land from a different location?</i>							
				No. of responses			
yes				12			
seasonally				2			
no				97			
no clear answer				15			
<i>7. Do you feel the demand for access is because of <b>ease of access</b> rather than lack of available access?</i>							
				No. of responses			
yes				67			
no				11			
no clear answer				49			
<i>8. Please assess the compatibility of the following user groups with your private or leased land:</i>							
	<i>Hunters</i>	<i>Hikers</i>	<i>Equestrians</i>	<i>Anglers</i>	<i>Wildlife groups</i>	<i>OHV-users</i>	<i>Target shooters</i>
Compatible	82	89	82	39	68	28	33
Incompatible	32	22	27	25	36	94	81
no clear answer	12	14	17	29	20	10	13
not applicable	0	1	1	35	2	0	1
<i>9. Please rank your preferences for size of user groups:</i>							
	Group size 1-2		Group size 3-5		Group size 6 or more		
compatible	91		69		30		
incompatible	10		28		65		
no clear answer	26		29		30		

<b>Table 1. Interactions with user groups on ranch lands (cont.)</b>	
<i>10. How much of a factor in considering recreational access is the time spent arranging for visitation?</i>	
	No. of responses
very time consuming	12
somewhat time consuming	44
time is not a factor	56
<i>11. How important is a concern for off-road vehicles in your decision to grant or not grant access?</i>	
	No. of responses
important	94
somewhat important	19
not at all important	8
no clear answer	5
<i>12. Do you think that hunters go off-road with their vehicles other than just to retrieve downed big game?</i>	
	No. of responses
definitely	92
maybe	31
not at all	1
no clear answer	2
<i>13. Have you been or would you be willing to work directly with user groups to provide recreational access?</i>	
	No. of responses
yes	40
maybe	43
no	37
no clear answer	6

*Impacts of Recreation on Ranch Operations ( Table 2)*

*Effects of recreationists on landowner operations (questions 1-3)*

Unfortunately it seems that the recreationist has the potential for interfering with the heart of ranch work. There was a clear cut response of 92 *yes's* versus 23 *no's* to the question of whether or not recreationists interfered with managing stock. The more general phrasing of the question of interference couched as *daily operations of the ranch* returned 77 *yes's* , and the work for construction of fences followed shortly on the heels, with 75 *yes's*. Questions 2 and 3 addressed specific impacts of visitation. The concerns were widespread and high for all listed. The deepest concern was for the *destruction of equipment*, its *theft*, and *rangeland health*: all factors at the heart of a ranching operation. *Cultural resources* were deemed at risk as well. A worry for invasive species was significant too at a pretty even split of 62 *yes's* and 55 *no's*. Levels of concerns for repercussions of recreationists are at a high level overall. Again, off road driving had the dubious distinction of bothering the rancher most. *Littering by non-hunters*, and *gates left other than as found* were essentially as high in terms of perceived threats. Vandalism scored high as did ideas of recreational access somehow encouraging access by “illegal travelers”. (Considering that close to one-third of the target list included ranchers further from the border in Northern and Central Arizona, the 63 listing for perceived increase of trespass by illegals should be considered problematic.) The general recreational public itself was not deemed particularly competent with 50 responses marking off a moderate level of *need for rescue*.

**Table 2. Impacts of recreation on ranch operations**

*1. Which, if any, of the following operations do recreationists interfere with, in your opinion*

	Chaining	Chemical defoliation of invasive species	Managing stock	Construction of fences	Daily operation of the ranch
no	85	84	23	41	38
yes	26	28	92	75	77
no answer	11	10	9	9	8
not applicable	6	5	1	1	1

*2. Do you have concerns that recreationists might bring any of the following:*

	Invasive species on tires, clothing, etc.	Theft	Destruction of equipment	Effects on forage and health of land	Negative effects on resources
no	55	19	10	20	35
yes	62	101	108	101	82
no answer	9	7	8	10	10

*3. Please note your level of concern for each of the following:*

	high	medium	low	no clear answer
Off-road driving	101	10	4	10
Litter from hunting	77	23	18	8
Other Littering	92	18	7	9
Driving by headquarters	49	24	38	14
Disruption of wildlife	43	47	24	13
Increased visits by illegals	63	18	30	14
Frightening stock	55	30	29	12
Need for "rescuing" public	17	50	41	16
Vandalism	78	30	8	10
Gates left other than how they were found	94	17	6	9

*Feedback on current access program ( Table 3)*

*Measuring the success of individual solutions (question 1)*

The winner in terms of assistance from agency input seems to be *cattle guard installation* with successful and somewhat successful ratings at 41 and 37 counts, respectively. But trailing not too far behind is an unsuccessful rating by 27 responses. *Seasonal permits and seasonal closures* bring up a close second with *financial and other support for wildlife* and *financial and other support for habitat restoration* each receiving essentially the same response. Although I have spoken with recreational groups, ranchers and agency personnel who have seemed happy with work by volunteers done in the spirit of reciprocating for allowed access, on the survey, ranchers recorded their help with a poor rating: only 13 *successful* , 13 *somewhat successful* and a high 57 *unsuccessful* responses. This group also received the highest number of *no clear answer* responses, indicating perhaps that volunteer work is not widespread.

*Time and frequency of visitation (question 2-4)*

As a follow-up the first question's reference to the seasonal permits/closures, question 2 sought to better delineate possible ways of returning control to the rancher. From the responses it seems that none of the alternatives were particularly attractive to the rancher with the exception of *limiting access to during hunting season only*. Again, hunting groups seem welcome by the rancher. Perhaps hunting season dovetails well with timing for cattle raising operations? Perhaps it is the simplicity of the delineated access time that is attractive?

Question 3 focused on monitoring and control relative to public agencies. In terms of receptivity to the listed government agencies, US Fish and Wildlife, Arizona Game and Fish , US Forest Service, BLM, NRCS, and US Border Patrol / Customs, *USFW* appears least welcome and *NRCS* most welcome. Perhaps there is a negative linkage from the rancher's perspective to a concern about the discovery of endangered species on their land/leased land and a positive linkage the many programs that NRCS is working to bring to the rancher from the Farm Bill, etc. Generally, ranchers indicated a positive to neutral view of agency personnel. Comments suggested that agencies were effective or not on an individual basis.

Question 4 explores direct incentives for granting access. A response number of 58 *yes's* sends a clear message connecting opening lands with the ability to share in monies for hunting/fishing permits. Yet, a pretty high *maybe* rating suggests that the ranchers are wary of any controls such an agreement may bring and wish to know more about the terms of a possible permit-share program. A hopeful response concerning *yes* to a willingness to try communications equipment for some surveillance capability concerning recreationists deserves, I think, consideration. It appears to be a reasonable desire on the part of the rancher and would inspire, perhaps, closer working relationships with agency personnel.

**Table 3. Feedback on current access programs**

*1. How successful are the following solutions*

	successful	somewhat successful	unsuccessful	no clear answer
Cattle guard installation	41	37	27	21
Seasonal permit/seasonal closure	28	38	26	34
Volunteers for ranch maintenance	13	13	57	43
Financial and other support for wildlife rehabilitation	18	34	38	36
Financial and other support for habitat restoration	28	34	39	35

**Time and frequency of visitation**

*2. If you were to open your lands to access on a limited basis what would be your preferred ways to limit access*

	very effective	somewhat effective	not at all effective	
Hunting season only	26	33	28	38
Weekends only	7	25	46	47
Weekdays only	5	26	42	52
Specified weeks/ Weekends	9	28	39	49
Seasonal closure of roads	17	30	32	47
Closure of trails	15	22	41	47
Camping closures	14	25	38	47
Limit to length of stay	13	29	36	47
When needed for management	16	33	23	54

**Table 3. Feedback on current access programs (cont.)**

**Monitoring and control**

3. How would you feel about increased contact between the ranch and field-going agency personnel from each of the following agencies:

	would like that	indifferent	would not like that	no clear answer
US Fish and Wildlife	36	26	48	14
Arizona Game and Fish	57	35	22	11
US Forest Service	45	35	26	19
BLM	37	42	26	21
NRCS	65	32	10	18
US Border Patrol / Customs	53	36	15	21

4. Would you be more willing to grant hunters access:

a. If you were allowed to sell permits for hunting/fishing on leased or private land?

No. of responses	
Yes	59
maybe	30
no	27
No clear answer	11

b. If you were provided closer links with agency personnel with communications equipment in strategic locations?

No. of responses	
Yes	28
maybe	52
no	35
No clear answer	12

Perception of land by ranchers ( Table 4).

When asked Question 1, “*Do you feel that recent customary access to a land is important to preserve for the people of Arizona?*” most ranchers affirmed that right with a 36 definite *yes, I believe that as a right.* and a 49 *somewhat important* in contrast to a 26 *no, not at all important* and 17 *no clear answer*. In agreement with this sentiment was the rancher’s view that their non-deeded grazing lands, even those upon which they had themselves made improvements were still meant for shared use. Only 14 agreed that these lands were *not at all* open to others. One no clear answer response commented that customary access “is just a smokescreen for more control of private land.” That agreed upon, the primary purpose of these lands was definitively seen to be grazing by 53 ranchers, as expressed in question two.

Questions 3 and 4 ask if recreationists have a deleterious affect on the number of cattle positioned on ranching lands. Response indicates, not much, with the highest response by a strong margin in the *not at all* category. The response to Question 5, “*Do you feel that your rural lifestyle will be/is interrupted by the presence of strangers coming through your land?*” was definitive. Privacy issues do seem to be very relevant to considerations for granting or not granting access, with a resounding 79 replying that *yes they feel that their rural lifestyle is interrupted by strangers* coming by. Although Question 6 could be considered a follow-up to this question or a lead-in to the next section on wildlife, if one were to interpret Question 6 in light of the first option the equally strong response of 81 saying *yes, definitely* to the question of access being dependent upon the type of land might be understood as meaning that ranchers do not mind granting access to lands remote to their headquarters or private facilities, but do object to people coming closer by. One rancher felt

strongly that fenced lands were not appropriate for recreational access while unfenced lands were. Another rancher commented and I think importantly, that “private land, wherever it is, is under the gun already. Cannot imagine opening a gate to it without dire consequence: once open hard to shut.”

*Questions 7- 11.* These questions are centered on the topic of wildlife, an issue discovered through meetings and interviews to be close to the heart of the rancher. The survey results concurred with my earlier understanding that ranchers are deeply attached to the wildlife on their lands. A strong aversion was registered against *off- highway vehicles* with 109 believing their use destructive to the wildlife on their lands. A reaction against *camping* was definite too with 58 believing this recreational use destructive. *Hunting*, was next but only with 35 negative responses. *Birdwatching*, *wildlife viewing* and *hiking* were seen to be far less destructive, but their impacts were recognized by some as disturbing to wildlife, as registered also in interviews. Naturally, wildlife is understood within the overall scheme of the ranching business. The majority of respondents perceived a risk of access to be the protection of wildlife at the expense of their rancher’s enterprise with: 63 replying *yes* and 33 replying *somewhat* to Question 9, presumably by reason of the introduction of external controls and regulations. At the heart of the issue may be a fear, registered by an affirmative response to Question 10, referring to the discovery of a federally listed or declining species. That said, Habitat Conservation Plans were in balance interpreted not to be an issue.

**Table 4. Perception of land by ranchers**

<i>1. Do you feel that recent customary access to a land is important to preserve for the people of Arizona?</i>		
	no. of responses	
Yes, I believe in that as a right	36	
somewhat important	49	
no, not at all important	26	
no clear answer	17	
<i>2. How do you view public/state lands on which you pay grazing fees and have made improvements:</i>		
	“Common lands for shared use”	“Lands who’s primary purpose is for grazing”
Yes, definitely	36	53
somewhat	57	40
Not at all	14	16
no clear answer	20	18
<i>3. Do recreationists to any degree affect the number of AUMs licensed on your deeded land?</i>		
	no. or responses	
Yes, definitely	15	
somewhat	20	
Not at all	76	
no clear answer	16	
<i>4. On your leased lands?</i>		
Yes, definitely	30	
somewhat	30	
Not at all	51	
no clear answer	16	
<i>5. Do you feel that your rural lifestyle will be/is interrupted by the presence of strangers coming through your land?</i>		
	no. of responses	
Yes, definitely	79	
somewhat	35	
Not at all	9	
no clear answer	3	

<b>Table 4. Perception of land by ranchers (cont.)</b>			
<i>6. Is your decision to grant or not grant access affected by the type of land in question?</i>			
			no. or responses
Yes, definitely			81
somewhat			23
Not at all			17
no clear answer			5
<i>7. Do you feel that wildlife will be negatively impacted by allowing recreation on the land?</i>			
			no. or responses
yes, definitely			61
somewhat			50
not at all			12
no clear answer			3
<i>8. Please check any of the following that you feel are destructive to the wildlife and/or the lands under your care</i>			
Horseback riding	<input checked="" type="checkbox"/>	16	
Bird watching	<input checked="" type="checkbox"/>	13	
Fishing	<input checked="" type="checkbox"/>	11	
Hunting	<input checked="" type="checkbox"/>	35	
Wildlife viewing	<input checked="" type="checkbox"/>	16	
Camping	<input checked="" type="checkbox"/>	58	
Off-highway vehicles	<input checked="" type="checkbox"/>	109	
Hiking	<input checked="" type="checkbox"/>	16	
<i>9. Do you have concerns that opening up your land will encourage the protection of wildlife at the expense of ranching?</i>			
			no. or responses
yes, definitely			63
somewhat			33
not at all			26
no clear answer			6
<i>10. Are you concerned that inviting more people on the land might encourage the discovery of a federally listed or declining species of plant or animal</i>			
			no. or responses
yes, definitely			47
somewhat			39
not at all			35
no clear answer			7

<b>Table 4. Perception of land by ranchers (cont.)</b>			
<i>11. In your experience have Habitat Conservation Plans (HCPs) been</i>			
	<i>...limiting to your operations?</i>	<i>... expensive?</i>	<i>.... time consuming?</i>
yes, definitely	33	39	45
somewhat	27	25	25
not at all	43	36	30
no clear answer	25	28	28
<i>12. It has been said that it is the present generation that will determine the future shape of the West. Do you believe that the public is willing to act, in a sense, as investors in private lands by paying private landowners, like ranchers, the money needed to protect public values—like open space, wildlife habitat, and access to public lands?</i>			
<i>☞</i> Comments added by ranchers: 61 statements	no. of responses		
yes, definitely	19		
somewhat	50		
no clear answer	47		
<i>13. Closing thoughts? (to follow)</i>			

Question 12, the final question of the survey, asks if the rancher believes that the public is willing to offer more than just nominal approval for the protection of ranching interests and the role of ranching in the preservation of open space. The answer is for the majority, 50 versus 19, a disappointing no. Is this an accurate reflection? Are people genuinely interested but not financially willing?

*It has been said that it is the present generation that will determine the future shape of the West. Do you believe that the public is willing to act, in a sense, as investors in private lands by paying private landowners, like ranchers, the money needed to protect public values—like open space, wildlife habitat, and access to public lands?*

(Comments below have been selected to represent expressed ideas)

**No:** *the majority thought no, the public would not be willing to pay*

★ *No, not at all. The public appears ignorant, indifferent and in opposition to landowners*

★ *The present generation along with the government and environmental extremists are bent on eliminating private land as fast as possible.*

★ *No. Most believe it is their right to do whatever they damn well please especially on public land*

★ *No because for generation after generation the public has free access to public land*

★ *No, do not believe that city dwellers will want to pay anything*

★ *No, our state does not have the resources needed*

★ *I believe in individual rights and private property. I do not believe in group or communal rights*

★ *Doubt if nation will survive as a republic or go as other nations before us*

- ☆ *The public has been reluctant to even discuss the issue of support although that is what is needed*
- ☆ *No! The public in general does not want to pay for open space—just wants the local government to zone it that way.*
- ☆ *I hope this survey reveals why ranchers don't look upon access to the public as a positive thing... If we received more respect maybe we would be more open to access!*
- ☆ *The agenda of the public and the rancher for the public space is **very** different*
- ☆ *Public is not willing to act to save ranching because of federal controls and portrayal of ranching by the media*
- ☆ *The war of the West and its culture is almost over—only we don't get a reservation*

**Maybe:** *faintly but optimistically expressed*

- ☆ *I believe that the public is finally recognizing this need, but it may be moot; there may be little left to protect by the time support is mobilized*
- ☆ *There can be common ground but it will require a much better-educated public*
- ☆ *The public should support ranching and think the time will come when government agencies will pay ranchers to manage properties*
- ☆ *The public has to decide if they want to have ranches here or not. If they get rid of cattle the dead grasses will build up and we are going to have high fires. I think the rancher could provide a service to the general public but we have to survive financially*
- ☆ *Some are doing it but the public at large is only beginning to be aware of the issue*

- ☆ *Those who show a willingness to invest in public values have an understanding of land management. The problem lies with those who are not educated or simply do not care about watershed, vegetation, and wildlife*
- ☆ *The public would support payment to ranchers or other landowners to support public values if the facts about ranching were presented objectively, which they are not*
- ☆ *Today it takes money to protect land and natural resources*
- ☆ *Not yet*
- ☆ *If the public is educated about the resources ranchers provide for wildlife and the conservation efforts in place by ranchers, Yes, I think they will understand and join us in that investment*

**Yes: a minority response**

- ☆ *Yes, through a lot of cooperation on everyone's part to make it all work*
- ☆ *I think the public is interested in preserving land but do not really know the effects public land managers are having toward ranchers being able to continue to operate in a normal profitable manner*

**Related commentary**

- ☆ *If the public were to contribute they might feel they have the right to a form of ownership and management for something about which they know nothing*

- ☆ *I fees were to be generated for recreational access, they should go to the State Land Department rather than Game and Fish*
- ☆ *Right to access public and state lands is not free is carries responsibility*
- ☆ *The present generation has no business determining the future shape of anything, especially something they know nothing about. I live on 80 acres, generate my own power and haul my water. I raise my own beef and can home grown vegetables and fruit. I conserve power by having appliances on timers and I know how much water it takes to flush a toilet, run the washing machine or a load of dishes in the dishwasher. When the youth of today can prove conservation through their actions then maybe they will have the right to an opinion in determining the future shape of the West.*

***Other comments:***

**Ranchers expressed that they and their lands received little respect from recreationists**

- ☆ *Dislike of private land used as a parking lot to public land*
- ☆ *Perception by women who left gate open; “It should be against the law for anyone to own this much land.” Another man picked fruit off their trees and when told he was trespassing and picking fruit off private property he continued anyway and only left when box was full.*
- ☆ *Most believe it is their right to do whatever they darn well please*
- ☆ *The public appears ignorant, indifferent and in opposition to landowners*
- ☆ *The public seems to want the best of both worlds. Our experience on our property is that people are becoming more careless, litter more, drive in inappropriate areas at inappropriate times... scaring the land*

- ☆ *Increasingly is an attitude of “What’s the big deal? We’re driving in the woods?”*
- ☆ *Most hunters are good considerate people but they are for the most part city dwellers and do not understand the damage they cause to rural areas*
- ☆ *If and when we close our ranch it will be in response to a quad runner of some sort*
- ☆ *If public were to pay a fee for use of the lands, then they would demonstrate even less respect by cutting fences and leaving more litter.*
- ☆ *The public ignores signs that ask them not to camp near water, to close gates or refrain from trespassing*
- ☆ *The Border Control, although needed, in chasing after illegal immigrants is destroying a lot of habitat daily*
- ☆ *We have 75 cows on 25,000 leased acres: very low impact from cattle; very high impact from the public*
- ☆ *Biggest issues are protecting condors and archeological sites*
- ☆ *The public mistakenly views ranchers as wealthy landowner when the reality is that we are just getting by*
- ☆ *If people who object to closed gates had to pick up trash, beer cans, and fix all the gates each season they too would deny access*

**Comments concerning government agencies**

- ☆ *General feeling that agencies have a negative attitude toward ranchers*
- ☆ *Feeling that all have allied with environmental groups and lost sight of their original missions*

- ☆ *“How do you make a millionaire? You start with a billionaire and give him a ranch. Government agencies will do the rest. “*
- ☆ *Belief that agencies are dedicated toward the removal of ranching, particularly Game and Fish*
- ☆ *People do not value private property rights*
- ☆ *Too much fake sciences on BOTH sides has distorted the issue*
- ☆ *The ranching community is the federal and state agencies’ first line of defense for protecting the land and its resources. Until this is recognized by the agencies conflicts will continue. The agencies need to change their attitude and treat the ranchers with respect*
- ☆ *The public is willing to have laws put in place then on a personal basis break these laws*

### **Conservation versus preservation**

- ☆ *Belief that the rancher cares for the land and its wildlife best and without them the land will dry up and be at the mercy of invasive species like Tamarisk*
- ☆ *Urban society is so removed from the farm or ranch that they have no idea what is involved with either. The true stewards of the land are those that derive their livelihood from that land*
- ☆ *Conservation—USE it within its capabilities and treat it according to its needs*
- ☆ *Individuals, groups and organization exist whose purposes appear to be to ‘put the earth in a jug’ by use of Congressional mandates, litigation, demonstration, delay tactics, emotional appeal and downright greed*

- ☆ *Let's protect the forest by harvesting trees when ready and doing away with coyotes and harmful thistles and beetles and yellow jackets. Let's cut back on the numbers of elk and push up the production of cattle which are so useful*
- ☆ *Maybe the public will support us but think they would rather take the land and designate it for preservation*
- ☆ *Thirty years of agendas and advocacy since the ratification of the ESA, urged on by radical environmentalism on a "war" footing (spare no expense) have destroyed most of the stable land husbandry of the Western U.S. The result has been wholesale abandonment to real estate developers—the only significant, lasting legacy of environmentalist zealotry*
- ☆ *Extreme groups have made the rancher the enemy of public lands*
- ☆ *Environmental groups have driven livestock off the land, forcing us to sell our deeded land and abandon our lifestyle. The beautiful lands are subdivided into mobile home lots, compromising animal habitats sites for antiquities. It's too late!*
- ☆ *Too much non-scientific work has already impacted our ranches*
- ☆ *Environmentalism is not a bad thing, ranchers and farmers, for the most part, have been environmentalists long before the word was ever known. The ESA was never meant to be used as a weapon against the backbone of the country, agriculture and natural resource use*

**The traditional cultural legacy shared by the ranching community: The ranchers' code**

- ☆ *Ranchers, most that I know, don't mind sharing their land with responsible individuals. It is their home, their life. They are proud of what they have developed over the years*

- ☆ *We restrict access but never deny a specific request to enter. Folks that seek permission can be an asset*
- ☆ *Making room and opportunities for the public for hunting and recreation is part of our job; but our leases need to be honored in that context*
- ☆ *Most people who have not grown up in Arizona or other parts of the West do not know about the ranching way of life and do not have ranch values*

### **Who is the appropriate steward of public lands?**

- ☆ *Disagree with idea that the public should be involved with stewardship directly. Believe that Forest Service is doing a good job of guarding public lands*
- ☆ *The public needs to know that rancher's stewardship is essential to open space, healthy resources and a strong economy*
- ☆ *Hunters largely view ranchers as friends while "environmentalists" see ranchers as a roadblock*

### **Tribal ranching**

- ☆ *On the Navajo reservation it is very difficult to invite public monetary support*
- ☆ *Our young Navajo people are rapidly losing their traditional values for the land and animals. Lack of local education and western influences are factors*
- ☆ *On tribal lands overlapping policies hinder receiving USDA funds that would otherwise be readily available to us such as EQIP monies that require archeological clearances first*

- ☆ *Demand for access happens for ease of access for wood haulers and hunters*
- ☆ *Believe that more people on the reservation have some knowledge of conservation and the need for a balance among wild animals, domestic animals and people. The responsibilities of a rancher are huge and include the need for respecting this overall balance*

### **Closing thoughts**

- ☆ *We need each other and all the help we can get*
- ☆ *Completely disagree with land trades with the Forest Service.*
- ☆ *Responsible people on the land are not the problem, although there is an upper limit to capacity*
- ☆ *Access is not a 'public value" it is a value to those wanting access-they should pay for it. Open space, wildlife, clean air and water are public values that taxpayers should pay for and offer incentives to landowners to provide*
- ☆ *Private property rights trump recreational uses*
- ☆ *Widespread confusion exists on the part of public in believing that State Trust Lands are public lands*
- ☆ *We have been ranching in Northern Arizona for many generations but believe that our small operation which brings a sense of family heritage to our grandkids will come to an end in just in few years as a result of surrounding development*

☆ *We are all in this together: the ranchers, loggers, hunters, fisherman, hikers, and so forth. But do believe that any recreation that damages the land, wildlife, or forage should be regulated or curtailed. Hunters should hunt on foot—I do*

☆ *Ranchers who are closing off access now are shooting themselves in the foot: now is the time for gaining as much favorable public support as we can achieve*

*The ranchers' voice*

Frequently cited in the survey was the belief that the public needs to be educated concerning respectful use and care of ranching lands. Concurrently held was the idea that the recreational public was often composed of urbanites who had little concept of rural life and agronomy. Ranchers overall believe that the lack of respect and resultant negative impacts is worsening. Often commented upon were the impacts of off-road vehicles particularly on wet soils. Alcohol was cited frequently as encouraging irresponsible and aggressive behavior but was noticed by the landowners to be an integral part of the visitor's weekend experience: livestock and equipment are used for target practice. Illegal traffic and litter left by all are seen as pressing problems, particularly in Southern Arizona. Also held, is the precept that only a small percentage, 5 to 10 percent of the recreational public is destructive, but that the damage left in their wake precludes granting generalized access. A central problem is that those that are wreaking damage are not caught or punished and the rancher is left to repair and pay for damages. Ancillary to this is the fact that the damage incurred is usually not seen until after a recreationist is long gone. Simple controls like requiring hunters to call first and request access, seeking written permission and arranging for key drops to gates, seem very effective.

If there were greater monitoring and control, I believe that ranchers would be more inclined to grant access, as supported by survey results that show a willingness to work with agencies through communications equipment (see Table 3. Feedback on current access programs, Question C. 4b) and many comments. Most of the ranchers comments clearly point to the idea that multiple use of public lands is welcome if people both act responsibly *and* share in

the responsibility for these lands. The corollary is of course that people who depend on the lands, the ranchers, are inclined to take better care of them than those who use them as a matter of happenstance. One rancher quoted a traditional authority on many matters, Aristotle: *What is common to many is taken least care of, for all men have greater regard for what is their own than for what they possess in common with others.*

The survey indicated a strong belief that the ranchers themselves know best how to care for their lands. Others, even outside investors, are perceived to less effective managers who may spend a lot of money just to answer specific demands of recreationists. The ranchers indicated that stewardship entails the right to govern the land including restricting access as needed. If asked for permission to use lands, ranchers generally appear happy to grant it. Although limiting size of groups seems important, most important to the rancher is his or her perception that the people allowed in are and will be responsible. Is it feasible to guarantee responsible behavior by all? Can everyone be reached to instill respect and appreciation for the land?

In sum, ranchers requirements seem simple and reasonable: asking for recreationists to respect signs and follow postings. Implicit, I think, is the rancher's trust that those who have enough respect to ask for permission will also have enough respect to abide by rules of responsible behavior. To repeat an explicit manifestation of this need for respect, "If we received more respect maybe we would be more open to access!"

The summary table below, *Table 5 Management and design solutions for access needs*, encapsulates some of the ideas expressed through the research findings of this paper, from the literature review, meetings, interviews and/or the survey. The ideas listed are meant to be starting points for paths toward finding solutions for resolving some of the conflicts that arise among land managers, recreationists and landowners in granting, establishing and monitoring access.

**Table 5. Management and design solutions for access needs**

Problems and solutions from two perspectives:

*The landowner's perspective*

*The recreationists'/agencies' perspectives*

The landowner's perspective	Solutions
<p><i>Perceived risk for liability suit</i></p>	<ul style="list-style-type: none"> <li>• State liability statutes should include clear statutory provision for a reasonable fee to all landowners who grant public access to cross their private lands to reach public lands. The fee would cover the landowner's administrative expenses related to the provision of access and attendant use. For instance fees could support the salary of a patrol person, liability insurance, and/or the cost of any repairs stemming from access. This fee should be allowed without "triggering" a higher threshold of liability, as commonly occurs, e.g., in Arizona.</li> <li>• To improve opportunities for sportsmen, state law must be changed so that Arizona which is currently one of only 6 states that doesn't have protection from lawsuits brought by an individual, does.</li> <li>• Federal and state agencies could write laws or regulations for ways in which the public agencies themselves, rather than the landowner granting access, assumes additional liability and related litigation costs. States might contribute to an insurance pool that could be available to landowners for liability expenses. The user groups might give the landowner liability insurance.</li> <li>• (CDOW) Ranching for Wildlife Program imposes additional conditions on hunters to minimize ranchers' concern with security and liability. Common ranch rules for hunters:             <ul style="list-style-type: none"> <li>○ May bring in only one non-hunting companion</li> <li>○ Must sign a liability release</li> <li>○ Must check in and check out</li> <li>○ Must stay in assigned areas to spread out and reduce hunting, as directed</li> <li>○ Must not hunt other species than those specified</li> <li>○ Must not discharge firearms unnecessarily</li> <li>○ Certain areas of the ranches may be closed for safety reasons</li> </ul> </li> <li>• If right-of-way easements are purchased to allow visitors to follow a hiking trail liability issues would be lessened as accomplished in the Trails for Vermont program             <ul style="list-style-type: none"> <li>○ Private landowners in Virginia seem satisfied with</li> </ul> </li> </ul>

**Table 5. Management and design solutions for access needs (cont).**

<p><i>Perceived risk for liability suit (cont).</i></p>	<ul style="list-style-type: none"> <li>• state law there which waives liability for persons who allow fox hunters on their property</li> <li>• Minimize liability issues</li> <li>• Safer trails             <ul style="list-style-type: none"> <li>○ Better engage the attention of users</li> </ul> </li> <li>• Change signage regularly to reengage attention of resource user and provoke adherence to specific rules and regulations</li> </ul>
<p><i>Little direct communication with the planners and specialists who acquire the easements</i></p>	<ul style="list-style-type: none"> <li>• Delineation of access needs in land-use plans</li> <li>• Type or purpose of access needed, i.e., number of miles of vehicle access required             <ul style="list-style-type: none"> <li>○ General area where access is needed</li> <li>○ Roads and trails specified to type of use, i.e., OHV or equestrian use or mountain biking</li> <li>○ Anticipated level of use</li> <li>○ Evaluation of projected impacts on resources and landowner</li> <li>○ Cost of acquisition for temporary or permanent access</li> <li>○ Time frame required for acquiring the access</li> <li>○ Oversight by public land manager for coordination with activity plans for transportation and other needs.</li> </ul> </li> <li>• Where possible, the implementation of access first at the state and local level ( federal intervention may be more restrictive)</li> <li>• Collaborative Planning principles identified in 2000 workshop of the SI and BLM. Billed as “the seven habits of effective collaboration” the principles are as follows             <ul style="list-style-type: none"> <li>○ “Build lasting relationships</li> <li>○ “Agree upon the legal sideboards early on.”</li> <li>○ Discover the effective ‘movers and shakers’ of the community</li> <li>○ Use the informal networks</li> <li>○ Work with tribal, state and local governments from the beginning</li> <li>○ Ditto for regional and national interest groups</li> <li>○ Have a variety of meeting venues</li> <li>○ Circulate newsletters and other outreach materials</li> <li>○ Respond within 24hours to e-mails and phone calls</li> <li>○ “Work at an appropriate scale.”</li> <li>○ “Empower the group.” Be careful not to give a group power and then take it away.</li> </ul> </li> </ul>
<p><i>Disruption of landowner operations</i></p>	<ul style="list-style-type: none"> <li>• Exploration of more projects such as the Humboldt County, California experiment that uses controlled ranching to restore natural ecosystems and provides recreational access.</li> </ul> <p>Alert recreational users to the importance of understanding that they are potentially interfering with the livelihood of the landowner and or lessee of the lands who is</p>

**Table 5. Management and design solutions for access needs (cont).**

<p><i>Disruption of landowner operations (cont).</i></p>	<p>voluntarily sharing this resource</p> <ul style="list-style-type: none"> <li>○ A sample admonition might read: “This access to such and such wilderness is located on private property. Please respect the land and preserve your right to use it.”</li> <li>○ Explicitly describe dos and don’ts that bring down the bottom line such as “Running cows lose weight which translates into shrinking dollars for the rancher</li> </ul>
<p><i>Appropriate compensation to landowner</i></p>	<ul style="list-style-type: none"> <li>● “</li> <li>● Alternative compensation in which a landowner receives a license for a use or right on federal land in exchange for access. This approach may be particularly valuable if permit is needed to operate on federal land. A rancher may earn reduced grazing fees. Or a landowner could enjoy facilities or permits related to operations on federal or private land.</li> <li>● Reward access with appropriate compensation with little or not strings attached in terms of regulation</li> <li>● Establish monetary incentives to rancher on a direct usage basis</li> <li>● Provide ranchers the opportunity to be receive remuneration for the time and expense taken for inviting recreationists. Ideas to be considered might include</li> <li>● Signs directing visitors to any boutique marketing efforts a rancher may take such as retail freezer/store kiosks on ranching grounds or information leading to other points of purchase for any grass-fed beef             <ul style="list-style-type: none"> <li>○ A concessionaire right such as the concession to conduct horseback trips to a lookout point to a visual resource.</li> </ul> </li> <li>● Continued support of programs such as the AZGFD Landowners Relations Program which through cost-sharing, makes improvements on the private landowner’s property in exchange for short-term or perpetual access agreements.</li> <li>● Payments for wildlife damage on private lands including crop, rangeland forage and fence conflicts between big game animals and livestock on private and public lands</li> <li>● Incentives for large-scale landowners to maximize wildlife benefits: Licenses can be sold by the rancher for use on a specified ranch. Hunters obtaining a license to hunt on these ranches are given access to private property that would otherwise be closed to public hunting</li> <li>● Estate Law Reform is seen by some as the single most important measure to preserve agriculture and the western landscape by lessening the onus of the intergenerational transfer of agricultural lands</li> <li>● Keeping the ranchers’ lands in agricultural use could bring a concessionary property tax rate</li> </ul>

**Table 5. Management and design solutions for access needs (cont).**

<p><i>Managing impacts of access</i></p>	<ul style="list-style-type: none"> <li>• Continuation of current efforts to improve rangeland monitoring so as to differentiate between varying types of use, irresponsible camping and overgrazing, for example</li> <li>• Distribution of educational information to visitors who access public land vis-à-vis private lands. A sample admonition might read: “This access to Saguaro National Park” is located on private property. Please respect the land and preserve your right to use it.”</li> <li>• Continuation of the (AZGFD)Adopt-A-Ranch and Landowner Respect Programs which focus on sportsmen’s ethics and offer opportunities for recreationists who use private lands to offer assistance with landowner projects or litter clean-up</li> <li>• Foster greater appreciation for the working landscape through better connections between the producer and the consumer: the financial promotion of farmers’ market’s, community-based agriculture, etc.</li> <li>• Better public recognition of the contributions of ranching:             <ul style="list-style-type: none"> <li>○ Role in defining the urban boundary</li> <li>○ Continuity of landscape for ecosystem protection</li> <li>○ Protection of open space</li> <li>○ Local provider of fresh/natural/organic food</li> <li>○ Historic and cultural significance including protection of archeological sites on rangeland</li> <li>○ Continuation of rangeland habitat for wildlife and plants</li> <li>○ Diversification and supplementation of the local economy</li> </ul> </li> <li>• Publicity and other measures to highlight the vulnerability of rangelands to development and the generally slim profit margin of the cattlemen</li> <li>• Minimize impacts to landscape             <ul style="list-style-type: none"> <li>○ Build trails away from highly erodible soils</li> <li>○ Restrict access to during rainy seasons when recreationists leave trails to avoid muddy trails and puddles</li> </ul> </li> <li>• Establish continuity of trails and roads to minimize wildcat trails and roads             <ul style="list-style-type: none"> <li>○ Design travel for OHV’s with connections and a variety of challenge levels and routes to prevent wildcat road</li> </ul> </li> <li>• Provide system for minimizing litter from users             <ul style="list-style-type: none"> <li>○ Have access groups responsible for the clearing away of litter and/ or any expenses necessary to empty litter receptacles</li> </ul> </li> </ul>
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**Table 5. Management and design solutions for access needs (cont).**

<p><i>Concerns for disruption of wildlife on landowner's property</i></p>	<ul style="list-style-type: none"> <li>• Minimize interference with wildlife             <ul style="list-style-type: none"> <li>○ Provide a buffer between trails and sensitive habitats</li> <li>○ Close access during vulnerable seasons such as breeding season</li> </ul> </li> <li>• Promotion of rancher's appreciation and care for wildlife</li> <li>• Education concerning the fragility of the desert rangeland and vulnerabilities to erosion, invasive species, etc.</li> </ul>
<p><i>Vandalism and inadequate levels of law enforcement</i></p>	<ul style="list-style-type: none"> <li>• Investment of more effort and resources into people management on the part of the agencies</li> <li>• Recognition that where there is access to federal lands there are needs for protection of resources and people</li> <li>• Prevention through visible law enforcement</li> <li>• Support of landowners who pursue enforcement actions by user groups, local, state, and federal agencies</li> <li>• A well funded entity that guarantees the land owner will not be subject to property loss</li> <li>• One model for generating monies [for monitoring] are OHV fees when all are registered. Register all OHVs. (Presently, they are not registered unless they are used on roads, like motorbikes. Quad cycles are not registered.)</li> <li>• Increase accountability for recreationists' use of trails             <ul style="list-style-type: none"> <li>○ Increase ease of monitoring</li> <li>○ Reduce numbers of trails</li> <li>○ Enforce monitoring</li> <li>○ Signage clearly stating fines with promises of enforcement for rule infractions</li> <li>○ Establish and relay specific contacts to landowners with Federal and county land managers to alert in case of threatened access</li> <li>○ Establish patterns of recreational access so as to clearly distinguish any negative range impacts attributable to recreation such as inappropriate camping or OHVs use from the effects of drought and/or negligent ranching practice</li> </ul> </li> <li>• Make each rule count: recreationists have limited patience</li> </ul>
<p><i>Perceived lack of control</i></p>	<ul style="list-style-type: none"> <li>• If a landowner is not given control over the timing of the access then repercussions can be costly</li> <li>• Limited seasonal access since certain parts of the year are more labor intensive for the rancher</li> <li>• Some land owners may give permissive access rather than legal access due to enhanced control of the first option. They have a strong bargaining tool when the access can be revoked.</li> <li>• Restrict access to archeological sites</li> <li>• Flexibility of trail markers</li> <li>• Light on the land and easy to move signage in</li> </ul>

**Table 5. Management and design solutions for access needs (cont).**

<p><i>Perceived lack of control (cont).</i>  <i>Competition for river bottoms between cattle and recreationists</i>  <i>Distrust of agency and land manager personnel</i></p>	<p>case trail placement needs to be altered</p> <ul style="list-style-type: none"> <li>• Use of Crystalyx® or other moisture blocks, for better cattle distribution on an allotment</li> <li>• Clear separation of interests between agency personnel and environmental groups and other outside interests</li> </ul>
<p><i>The recreationists'/agencies' perspectives</i></p>	<p><i>Solutions</i></p>
<p><i>Lack of coordinated interagency plan for access</i></p>	<ul style="list-style-type: none"> <li>• A statewide access program could help create an awareness and education tool for both land owners and the public, which in turn could make federal agencies more effective when seeking access. Unless access is an issue tackled by Southwest Strategy, or other multi-agency team, it is unlikely that federal, state and private entities will work together to solve problems on a statewide level. It is foreseeable that counties will play a pivotal role in claiming county roads, but has not been the case in Arizona up to now. Furthermore, the question of how much access to public lands needs to be answered to define the project.</li> </ul>
<p><i>Insufficient leadership attention to the issue of access</i></p>	<ul style="list-style-type: none"> <li>• Possibly a third party could facilitate agreements between agencies and land owners. Such an organization would provide the initial research and contact with the land owners to the determine their level of interest in providing access. This way, the agency doesn't have to raise the issue, but can concentrate efforts on the legal process of acquiring access.</li> <li>• A BLM- wide data base which describes the scope of the problem, acreage of public lands which are unavailable for public uses, numbers of easements needed and estimated costs</li> <li>• Inclusion of appropriate public access to BLM lands as a prominent feature of all BLM land use plans</li> <li>• Provisions for the protection and management of sensitive resources in planning public access made prior to opening of added areas</li> <li>• Long-term and short-term budgets for access acquisition. (Budgets reflect a total cost approach with support funding from related resource management programs to prevent degradation and damages</li> <li>• County road record research in priority counties. (Counties could be asked to fund part/all of this research since they are the primary beneficiaries of the work).</li> <li>• Any roads found to provide access to public lands should be signed and made available for public use</li> </ul> <p>Promote community involvement with selection and self-limitation of trail access</p>

**Table 5. Management and design solutions for access needs (cont).**

<p><i>Insufficient leadership attention to the issue of access (cont).</i></p>	<ul style="list-style-type: none"> <li>• Actively recruit community involvement for planning design of trail             <ul style="list-style-type: none"> <li>○ Agency field personnel and the landowner should definitely be consulted in trail design and placement</li> <li>○ Agencies should share in accountability for negative impacts recreationist brings</li> <li>○ With community members brainstorm in developing alternatives to the private automobile to reach access points</li> <li>○ Bolster volunteer efforts for building and maintaining hiking and biking paths</li> </ul> </li> <li>• Garner support for sales tax and other funding mechanisms to develop recreational paths</li> </ul>
<p><i>Inadequate access</i></p>	<ul style="list-style-type: none"> <li>• Is there anyone in the middle, granting access or hunting by permission?</li> <li>• Emphasis on maintaining historical access. People of the state might be able to say that if there has been historical precedent to use that road for access then Fed agencies should be able to work in cooperation through a streamline process to guarantee permanent access</li> <li>• State and local options such as searching old county records for possible county rights-of-way</li> <li>• Request of county commissioners to reopen old routes that may be traceable</li> <li>• Petition of county commissioner to put routes on county records</li> <li>• Suits may be filed to open and retain established public or prescriptive routes using state and/or federal statutes</li> <li>• Funding stream for State Lands to maintain and acquire rights-of way by sharing in sportsmen's fees</li> <li>• Future access: The key in the future will be to retain contiguous blocks of public land that can be managed by one agency, primarily for efficiency of operation and consistent mission across all lands</li> </ul>
<p><i>Managing impacts of access</i></p>	<ul style="list-style-type: none"> <li>• Tracking impacts thru use of an information clearinghouse (an 800 telephone number?)</li> <li>• After a critical point of costs is reached, analyze why the problem exists</li> <li>• Impacts are above anticipated levels, then the agency responsible for the access should generally take the lead in remedying the situation.</li> <li>• Develop a response system to the landowner</li> <li>• Motivate with incentives and disincentives to respond to landowner concerns</li> <li>• Design travel for OHV's with connections and a variety of challenge levels and routes to prevent wildcat roads</li> <li>• Reward personnel who implement successful solutions</li> <li>• Write budgets to address impacts</li> <li>• Assign priority to the issues</li> </ul> <p>Grant flexibility and authority to local managers for problem resolution</p>

**Table 5. Management and design solutions for access needs (cont).**

<p><i>Managing impacts of access (cont).</i></p>	<ul style="list-style-type: none"> <li>• Relieve pressure on problem areas by getting the word out for other access opportunities and granting access elsewhere</li> <li>• Limit use in problem areas by restricting access to non-vehicular use and/or requiring an entrance permit</li> <li>• Support landowners when they complain that access is not working by closing access as necessary</li> <li>• Improve inter-agency communication for addressing access impacts</li> </ul>
<p><i>Minimizing the effects of OHV use</i></p>	<ul style="list-style-type: none"> <li>• Increasing membership in OHV clubs to teach responsible use and secure volunteer labor for repairing damage to trails and landscape and other volunteer projects</li> <li>• Educational flyers at points of sale of OHV vehicles and/or required licensing similar to Motor Vehicle Departments</li> <li>• Increase availability of maps through internet postings</li> <li>• Clarification of allowed trails by the display of maps from ranger stations, kiosks and the internet</li> <li>• Clarification of access trails to user trails since wildcat roads and trespass are often seen as the result of poor knowledge of the area</li> <li>• OHV use could be limited. Forest Service and BLM to develop a land use map showing which roads these vehicles would be allowed on. All other roads would not be shown on map.</li> <li>• A Legislative Workgroup of the Arizona Game and Fish Department is currently working to create uniform laws to allow for better law enforcement. The plan may address the suggestion of sacrifice areas for OHV use by using monies collected from citations for their development</li> </ul>
<p><i>Competing recreational interests</i></p>	<ul style="list-style-type: none"> <li>• Responsible recreation includes awareness and respect for competing uses of the landscape</li> <li>• Effort on the part of land managers to thwart the impulse for privatization of lands near public resources</li> <li>• In determining whose rights should take priority apply the principle of non penetration (See: Tools for conflict resolution)</li> <li>• Focusing on shared values in resolving subgroup conflicts</li> </ul>
<p><i>Fragmentation of routes to public lands and uncertainty of where access exists</i></p>	<ul style="list-style-type: none"> <li>• Use of land exchanges where an owner is willing to give formal access in exchange for a particular tract of public land</li> <li>• Incentive programs to reward and compensate private landowners for public usage and access to public lands</li> <li>• A database mapping access restrictions/passages</li> <li>• Clarification for the public where administrative access by government agencies does not include other users</li> </ul>
<p><i>Confusion concerning jurisdiction of lands the recreationist visits</i></p>	<ul style="list-style-type: none"> <li>• Postings along trails identifying ownership including, the name of specific ranch, as applicable, at points of ownership change and entry points</li> </ul>

**Table 5. Management and design solutions for access needs (cont).**

<p><i>“locked gate” confrontations</i></p>	<ul style="list-style-type: none"> <li>• Placement of a high priority on the situation</li> <li>• Work with public land user interest, local government and private landowners to bring about a positive resolution of the situation</li> <li>• Critical to the resolution may be effective and early communication</li> </ul>
<p><i>Escalating demands for money on the part of the landowner granting access</i></p>	<ul style="list-style-type: none"> <li>• Try for short term agreements, of 6 years. Don’t necessarily go for permanent easements</li> <li>• Agencies not using appraised value of the land by itself, but on its value in terms of lands that that acquisition can open up. Base offer on cost of alternative to go around the lands in question. This is also thought to solve the problem of a discrepancy between surveying and appraisal standards of FS and State Lands Department</li> </ul>
<p><i>Development and change of ownership endangering current access points</i></p>	<ul style="list-style-type: none"> <li>• Retention of ranchlands for current and future access             <ul style="list-style-type: none"> <li>○ In Colorado, the state purchases development rights on agricultural land to prevent others from buying it</li> <li>○ In Lancaster County, Nebraska, are zoning policies that try to protect farmland with 20-acre zoning</li> <li>○ Determine not just how ranchers can continue, but how they can gain a reasonable level of income.</li> <li>○ Facilitate ranchers selling some land for a sufficiently high price to support continued ranching on remaining lands</li> </ul> </li> <li>• Inventory existing prescriptive access points to public lands</li> <li>• Establish a watchdog group to regularly monitor these points and trail heads with specific contacts with Federal and county land managers to alert in case of threatened access</li> <li>• Provide landowners with same contacts to discuss abuses on private lands</li> </ul>
<p><i>Protection of wildlife and plant species</i></p>	<ul style="list-style-type: none"> <li>• Resource managers may control trail use by spatial, temporal, visual and behavioral means, even closures</li> <li>• Educate people concerning impacts of their presence. This be useful in ensuring a growing acceptance of recreational restrictions for the benefit of wildlife and plant species</li> </ul>
<p><i>Confusion about possible benefits recreational use such as hunting may bring</i></p>	<ul style="list-style-type: none"> <li>• Explanation by land managers to landowners about the benefits of hunting to wildlife management</li> <li>• Work by land management personnel with landowners and hunter to encourage landowners to open up their lands to hunting</li> <li>• Agencies working closely with organized groups to help landowners maximize benefits of land and wildlife</li> </ul>

**Table 5. Management and design solutions for access needs (cont).**

<p><i>Confusion about possible benefits recreational use such as hunting may bring (cont).</i></p> <p><i>Other concerns germane to sportsmen</i></p>	<ul style="list-style-type: none"> <li>• improvement grants</li>   <li>• Sportsmen’s access MOU of 2003 which generally reinforces the multiple- use mandate of the federal agencies in terms of hunting and fishing opportunities and the agencies’ jurisdiction over roads and trails within their system to provide access for hunting and fishing on federal lands. Specific obligations agreed to by the agencies:             <ul style="list-style-type: none"> <li>○ To inform the sportsman’s groups when management plans are to be developed, revised, or amended, and to cooperate with local groups to assess recreational needs and access opportunities for hunters and anglers</li> <li>○ To identify problem areas for access to hunting and angling opportunities and consider potential solutions to improve access to such areas, or alternative areas.</li> <li>○ To help orchestrate cooperative projects for the upkeep of access points and federally managed roads To work with the sportsmen groups to launch a sportsmen’s volunteer day to gain visibility for the efforts of the Agencies and Private Organizations (that were part of the MOU) on the maintenance of recreation opportunities on public lands</li> <li>○ Specifically notify the private organizations (which made the MOU) of significant management changes for land units that would impact access for sportsmen.</li> <li>○ To working with interested parties at the field, regional and national levels to seek alternative access opportunities and/or work together to notify users of the changes and why the changes were necessary.</li> </ul> </li> <li>• To explore the use of the web to keep hunters and anglers abreast of the status of access</li> </ul>
<p><i>Escalating time spent on obtaining access from landowner</i></p>	<ul style="list-style-type: none"> <li>• <i>Cooperative agreements</i> made directly between user groups and the landowner independently of the agency work to benefit each stakeholder. (Public agencies may then also be freed of commitments to the land owner such as land improvements in return for access). But access may be granted for only some user groups.</li> </ul>
<p><i>High cost of obtaining easements, right-of-ways, land exchanges and other provisions for access on the part of the agency</i></p>	<ul style="list-style-type: none"> <li>• Contact of landowners early in the process</li> <li>• Improved communication between planner and access specialists or surveyors who initiate contact with landowner</li> <li>• Discussion of potential impacts with landowner</li> <li>• Instruction in negotiation skills for land managers (including: a. the need for access; b. any alternative access considered; c. objective of agency for access in question; d. landowner concerns; e. any compensation and how it is</li> </ul>

***Table 5. Management and design solutions for access needs (cont).***

	<p>determined; f. type of access, whether exclusive or non-exclusive; g. possibilities for reversionary clause)</p> <ul style="list-style-type: none"><li>• A collaborative effort in which federal agencies could ask for assistance from local government, communities and interested parties</li></ul>
<p><i>Conversion of grazing lands to development</i></p>	<ul style="list-style-type: none"><li>• Monetary support for the rancher</li><li>• Comprehensive land use planning which includes access</li><li>• Vigilance concerning local future and current development plans</li></ul>

## *Conclusions*

The problem for access has been clearly articulated more than a decade ago by the General Accounting Office report indicating that Forest Service and Bureau of Land Management agency managers interpreted access to about 50.4 million acres or about 14 percent of the lands in the contiguous United States to be without adequate access. A focus on correcting this problem, although extensive, is relatively new for federal agencies but they are currently responding with landowner incentive programs as demonstrated by the Arizona Department Game and Fish Landowner Relations Programs and Colorado Division of Wildlife's Ranching for Wildlife Program. Access issues however persist and in fact appear to be deteriorating despite these efforts. In the West, the dramatic impacts of development, land use change, other causes and sources for fragmentation, explosive population growth and desire for an exurban lifestyle seemingly overshadow these efforts.

Collaboration that is inclusive of the community and local planning efforts united with larger scale comprehensive planning led by such institutions as Pima County, the Sonoran Institute and the BLM proceed in what promises to be a fruitful process for minimizing conflicts and better engendering trust between the rancher and government entities. Rancher organizations themselves, such as the Malpai Borderlands Group are working to not only find ways for keeping the ranching industry alive in Arizona but also for establishing better connections with agencies and the public at large. Happily, it seems, that land managers, local government, developers, the recreational public and the private landowner are recognizing

the need for extending mutual support and forging effective ways for communication toward shared responsibility and action..

Issues of access include fundamental discussions of rights such as how to look at private property and values such as the common good. Access thus remains a complex issue. The focus of meetings and the considerable effort and time taken on the part of land managers here in Arizona to address access issues points to its yet current need for solutions. The quality of the survey response indicating considerable time taken by the ranchers to complete the survey illustrates the significance of the issue of recreational access to the private landowner in Arizona. The availability of many ranchers for further discussion and contacts by me and others, appears to demonstrate a willingness to work with others toward cooperative solutions. Complementary to the landowner interest has been the dedication of the government agencies, local interests and recreationists themselves who shared extended interviews with me to discuss current and past conflicts and present possible solutions for improving landowner public relations in the future.

The results of meetings, interviews and the survey indicate that no apparently simple solution presents itself. Yet, if one might try to capture research findings into a single word, that might be “accountability”. If recreationists could willingly adopt accountability, then the research suggests fewer restrictions would be placed on access by the ranching landowner. Additionally, formal constraints placed on the federal agencies themselves indicate that in many cases conflicts might best be addressed between the land owner and the recreationist/recreation group directly. The research overall indicates that ranchers be recognized for their

work related to land stewardship before arrangements for problematic access could begin. The research suggests that they keenly resent implications that they are not fine stewards of the deeded and licensed lands under their tutelage. Their survey responses suggested that they have been deeply underestimated by the public and government officials. Ranchers were definite in thinking that the rancher has been misrepresented to the general public by environmentalists. Comments relayed the feeling that as a result, the majority of the public may possess an adversarial attitude that ranching is destructive. The rancher values his own level of scientific understanding and management skills for keeping the lands grazed by cattle fit and healthy for cattle, wildlife and recreationists alike

Results from this study suggested that ranchers continue to express a cooperative approach toward the recreational public and physical access across deeded and licensed grazing lands. Despite the time-consuming nature of granting access and potential risks to their equipment, cattle, grasslands, and even personal injury, ranchers for the most part deliver access.

Flexibility related to continuing to approach access on an individualist basis seems to continue to be an appropriate approach, despite the time consuming nature of this process. Comments suggest that the varied conditions of the Arizona landscape mean that no uniform law can be applied to ranchers. Instead agency personnel are urged by ranchers to return to earlier approaches in which they worked with the rancher individually “for the good of the land.” Within this flexibility must come a greater consistency of regulations leveled at the rancher. For example, recognition for consistency has come in the recent cooperation agenda for monitoring which asks that agencies apply one consistent model for measuring

utilization. Part of this new approach to measurement should include methods for clearly differentiating grassland impacts incurred by the rancher's management and those left by recreational use. In order to more effectively implement these strategy however, more money is needed to fund more agency personnel. Without additional funding appropriate consultation, availability to the landowner and regulation or law enforcement efforts sabotage the process. The Arizona recreationist, particularly the tourist, for the privilege of access may have an inherent responsibility to contribute toward this funding.

Trust levels between landowners and government officials may be coming back from a recent nadir, but are far from optimal. Respect and response to the individual needs of the landowner may help repair this distrust. Again, foremost, research for this thesis has suggested that ranchers appear frustrated by a lack of respect on the part of recreational users and agency officials. Today, ranchers seem acutely aware of the positive roles they play concerning issues of maintaining habitat for species biodiversity, defining the boundary against urban sprawl and preserving open space. Ranchers are actively employing or in the process of employing new tools for sustainable ranching practices such as grassbanks, particularly since responsible management is currently connected with grants and other funding opportunities. Ranchers seem ready to accept productive collaboration and other opportunities for financial support. They appear increasingly well- positioned to take advantage of outside help and willing to make a continued commitment to ranching when feasible.

Common sense argues that the recreationist might be more respectful toward the rancher who is dependent upon the health of the landscape under his guidance. If in effect much of

the work of the research for this paper was taking the pulse of the current feelings concerning access, then one would have to argue that the opportunities for collaboration for access from the grassroots of local communities to the upper tiers of government agencies already exist and that they should be seized upon by all concerned.

Speaking the simple but clear message is one parting comment added to the survey: “I , John S. Laird, think that grazing is very important to [the Gila Bend ] area with good management. I have lived here for over 70 years and have watched the changes and would like to help in any way I can. Thank you”. The insights of ethnographer, Sheridan, bear repeating. Although the networks of ranching families that established communities have been weakened by the relentless urbanization of Arizona, the networks still exist and can serve as the foundation of new communities where environmentalists, hunters, birdwatchers and hikers partner with ranchers to preserve and restore the legacy of the working landscape, a landscape that can bring benefit to many, if not all.

## *Appendix A: General interview template*

*Preamble:* Hello, my name is Elizabeth Penati, I am a graduate student in Landscape Architecture at the University of Arizona, I am working under a public grant to address areas of interest concerning access to public lands and state trust lands.

You have been chosen to be interviewed because of your connection to recreational access. The information received will be used to help land management and other public agencies here in Arizona work in concert with the private landowner to achieve desired outcomes for both the landowner and the recreationist. If you choose to participate and have any questions or concerns with respect to this interview, please feel free to contact the University of Arizona, Human Subjects Protection Program, 1350 N Vine Ave., Tucson, AZ 85724. Telephone: (520) 626-6721.

*Access Issues:* Access restrictions in Arizona have risen quickly in the last decade. Private landowners close off access to public lands that are landlocked by their private property where access was once permitted.

1. Could you comment on common reasons for landowners denying access such as:
  - Trespassing:
  - Littering
  - Transients
  - Off-road activities
  - Disruption of landowner operations:
  - Liability Issues
  - Undocumented Immigrants and Drug Trafficking (Southern Arizona)
2. Ranching: As traditional ranch families move on for whatever reason, new landowners, it has been reported, take a different perspective on allowing public access. Could you comment on this problem?
3. The forest service reports that there is no permanent legal access to the Galiuro, Whetstone, Santa Teresa, and Winchester Mountains. The other mountain range units have very limited permanent legal access. Traditional access routes through interior and adjacent private, and State Trust lands are gated and locked. Do you know of other problems for access to public and state trust lands?
4. Do you think that there is a distrust of government on the part of the landowner?. What is your view is the perception, of BLM, Forest Service, State Lands Department and other federal agencies, of game and fish, for example?
5. Which key resources do you feel are most in danger of restricted access? Public reserves, Santa Cruz River, San Pedro River?

6. Further, fears of vandalism, liability, and drug trafficking issues among others, cause landowners to shut off traditional access. Have you seen examples of this fear limiting access?
7. In your experience do you agree with the statement that most public land user and landowner conflicts as well as creation of wildcat roads are due to attempts by public land users to access NFS lands via the private and State Trust land after traditional access routes have been blocked?
8. If it is the Forest service's belief that the primary responsibility for access across private lands within the proclaimed Forest boundaries lies with the Forest Service, while getting people to the proclaimed Forest boundaries is the primary job of State and local agencies? Do you believe this is appropriate?
9. Do you know of any interest, other than that expressed by AZ Game and Fish through their Landowner relation programs, in a coordinated rights-of-way program for permanent public access?
10. Can you comment briefly on the state of access issues in terms of Arizona where it used to be, where it is today and where it is headed in the future?
11. Have you seen a reluctance on the part of State and local agencies and others to actively assist in securing needed rights-of-way from private landowners?
12. With whom have you worked to maintain or build access to Forests, BLM, Parks and other lands?
  - a. Forest Service
  - b. Private Landowners
  - c. Environmental Groups
  - d. Pima County
  - e. Developers
  - f. BLM
  - g. Arizona State Trust Lands
13. In your experience what easements have been successful? Which have been unsuccessful?
14. What other solutions have you seen or been part of realizing?
15. Any thoughts for better ways toward working for permanent access?
16. Do you see a need for educating and monitoring recreational users, especially of trails that cross public lands?

17. How would you envision a way to monitor existing trails, any ideas for volunteers from user groups for coordinated monitoring of recreational lands? Any thoughts for how an enforcement program would be funded?
  
18. Do you think people are developing a greater sense of working together for a common good for lands today?

Thanks!

## *Appendix B: Detailed responses to interview questions*

### *1. Access restrictions*

*Common reasons for landowners denying access*

Land and wildlife managers and other public officials

Trespassing

Damage to property and facilities

Perceived liability

Legal access vs. permissive access

Too many permits issues with too little enforcement

Individual character of game manager

Lack of identification of land ownership

Fear that livestock will be shot or harassed

Protection of archeological sites

Criticism for damage recreationists cause

Tribal perspectives on tourism

High numbers of visitors can increase maintenance on rancher's improvements

Disruption of landowner operations

Littering

Off-road activities

Undocumented immigrants and drug trafficking

Transients

### Conservation groups

Trespassing particularly with newer landowners

Invasion of solitude and peace which are reasons that people have moved to rural areas  
Off-road activities

Noise like barking dogs

Fear of the discovery of any endangered species on public land above them. The next time rancher has do to allotment management plan, he would have to address how he would use those lands.

### Land owners

Basic control and management compromised by public entry

Cattle lose weight if excited

Lose of privacy since most access roads pass by ranch headquarters

Belief that shutting gates will stop illegals from coming through

Belief that with an increase in population will have an increase in impacts

Destruction of equipment through careless play and target shooting

Theft of expensive equipment like saddles kept in barns near headquarters and entry

Noise, particularly of ATVs

Littering substantial after illegal immigrants, but also hunters leave shells, and campers garbage like plastic bags which can be lethal to cattle when swallowed

Responsibility to protect wildlife compromised by allowing access to wildlife groups, who have in the past disturbed nesting birds, or hunters

If a landowner is not given control over the timing of the access then repercussions can be costly

If someone leaves open a gate no one is held singularly responsible except the rancher

### Local development interests

Trespassing is of some concern, people will leave a trail

*Response to fears of liability:* “If you give public access to property with the new legislature, only responsible in terms of gross negligence. Not an excuse.”

If allow anything with a motor, no question will have litter

*Response to fears of vandalism and drug trafficking issues:* just an excuse on part of rancher because they will come thru anyway, anywhere they want to

### Recreation groups

Liability fears persist and remain a big problem.

### ***Access restrictions***

*Resource areas with inadequate access*

### Land and wildlife managers and other public officials

No permanent legal access to the Galiuro, Whetstone, Santa Teresa, and Winchester Mountains

The other mountain range units in the Tucson area have very limited permanent legal access. For example, about two-thirds of the Coronado National Forest ( $\pm$  1.2 million acres) does not have adequate permanent legal access

Game and Fish Region 5 is the most limited

Problems at south side of Santa Rita Mountains

Dos Cabeza mountains and really all of Southeastern Arizona

High Creek

Restrictions to 'general multiple use' land is the most impacting to the general public. Special areas will get more attention than general multiple-use lands and thus funding and personnel time will be allocated to maintain access[on special areas]

Central part of the Sonoran Desert National Monument

Parts of the Agua Fria National Monument

In general, when private lands are interspersed with BLM and State Lands

Holbrook or Ashfork, lands along the I40 corridor more of a checkerboard with every mile surface management changing. In those case more a of a challenge for people to know which is private and which is state.

At Civano, Tucson trails problems coming in and out wilderness

Advocate for the Tumacacori area to be designated a Natural Conservation Area. More flexible than a wilderness designation. Would like to see two levels, A and B for wilderness designations

### Conservation groups

Hunters typically cross over privately deeded land with permission to get plenty of access on State Lands

Nice if fewer ways to traipse around wilderness areas

### Local development interests

Favor public access thru projects. Given access to: Tucson Mountains, Pima Canyon, The canyons, Madera Reserve, Tucson Mountain Reserve, Casa Contenta. Committed to develop access to: Ironwood reserve, Smith ranch, Swan southlands, Rocking K

Differences are the degree of access: How much is fair access, how much is necessary. "How much" becomes: "I want more." Some people have no regard for private property rights. Others have no regard for public access. These are the bookends

Catalina Foothills already damaged. Access is closed, dead

### Recreation groups

Shift in AZ where population is spreading out. Hunters and ranchers used to having State Lands to themselves. Understand this natural resentment. Problem only going to get worse

A proposal by Game and Fish to develop access on new side of Whetstones would be very beneficial. The Galiuro is a remote but populated area. We definitely need more access routes in there

The Arizona wilderness act designated wilderness areas. One near Tucson without access is the Coyote Mountains. Another sore point is the Baboquivari wilderness. Can get permit to hike into that area from the Indian reservation on the west side. However, from East side, bordered by Buenos Aires Game refuge, access is blocked. Browns canyon has blocked access

I think w/designated national monuments, part of the plan have to ensure adequate access

Hunters go into Cienegas on power line road but that right-of-way is not a legal public access

In Arizona, riparian access is forever abrogated by State law, landowner owns streambed.  
Washes used but not legally. Even streambed of Rillito River privately owned

Once development starts it closes horse trails from the get go on the NE under MT Lemmon highway. As people buy property close to forest block access there

The West side of Dragoon Mts. is now subdivided into lots from 4-20 acres. Belief in an Eastern liberal bias against hunting on part of developer there

Swiss Helm area, parallel to the Chiricahuas, is regarded as an excellent deer hunting part of Coronado National Forest. But land acquisition by "Easterners" has limited archers to a range of only 45 to 50 yards.

Brown's Canyon in Baboquivari Mountains

The subdivision around Tortolita Mts. State Trust Lands

Access to the Sweetwater Preserve

Different designations for land, i.e. wilderness, means that these lands are being closed off

Anyone that is motorized or mechanized seems to be losing access. This holds true for bicyclists too

### ***Access restrictions***

*Resources at risk from recreational impacts*

### Land and wildlife managers and other public officials

Public land user and landowner conflicts as well as creation of wildcat roads are due to access NFS lands via private and State Trust land after traditional access routes have been blocked

There are extreme problems of what users groups are doing to land. Level of sales of off highway vehicles (OHVs) each month in Phoenix at probably 7 or 8 thousand sold each month indicates the dimensions of the problem

Most users not familiar with soil types and wouldn't necessarily know that when it has been rainy sand is appropriate to ride on and clay is not

It is appropriate to designate some "scorched earth zones". There is one near Tucson referred to as Desert Wells Multiuse Management area

Need to be vigilant about resource protection. It is not OK to let a trail degrade to the point of impacting a resource.

At risk are: Public reserves, Santa Cruz River, San Pedro River, Urban fringe with respect to ATVs

### Conservation groups

Concern is that we are already encroaching on habitat with greater numbers desiring access, what will happen to resources?

Need to think about quality of life for others on lands when we talk about access

Nature Conservancy managed nature preserves do grant access. Ramsey Canyon Preserve had 3000- 3500 visitor a year on one trail when Trogon birds were nesting. So much visitor use nests were not successful at raising the young. "Since the goal of the organization to protect diversity, there is no reason to want to give public access."

### Recreation groups

Foreign Forest Service personnel come to the Coronado National Forest from different parts of the country who don't understand the desert environment. See signs of degradation on the washes for example from access that are immaterial in contrast to the impacts of monsoon rains on the washes. Closed one of the major washes that people use

## ***2. Acquiring and guaranteeing access***

*Responsibility for acquiring and guaranteeing access*

### Land and wildlife managers and other public officials

State Lands handles access issues across a mix of state and public lands while nothing specific in statutes that asks state lands address this problem. Not at all uncommon particularly in SE part of Arizona for a rancher who has 5,000 acres to have only 160 privately held. They perceive land as a single unit. In some case may have leased lands for generations. But the terms of their lease does not give them authority to restrict access.

The primary responsibility for access across private lands within the proclaimed Forest boundaries lies with the Forest Service. Getting people to the proclaimed Forest boundaries is the job of State and local agencies

Historically, public lands were just a way to reach private property. Recreation currently has no specific laws that enable it like mining or ranching, so it's not a priority to manage for. Because of this, private property access trumps recreation access

Where the BLM block of land is contiguous with few private parcels, BLM can seek access across the private land first, but in the end will probably end up creating a route to bypass the private property

Phoenix Field Office BLM, as part of travel and transportation planning, has an interest in finding solutions to long term access issues. Specifically, to provide meaningful route systems for recreation, authorized and administrative uses

New proposal for AZGFD bases the amount spent to acquire access not on the appraised value of the land by itself, but on its value in terms of lands that that acquisition can open up in terms of access and on the dollar value recouped to Game and Fish generated for access use in those lands.

Recently, AZGFD given new tool [for acquiring access]....can actually purchase land easements, before was done in lieu of projects. We will make an actual cash payment to the landowner for permanent easements

Ranchers through EQUIP ( Environmental Quality Incentive Program) receive a 50/50 funding match with the NRCS [for improvements for wildlife made on their lands]. If we, AZGFD , get guaranteed access, we will match that 50%, TNC could do the same

### Conservation groups

Would like to provide for access easement. Eventually landowners decision

### Local development interests

Our involvement is to look at Pima County Trails Master Plan and to participate in large land management agency in their comprehensive plan

In another area there is a lack: open space advocacy groups have not reached out to homeowners associations

Not up to FS [ to secure access to the National Forests] but one of things they can do is to assist in rezoning. This attitude would behoove them and the whole country

### Recreation groups

The public sees the government as responsible for guaranteeing access. People get tired of seeing privileged access without public access

Today access is a high priority and Arizona Game and Fish recognizes that. The land agencies are not as aggressive as they could be and are not showing access as a high priority

The State Land Department is a key agency that could help us. A key access road to the Redfield Canyon Wilderness was closed and State Land Dept could have prevented that

BLM has been more proactive on working with the public on land use and I think the Forest Service needs to use the same model with access.

Purpose is to prevent wildcat routes. You need connections. Most agencies don't get that we need a variety of challenge levels, routes, everyday SUV roads and roads with a greater technical difficulty

### ***Acquiring and guaranteeing access***

*Trust issues between landowner and government*

### Land and wildlife managers and other public officials

AZGFD: Would like to find out private landowners' trust levels: Do they trust FS, State Lands, BLM, Game and Fish, US Dept of Agriculture? Do they trust private non profits, Who do you not trust most? First hurdle a trust value

Landowners are skeptic. "Rancher read contract real close. They have a skepticism: why is government giving me money? What are you going to do?"

There is a contingency that has a high distrust of all government which is very much a part of life in the western US. When less than 13% is owned privately, there is inherently going to be mistrust of land managers to protect private property rights.

Different expectations of agencies present confusion for landowners

NRCS: For those who distrust the government, federal or county taking of property is probably a major concern. Part of the distrust comes from the political nature of government, both federal and state level. The goals of government may be different than those of the land owner. While land owners may trust individuals, they may distrust the entity the person works for

”NRCS job to help ranchers jump thru hoops and help them out. Game and Fish wants an access in agreement for a cost share. Ranchers really back off from landowner incentive program, worry about LIP bringing in a new endangered species.”

### Land owners

Government fails to recognize that when a cattle owner is working across different jurisdictions of land any decision on one type affects management across all ownerships. If had four rooms that together function as an office, two were owned by the federal government, one by the school trust and the last by a private owner the office still has to be managed as a whole. This is true for many reasons such as mobility of cattle, wildlife and plant species

Private property enhances the importance of the individual for reason that the individual is held accountable. With a lot of government interference landholder loses not only control but also accountability.

Perception that public agency like FS is arbitrary in its decision making in terms of what multiple uses it will allow. For instance, the National Forest is open to motorized vehicles free of charge, while ranchers have to pay for the right to graze.

Game and Fish now trying to disengage themselves, but for the decade of the 90s were allied with activists such as: Center for Biological Diversity, Forest Guardians, Western Gamebird Alliance, in some case organizations with small numbers but noisy ones. These groups worked to challenge leases for ranchers

Anti-ranching activists were out to cut people’s permits which translates into loss of income, or that they were cut in half or eradicated altogether. Many thought there was a conspiracy against them but the ability of most people to disprove these allegations was limited had to have \$ upfront to hire independent experts to monitor data to disprove allegations.

Doubt exists that The Nature Conservancy is operating effectively internally, think they have the equivalent of an old boy’s network.

Belief that the FS has a punitive attitude toward its field personnel

Need a cohesive management plan that takes into account the elk and cattle together. Most western states, other than Arizona, will pay you to keep water and fences up. They pay an amount or let you sell hunting rights to some of the elk. Here in Arizona, can't sell the rights. This has been a hot topic for the past 15 yrs. The reason that ranchers that deny access is because they have to fix damage that occurs after access. By allowing that access Game and Fish are asking someone else self to profit from the ranchers' hard work. "If Game and Fish were willing to look at this in a holistic fashion they would find this out." (AZGFD *Response: We can't allow any single entity to profit from publicly held lands*)

### Conservation groups

I don't know if there is a generic view, but folks are clearly frustrated with moving management targets and cumbersome public processes

### ***Acquiring and guaranteeing access***

*Discussion of possible reluctance of State and local agencies to actively assist in securing needed rights-of-way from private landowners*

### Land and wildlife managers and other public officials

An agreement where the State Lands Department shares revenue from licensing with Game and Fish would boost our willingness to help secure access. We do issue recreation permits but we don't get any funding from these as the money goes directly to the general fund for the state.

Recreation access has not been a priority. The federal and state agencies have relied on the public to create their own access opportunities across private land. Without legislative direction to do so, it is unlikely to be a priority in the future.

Seeking access for the public opens the agency to possible criticism. Criticism could come from private property rights advocates and also those who oppose improving public access to federal and state lands..

No long range plans exist for access. County plans for road development are the most organized in terms of access, but rarely provide the breadth of recreation opportunity that unimproved routes on federal and state lands do.

For the State lands Department at issue is our lack of funding. Why should we go to bat for Game and Fish when all we get is a minimal fee for a right-of-way for a road ? It is not enough to pay for my time and effort to try to get right-of- way issues resolved

Training in the legal aspects of negotiating and acquiring access is limited in federal and state agencies. Recreation is not a priority to those who have traditionally worked in the real estate and land use authorization fields

### ***3. Collaborations for access***

*Advice for collaboration from people who have worked to maintain or build access*

#### Land and wildlife managers and other public officials

Humboldt County Farm Bureau, CA: The Mad River Slough Wildlife Area Ranching Project uses rotational grazing to increase habitat for Aleutian goose species while using lands for grazing and recreation in which Farm Bureau raised all money to make improvements since Fish and Game do not have enough money. Fish and Game is trying to repeat this model elsewhere think probably wave of future. Various state agencies do not have sufficient funds for employee wages, development management plans, or providing fences or water lines, but Farm Bureau can thru grant writing, We have incoming money from renting pastures, that's how we pay off money upfront.

BLM: Can partner for all the wrong reasons it is about maintaining sustainable communities and ecosystems. Partnering is not a goal just a way to get there

Problem solving for success: Stewardship is about the community having a shared vision for that landscape and a collaborative approach for moving forward. It is about inclusion. We are not altruistic: how can I get XZ while allowing for QRX to occur?

James Kent Associates, a consulting group which the BLM has worked with is working to spread new concepts for mapping land use. The company uses maps to describe nesting scale of human resource and social resource units. These units are connected by networks, informal groups, not chambers of congress members, not elected leadership. A planning goal is to uncover these networks to listen directly to what the patterns of use are

A recent coalition by the FOX group failed in its attempt to restructure the way the State Land department does business. Together the ATS utility, government, State Land beneficiaries, other concerned groups, and ranchers made some progress but it fell apart at the 11th hour. The Conservationists wanted to set aside a lot of land for open space in quantities that everyone else thought was too much. It could have and should have been worked out

For the BLM the land use plan process is public process: series of public meeting, with environmental groups, anyone who has an interest in that area has opportunity to go and to give input from their point of view. Take comments and massage that into alternatives, For each activity or program areas 3 or 4 possibilities: no action alternative, menu of various

alternatives. When we develop alternative go back out to public and ask the public to comment on which alternative meets the area better than another. Finally take up alternatives and develop a draft plan. Open that for comment for 60 or 90 days. From that develop final version signed off thru agency by AZ state director, but because it is a public document open for appeal or objection to final project. Including lawsuits

Have worked closely with Pima County, that local government is very interested in seeing public lands as an integral part of SDCP for sensible growth.

The most successful partnering experiences [I] recall were individual resource management projects where 2 individuals made something happen. Huge memorandums of understanding have been unsuccessful.

AZGFD access projects have been around for many years in terms of a small scale courtesy program. A rancher would need a sign or gate. The program was then only a total of about \$20,000 a year. We decided we needed to work with private landowners. Before had the idea that since 50% of western states is in public landownership and there is tons of public land why do we need to deal with the 19% which is deeded? For those fish and game personnel stationed in Nebraska, saw that if wanted to maintain any wildlife or habitat we would have to be very, very active in working with landowners. There over 1/2 of the department's money is expended on private property programs. Here over 8 years ago started seeing the value of investing in access programs. A lot more funding for access. The department went from 1 person to about 8 people with a budget of a couple of million a year.

Heritage Funds are state dollars that we use to match against Federal programs. An example of how we put these funds to work: here where we live in the desert the limiting factor is water. For a large ranch we are looking at an extensive water distribution system for a good rancher who had pretty much allowed access. We will go into this with Department of Agriculture through the EQIP program and will agree to a 50 /50 match. We have sent a letter stating that we are partnering with the landowner and will cover the landowner's cost. This letter gives the landowner higher point value with the USDA, so that they are more likely to win approval for the project. One of the biggest things is that the market fluctuates: one could get approved and then if beef prices take a nose dive, the project could get scrapped. If the State of Arizona will cover that 50% each project is individually guaranteed in a sense

In terms of negotiating access with developers its been mostly with signage thru the Respect program and sign in stops. Becomes more difficult because more people involved when dealing with developments: dealing with as many as 50 people in homeowners associations. More people you add more different opinions they have. Could be a couple adamantly against it. This type of negotiation is coming up more often now.

Advice from the River Trails and Conservation Program: Converge people to discussion. Frame discussion: Hold to agenda while allowing discussion. Return to agenda. How the consensus will be built upon is part of the process that is important. Achieving any agreement

is important for future consensus building. Strike while the iron is hot. When decisions are made they have to be acted on right away. A first step then can lead to future steps. The trick in building consensus is to select the details that lead to a point of agreement.

The Sonoran Desert Conservation Program (SDCP): the SDCP is a recreational opportunity in terms of a land acquisition, program to continue to keep recreational access open for the public, In some cases purchase working ranches now. This land will owned by Pima County and will be able open up access. In some cases, can't be opened in order to protect resources. In some cases, these lands may have been blocked in terms of access for many years. Working now on the Empirita ranch owned by Pima that has been blocked for awhile. City willing to open up Empirita Ranch. First plan is closer observation of blocked access [there] on land to north and west side of Whetstones. That would be done in cooperation with federal agency so that we control access

### Conservation groups

The first key is listening to landowner concerns and genuinely trying to solve problems together – not just some instrumental relationship.

One of common conflicts is public access and conservation. In general conservation easements are intended to protect biological resources. Quiet on subject of access which means access is not given. Usually conservation easement is intended to have some specific biological features and/or values. A lot of conservation easements are private transactions. Most land owners want to main privacy. There are situations where public agencies arrange for conservation easements. When spending public money, then public access on the easement is more likely.

One access easement know of is for Arizona State Park land on San Raphael Ranch in San Raphael Valley. Some concerns some people might want to want to ride/walk along the length of the Santa Cruz River. So limited access specifically along the river corridor given to a limited number of visitors per year. These are guided tours, not unrestricted access. Immediately next to private property is the State Park. On the property, conservation easement protects view shed, and setting of public park. County road goes thru middle of ranch. Thinking was people had plenty of access scenically so that limited access on the ranchland was appropriate. The Nature Conservancy owned property when rancher bought it.

A situation in which public money was used to purchase lands that were not open to the public is the purchase of 9 Bar Ranch, next to Leslie Canyon Refuge in Arizona. Goal was protection of watershed of Leslie Creek. USFWS purchased the land to protect the water but doesn't provide public access.

### Local development interests

Steve [Anderson] and I [Peter Backus] worked on easement in Rincon Valley for specific trail. When hit dead end go around it. If it takes you an extra half or quarter of a mile to do it, still worth it. Just did this on a trail for public access into SNPE 2 or 3 miles. To be named “ Backus Trail”

### Recreation groups

Successful coalitions: Success built upon their reasonableness and willingness to compromise and listen. SDCP on which Sue Clark was part of 75 people. You need to know what the other person wants.

“Sportsmen are represented through the Southern Arizona Sportsman Alliance. It has Representatives from every single type of outdoor sports club there is. [The Alliance] tries to be represented at every Pima County Board Meeting that might affect us.”

Mountain Biking: Trying to get state level meetings going with stake holders, ranchers, hunters and recreation groups. G and F has certain requirements mandatory to satisfy their mission. Within these parameters talk about other users, hunting, grazing, motorized recreational users and how they can share without stepping on one another’s toes. Expect to see a better understanding among agencies and stakeholders of issues: needs, wants and requirements. For example if a hiker or biker understands that a rancher makes his livelihood from cattle he will be more careful of encounters: If he understands that when cattle run or are excited, cattle can lose weight or be stressed, susceptible to disease. ( I grew up on a cattle ranch).

4-Wheel Drive Clubs: With BLM did apply for Range Resource Team, RRT out of Tucson office, route inventory group map routes out on GPS. These then go thru an evaluation period, submit maps to agencies and then agencies will put maps out for public comment and then agencies finalize which ones will be used. Almost everything has to go out for public comment. I do not think Forest Service has done that, FS has released a new plan for OHV use, but not actually inventoried routes. We work with the Forest Service, usually engineers out of the Coronado district. We have a couple of roads in back side of Mt. Lemmon and one in Reddington Pass area that we maintain, road work damage from rains, trail maintenance , Forest Service and Game Fish.

Helped Steve Anderson with Tucson Motorsports Park. Had a grant to start Park. We applied for a grant thru Pima County to develop this park worked with Steve for a couple of years. The grant was from State Parks. OHV grant from gas tax money. Came up with plan and grant to build park, BMX track. TOT track for kids to play on for motorcycles. It was a lot of work.

### ***Collaborations for access***

*Perceptions of working toward a common goal*

### Land and wildlife managers and other public officials

“ Really wish [they] would. Sportsman groups, hiking groups, birding groups all have to get together to work toward securing perpetual legal access. Needs to be more than government agencies and a single agency, such as Pima Trails, on this issue. To be effective, issue must be addressed by all of these groups together.”

Recreational groups together can do things that government agencies may not be able to do such as purchasing a right of way above fair market value or offering to do things to protect adjoining private lands that Forest Service can't do like keeping trails clean.

Getting people to understand what we do [and participate in the public planning process] is a constant education process. Because we are a mobile country a continual education process, what we do now is to develop plans. Once people understand the process, they do participate, write and email in response

In my experience, people work for their picture of how the land should look and be used, not for the land itself. A few may speak for the land, but most speak for their own interest. People work together when they cannot achieve their goals on their own.

Ranchers are considering that ranchers and hunters have a lot in common in terms of the land and are deciding that they should be allies not enemies. With a whole bunch of volunteers, ranchers are understanding that people are doing more to help.

There is a natural coalition between recreationists and oil and gas companies. Everybody wants same thing: to use and protect the resource and have it still be there when they are done.

Tribal government: I believe [people are more interested in working together] because I am part of that . Goes back more than 30 yrs: growing up and thinking where we grew up was our home forever but not our land, BLM land.

#### ***4. Monitoring and enforcement issues***

*Top concerns with respect to monitoring and enforcement of recreation on public land*

##### Land and wildlife managers and other public officials

State Lands Department: General problem with monitoring state lands. Only 2 trespass range managers for 9.3 million acres. Hundred and hundreds of miles of illegal roads exist on state lands with new roads being blazed every day. Don't know have a problem until landowner complains. Large tracks of land at Apache Junction east of Phoenix with big crowds of 4 wheel drives and ATVs. Need more money and more bodies, we're terribly under funded.

Many potential monitoring regimes that would be appropriate. Don't know that anyone actually has begun to look at one for OHV use. The tire marks left from 1940, General Patton's Troops on the Yuma Proving ground are still evident today

One model for generating monies [for monitoring] are OHV fees when all are registered. Presently, they are not registered unless they are used on roads, like motorbikes. Quad cycles are not registered.

State Lands has closed some areas under regulations from the EPA when the dust in these areas have been closed because of PM 10 dust particles under 10 microns (it is the smaller particles that are most detrimental).

In the last 13 years around border units the amount of illegal traffic has skyrocketed with the amount of wildcat trails and garbage. Have heard that access has been closed off because of vandalism. Hunters are afraid of going to these areas because of fear of their own personal safety. Lot of drug trafficking and worry about being mistaken for federal agents and/or stumbling into drug camp.

BLM: Wildcat roads and trespass many times are a result of having poor maps available. The recreationists perceive there is a shortage of routes and need to use a particular route, across private land, to achieve their recreation goals. I think, to a lesser extent, land owners who block access may be the catalyst to wildcat roads being created to access public lands

NRCS: Nobody at State Land department to write trespass ticket, a rancher can't enforce people trespassing on State Land. Game and Fish can't write tickets. For quad use, or hiking only if actually hunting. Not even scouting I think. A lot of issues if work with Game warden don't have these problems. Lot of wardens will give ranchers their own phone.

ATVs are always an issue in washes. County's enforcement is not there. Especially a problem on North South flow thru washes. Either way has made landowners more apprehensive

Pima County Police: Lots of attention is being paid to acquisitions and environmental monitoring and money for conservation management but not enough funding on part of the public lands managers, Pima County, BLM, Forest Service and Park Service. As these lands are becoming interconnected, enforcement of this interconnectivity is important, a key part of it. We need an inter connectivity on part of management

Pima County Natural Resources Parks and Recreation Department: Funding will come from increase in county funding. Enforcement and monitoring are cooperative efforts with the county. Don't see taking general lands and applying fees. Some monies may come from future bonds. Right now any money that comes in goes back in to the general fund

Conservation groups

If there is support in managing the users who access the property, then the request [of landowner for granting access] would be more palatable

Most conservation groups need to ask for endowments for monitoring easements. One way is for the developer to fund an endowment to the development's homeowner association. The developer pays an annual fee to help pay for monitoring of property

#### Local development interests

First education and second enforcement. No problem with interest and zeal for public access. But it is the responsibility of the public to monitor and educate. If you look at the [SNP] Park enforcement staff. It is very thin and public lands are expanding. It is going to be very difficult to take care of what we've got

User fees may be where we are going. "Take care of what you have" value system I was raised with. Are we managing that responsibly? Ultimately that management must be part of the system. From a developer's point of view what you don't do is add more activity and more access. . Need a potential plan for the operation of these recreational lands and financial plan with a funding mechanism to deal with the management and education of recreational users.

### ***Monitoring and enforcement issues***

*Discussion of a need for educating users toward responsible recreation*

#### Land and wildlife managers and other public officials

State Lands Department: In working with 32 conservation districts we are still struggling to come to an agreement on OHV education. All comes down to funding. Schools would be a great place to educate users. But teachers are not interested in teaching anything that will not come up on the AIMS test.

The only entity that can condemn State Trust Land would be the feds. No eminent domain claims may be made by any other state agencies. A lot of illegal roads that have been used for decades. People can't claim prescriptive easements, adverse possession. None of : I have been crossing neighbor's land for several years. Yet State Lands department afraid of "political suicide" fails to enforce many of its legal claims to trails, etc. that are in use today illegally.

AZGFD: Education centers could be working with trying to gear education to youth organizations such 4-h groups etc, Appropriate solution would be to r help define scope of the problem for users which would perhaps lead to more sensitive user groups. Currently we are applying to the State Parks Recreation Trails Program for funding to include info for publications for users. The flyer would include information from AZGFD on sensitive

species, a discussion of soils, i.e., highly erodible soils, with feed back from ranchers about the problems of gates that have been left open.

BLM: Public-private land owner conflicts are due to a lack of respect for private property and who governs what happens there. Private land is not public access just because access was never restricted in the past.

An RTP grant to BLM, USFS and ASLD is funding some “Tread Lightly!” Training. Other training like “Leave No Trace” is pertinent. This needs to be continuously funded and funding should be increased to include a public outreach campaign. The AZ State Parks “Let your conscience be your trail guide” campaign was successful when it was funded.

Monitoring of recreation is a good tool for implementing the 3E’s of recreation management. The 3E’s are Engineering, Education and Enforcement. A monitoring program that addresses land health standards, visitor safety and reducing user conflict would be valuable.

Tribal government: Tribes need to show petroglyphs. The better informed the public is the more likely the petroglyphs will be protected.

#### Conservation organizations

Are no rules in place to control where OHV vehicles go. Do have rules about off trail travel. But no law enforcement. Proposing greater law enforcement by using other people, such as hikers who could check if a person had a license.

#### Land owners

Believe that educating public outweighs the risk [of granting access]

Don’t think people are showing greater care than in the past. Understand what the respect programs of the Game and Fish are trying to do where people go listen. But afterward they go off and continue to do what they want. Litter still by the side of the road because everyone expects someone else will take care of it. Well, its the same way with people on ranching lands

#### Recreation groups

Pima County Trails: Education of Government managers is of importance for Trail system. “Was not on their radar” until 1989. Trail establishment would fall thru the cracks. Just in the past 5 years is the public perception of trails seen as reasonable.

The trails and river parks system has even farther to go to meet a 1989 county plan's goal of a 500-mile network along washes and creeks. While the county has had a trails master plan since 1989, the city doesn't have one, even after spending four years and \$165,000 working on an update of a long-range plan for its entire parks system.

4-Wheel Drive Clubs: We are partners with BLM: trash cleanups across the state, not even lands we use, major cleanup in Ironwood National Forest, they provide dumpsters trash, county now charges fees for dumpsters, also clean up refuse at illegal shooting range, shooting targets, glass, three rollout dumpsters filled up. Bush highway? near where rafters dump trash in river where it floats beer cans and soda cans

[With reference to disruption of landowner operations], think that happens from minority of uneducated 4-wheelers or wildcatters out there. One particular place doesn't want to give access because of things that have happened in the past; destruction to water tanks by other people. Have to work hard and prove that we are not of that kind, Dues go to keeping organization running, have to rent hall, etc, member meetings.

### ***Monitoring and enforcement issues***

Ideas for monitoring and funding an enforcement program

#### Land and wildlife managers

BLM: The Site Steward program has been popular with agencies and the public. Perhaps a similar organization for recreation monitoring could benefit the public and management agencies alike. AZ State office BLM is attempting to start an Adopt-a-Trail program similar to USFS. Consistent staffing, funding and goals among agencies is necessary. Perhaps an outside entity could provide this consistency and funding.

#### Recreation groups

4-Wheel Drive Clubs: FS has an Adopt-A-Road program. Clubs throughout the state will sign an agreement to adopt particular roads in area, clean-ups and kind of police them

## ***5. Speculations about the future of access in southeastern Arizona***

*Concerns for changing values of new landowners versus traditional ranch families for access*

#### Land and wildlife managers and other public officials

Arizona Game and Fish: Sometimes people who buy ranches come from big cities without a ranching background and don't honor traditional use that has been granted by traditional ranchers that have been here for generations. Say a wealthy business owner from Albuquerque comes without a ranching background and moves into a ranch and so closes off access that a ranching family before may have granted for 3 generations.

In Nebraska, all these pieces are privately owned, all farms had “no trespassing”, “No hunting” on fence which really meant “come talk to me.” That conversation is part of the culture: you are supposed to go to the farmhouse and ask for permission. That custom is unheard of in state like Arizona where there is so much public land. Here the response is different: when a recreationist sees that a landowner has tacked up signs, they don’t stop by farmhouse or ranch house. In Nebraska if the farmer meets the hunter and if he seems reasonable and a nice guy they let him on the property.

BLM: I think there are two main reasons for the change in perspective on access:

- 1) New land owners may be from more urbanized areas where access to private property is heavily restricted. Therefore, they move to rural areas to have more control over their environment and be in a more secluded environment. Therefore, giving access to the general public would be contrary to the reasons for moving out of the urban areas.
- 2) When the west was originally populated, neighbors were known and allowing access was not a problem. Even members of the public who were not known, had similar values from living in a rural environment. With increasing urban populations, there is a lack of understanding of ranching and rural practices.

County government (Moffat County, Colorado): I support any users of the land if they help defend ranchers. Money is not the answer. The real answerer is support to keep the ranching industry viable

### Conservation groups

Sonoran Institute (Montana): [Newer landowners] appear to be less interested in historic patterns of access. Buy and lock it up is common. In part this happens because people buy what they think of as a retreat and because they are often disconnected from local community and users

### Recreation groups

Hikers/Equestrians: People from MidWest and California who are not tuned in to idea of public lands that are available to everyone, are “squirrely” about letting people in. Don’t like the idea of public walking through. So foreign to them. Mentally the response is territorial, no concept of sharing, suspicious.

## ***Speculations about the future of access in southeastern Arizona*** *Opportunities for re-allying landowners and recreationists*

### Land and wildlife managers and other officials

Arizona Game and Fish: Landowner relations programs: One of the good things about the Respect and Adopt a Ranch programs is that they are totally voluntary. There is no contract or agreement involved. It is a handshake agreement from which they can back out at any time. Landowner has right to keep anybody or everybody out by locking them out. The idea behind the program is to maintain access.

State Lands Department: Generating fees to pay for public access :Grazing fees could be raised. The right-of-way fees we receive are minimal. A suggestion for recalculation of fee:

New fee would be: appraised price per acre x no. of acres tied up in right-of-way x IOU (intensity of use) x the length of lease.

For example to calculate the 1 mile-long right-of-way in Sulphur Spring:

Say, \$1,000 per acre x approx. 5 acres x 99% of use x ten year right-of-way= \$49,500.

Game and Fish can apply to renew right-of-way for another ten year period .Game and Fish would pay for appraisal stumpage fee, archeological survey, construction and maintenance of road. This way the land will not have to go to public auction . Rancher could ask for grazing fees to be lessened by those 5 acres now converted into a road.

BLM: Where access has been long standing practice and a benefit to the owner, for their own reasons, is the most successful arrangement. Example – land owner gets free maintenance or additional business from allowing access.

Pima County Natural Resources Parks and Recreation Department: With reference to selling hunting permits in the open market, this occurs in New Mexico and other areas This proposition has created a lot of discussion and debate. I think that there will be another run at it here again. Don't think it will work in Arizona. I don't think it is appropriate because it is giving a private operator a state resource to sell for private benefit. Don't think that is a good idea here. Nothing stopping a rancher to collect fees on his private land. .... I don't believe that a rancher who is using public lands should be the beneficiary of a resource that is generated on those lands, ie. Wildlife game. The way I look at is let's say Pima county owns a piece of property and chooses to lease that land to someone who operates a golf course. Should I have the ability to say you can only buy your golf clubs from them? Rancher is leasing public lands and may improve it. But clearly didn't put in wildlife, put in cattle.

Recreational use fees may not work in Arizona: Look at Texas which is 85% private land versus Arizona at 67% public. Private land owner has created very lucrative business in providing recreational opportunities on private land. In TX ranches were built on land ownership. Here in Arizona, ranches were built on small pieces of land that created access to public lands. Less than 150 acres of private land could control as much as 40,000 acres of public land. Private holding much smaller than public land lease.

County government (Moffat County, Colorado): Charging fees: I know of 3 or 4 ranches that make it because of additional hunting income. Passes break even point. Each [state] wildlife agency has its own regulations and rules it operates under. Some of those laws allow special opportunities for rancher. Over the years there has been a lot of controversy that ranchers get advantage that public doesn't get. Right now work group being set out to address issue. Highly controversial. This is the toughest issue the resources department deals with second only to the reintroduction of wolves. A lot of other ranchers, do their own guided hunts. Some of ranchers have right to sell hunting permits for their private lands. General public doesn't think this is fair. People feel that the scheduling of the hunting permits is such that Elk leave the public lands and take refuge on the private lands, and so they don't have a chance to find them on the public land.

I also know of birdwatching and sage grouse viewing and other wildlife viewing tours that give on leased lands or private lands making money [ But] biggest revenue is hunting licenses.

#### Land owners

Charging recreation fees: Although many landowners may see charging for recreational opportunities such as selling hunting licenses a quick way to make money "the number of people who have places where people really want to go are far between. In the SE of Arizona have pheasant hunting. For big game hunting either have the habitat or don't".

If you start charging money the prospects become complicated. Having horseback riders in itself is not profitable, but may develop a lodge or trails. But must address the question of liability, by for example setting up limited liability corporations. Like any other business, if trying to make a living off it there is a chance of risk. Must work on due diligence for legal problems and need to draw up feasible studies first.

### ***Speculations about the future of access in southeastern Arizona***

#### *Ideas for improving future access*

#### Land and wildlife managers

Arizona Game and Fish: In order to have permanent access in the future have to come with either a lot of money or laws that if public has used road, in a sense then it continues to belong to public. Prescription variant for maintaining historical access. When it comes to state lands, county and people working for the people of the state ought to be able to say that if there has been historical precedent to use that road for access then Fed agencies should be able to work in cooperation through a streamline process to guarantee permanent access for public

From the standpoint of my job we are in pendulum swing between everyone being allowed in or nobody is allowed in. Is there anyone in the middle, granting access or hunting by permission? Again, with those problems there is value in finding out if there is an overriding issue. Could have statement about ATV use in agreement for example. If we surveyed 400 landowners and that ATVs turned out to be the problem, then Game and Fish would find a way not to allow 4 wheelers on these properties. What are the core problems?

BLM: Access to remote lands in Arizona is still widely available. As population increases, private land is on the increase also and will further fragment public and state lands. The key in the future will be to retain contiguous blocks of public land that can be managed by one agency, primarily for efficiency of operation and consistent mission across all lands. If leap frog development continues as a result of privatizing public and state lands, the access problem will be compounded.

### Conservation groups

Sky Island Alliance: OHV use could be limited. Forest service like BLM is in the process of mapping roads for these OHVs. Solution we at Sky Island would like to see is for Forest Service and BLM to develop a land use map showing which roads these vehicles would be allowed on. All other roads would not be shown on map.

### Local development interests

Federal and state government and Pima County have to get together as a concerted effort. Approaches on how to maintain access are already there. When land comes up for rezoning if developer says want its it to go on the outskirts of the property, that is fine. Trails on development do not diminish value of property. People want trail access. Developer can charge more money rather than less even if directly abuts property.

Start thinking about access before density is really developed. The master trail plan may or may not be adequate, but is just a line on paper. Need to create the trail piece by piece when areas go up for rezoning

### Recreation groups

Sportsmen: "Its not going to happen as long as we have a tremendous bias against hunting. hunters need to make as much noise as a lot of wildlife activists. ...Because of Rocky Mountain Elk foundation now see many elk, quail and other wildlife in greater numbers."

To improve opportunities for sportsmen, state law must be changed so that Arizona which is currently one of only 6 states that doesn't have protection from lawsuits brought by an individual, does. Examples of man who hit an elk with his car and got 3 million in judgment. "That money comes directly out of Fish and Game. Five and a half million has been paid out toward judgments in the last 4 years."

#### 4-Wheel Sports Clubs

If agencies could work closely with organized groups. When work with agencies with FS there is a 50/50 deal for the rancher in terms of time and labor, so that if we do the labor the ranchers can put these monies toward more projects.

### ***6. Solutions in the interaction between ranchers and recreationists***

*What works, what might work*

#### Land and wildlife managers and other local officials

Forest Service: Wish we had a coordinated program with all federal, local, state governments to develop legal access. A lot of counties don't want to get involved. It is a politically sensitive issue.

Arizona Game and Fish: Have a lot of ranchers and farmers who have always allowed access. Try to work with them to reward them. Flaw with government thinking is that it tends to focus on "bad apples" in dumping money to fix a problem. My personal philosophy is to reward those who are cooperating so that the noisy wheel doesn't always get the grease. Get double benefits from rewarding cooperative ranchers: program makes them more financially sound so less likely to subdivide lands and be a good steward of the land; and secondly, all these projects which benefit cows, are also restoring the grassland for wildlife, improving access and building more wildlife friendly fences.

Try for short term agreements, of 6 years. Don't go for permanent easements because they are not configured in a way we need them to be. A good rancher is a friend of Game and Fish, if gave him a perpetual easement wouldn't be able to reward him for his friendly behavior. We want to be able to help him again when his contract expires: what is next set of projects can do on his land and how can we help him?. We are trying to build relationships with these landowners. With short term agreements when we are getting perpetual easements, we are not excluding anybody

Colorado Division of Wildlife (DOW): Ranching for Wildlife Program: would like ranchers to manage lands for habitat improvements. Ranchers said we will grow cattle or elk we are indifferent, but if you want us to grow elk have to compensate us for that or we will grow cattle. Arrangement so that ranchers have an incentive to manage ranchland as habitat for big game, in exchange DOW gives them something, licenses to sell. Contracts with ranchers, 26 in CO have to be 12,000 acre minimums, if not 12,000 acres on one ranch can put together a conglomerate of ranches. DOW gets public access to large blocks of land, primarily hunting. 1.26 million acres of lands added to public land base

BLM: Some land owners would be willing to give permissive access rather than legal access due to the control they maintain. They have a strong bargaining tool when the access can be

revoked. There could be some success in dealing with a land owner who wants to provide goods or services to persons crossing their land. The key is finding an amenable solution to both the land owners concerns and wishes and the access seeking entity.

A statewide access program could help create an awareness and education tool for both land owners and the public, which in turn could make federal agencies more effective when seeking access. Unless access is an issue tackled by Southwest Strategy, or other multi-agency team, it is unlikely that federal, state and private entities will work together to solve problems on a statewide level. It is foreseeable that counties will play a pivotal role in claiming county roads, but has not been the case in Arizona up to now. Furthermore, the question of how much access to public lands needs to be answered to define the project.

Possibly a third party could serve to facilitate the agreement between agency and land owners. Such an organization would provide the initial research and contact with the land owners to determine their level of interest in providing access. This way, the agency doesn't have to raise the issue, but can concentrate efforts on the legal process of acquiring access.

Route inventory, analysis and resulting negotiation helped to identify the key access points. Signage, maps and stewardship have been the key to successful implementation. Access to two state land blocks, Desert Wells in Apache Jct and Granite Mtn in North Scottsdale, was preserved by this activity. This approach has given the rancher at Desert Wells renewed faith to support continued access. At Granite Mtn, the City of Scottsdale and the McDowell Sonoran Land Trust have bought into this approach as well.

NRCS: If they were willing to grant access ranchers would want to know how many people would be coming, at what time of year and when they would have to leave gates open. They would want to know what kind of support for road maintenance, damages, litter left.

### Conservation groups

Understanding on part of people who ask for access that ranchers have a barely sustainable profit margin and anything more that they have to do in terms of work to repair/rectify impacts left by recreationists are an additional struggle in terms of their limited resources, both financially and physically since it is very difficult to find affordable competent labor.

### Land owners

On granting access.” If you padlock the gates you are shutting out the people who like to support you when you need support. People have to know its a privilege [to be able to ranch].”

State Trust land have posted land need a permit to go there within the Ironwood National Monument Wild. Needs to be a mechanism to trade out State Trust lands in monument. Unfortunately, old land trades were made that were not advantageous to people. The stigma

from these trades exists today. Extremely shortsighted view. State Trust land in Las Cienega could be leased out or sold for development. Reform package went down in flames recently. Until people East of Mississippi understand about BLM and State lands, not much will change. If people don't know or understand something they vote no.

Importance in reaching point where respect each others' values. Maybe both are, for example, interested in the same thing but for different reasons. Landowner offered analogy of brothers fighting over cookies, "frosting on cookies for one and rest of cookies for the other, an elegant solution where everyone gets to have what they want. Same thing with natural resources, about sharing ranchland. There are a lot of people who like to go out and learn with nature. Yes there are potential pitfalls and problems with sharing ranchlands but can't approach life with a fear of that."

One of the biggest stumbling blocks is communication. If you explain to people that there are limitations and spell that out as clearly possible, it avoids problems

"First thing would tell game and fish, the more opportunity they have for landowners to talk directly with hunters to find out common values, don't automatically assume that they are adversaries. They can be strong advocates for one another, but have to opportunity for each to learn what each desires. When I work with them hunters usually become my friends. Difference between someone you've met and talked to and a stranger. If go into something thinking it will be bad experience, usually it will be. Now some people should never try to work with recreationists, they don't have the people skills to make it work. "

### Recreation groups

Funding for parks and recreation departments need to be mandated, just like other services like the police department.

Federal lands take forever to deal with. City and county have direct access to local Board of Supervisors and City Council and Mayor. The final decision makers are local which makes a world of difference. If federal lands could make more (any?) decisions locally would be much better. Recommend land use specialists for federal agencies..

## ***Appendix C: Rancher survey cover letter and survey***

*Elizabeth Penati  
6252 E. Pl. Aurelia  
Tucson, AZ 85750*

March 2005

Dear Arizona Rancher:

You are undoubtedly aware of the expenses you incur with public access on your ranch. You are also aware of the pressure to increase the access to federal land by the public. Many of those asking for access maintain that it is increasingly difficult to reach public lands for the average hiker, equestrian and hunter in Arizona. In addition to overall increased development and in-migration to rural areas surrounding public lands are closures on private land. Together these factors have brought about a situation of record numbers of people who seek recreation on a shrinking acreage base of opportunity. Preserving access into areas that have traditionally been open for recreation is problematic.

You have been chosen to receive this survey because of your connection to ranching. A graduate student in Landscape Architecture at the University of Arizona, I am working under a public grant to address areas of interest for the both the rancher and the recreationist concerning access to public lands. The information received will be used to help land management and other public agencies here in Arizona work in concert with the private landowner to achieve desired outcomes for both the rancher and the recreationist. Your response to this questionnaire is important because it will help *quantify* what has for many years been a highly controversial issue. The impacts for both the rancher and the recreationist can then be more effectively addressed.

The questionnaire also will help bring problematic issues to light. All responses will remain anonymous. If, however, you would like to add your name to the questionnaire, that is fine too. If you have any questions or concerns with respect to this survey, please feel free to contact the University of Arizona, Human Subjects Protection Program, 1350 N Vine Ave., Tucson, AZ 85724. Telephone: (520) 626-6721.

Please take the time to complete and return the questionnaire with its enclosed, self-addressed and stamped envelope and mail it back to me. I am unable to offer you any compensation for your time, but your response will help to keep Arizona moving forward to support both ranching and responsible recreation.

With best wishes for each of you in your community,  
Sincerely,  
Elizabeth Penati  
Graduate Student  
Masters of Landscape Architecture,  
University of Arizona

## Survey

Protecting public access to public lands is a significant challenge to land managers in the western United States, particularly so in light of the spectacular recent growth that shifts land use from an agricultural to a residential base. This survey recognizes that the rancher has played more than a symbolic role in the history of the West. With that in mind, this survey hopes to elicit responses that will be beneficial to the rancher and land management agencies, both.

Please complete this survey simply by circling or checking the appropriate response. All questionnaires are anonymous. If there is anything else, you would like to add, please jot it down at the end. Thanks for helping to inform wise-use planning for Arizona's resources!

### **User groups**

*Have you ever restricted access to public land by way of your private land?*

Yes                      seasonally                      No

*Do you presently restrict access to public land through your private land ?*

Yes                      seasonally                      No

*If you do not now limit access, are you thinking of it in the future?*

Yes                      seasonally                      No

*Please assess the compatibility of the following user groups with your private land:*

<i>Hunters</i>	compatible	incompatible
<i>Hikers</i>	compatible	incompatible
<i>Equestrians</i>	compatible	incompatible
<i>Anglers</i>	compatible	incompatible
<i>Wildlife groups</i>	compatible	incompatible
<i>Off highway vehicles</i>	compatible	incompatible
<i>Target shooters</i>	compatible	incompatible

*Please rank your preferences for size of user groups:*

1 to 2	compatible	incompatible
3-5	compatible	incompatible
6 or more	compatible	incompatible

*How much of a factor in considering recreational access is the time spent arranging for visitation?*

very time consuming                      somewhat time consuming                      time is not a factor

*How important is a concern for off-road vehicles in your decision to grant or not grant access?*

important                      somewhat important                      not at all important

*Do you think that hunters go off-road with their vehicles other than just to retrieve downed big game?*

definitely                      maybe                      not at all

*Have you been or would you be willing to work directly with user groups to provide recreational access?*

yes                      maybe                      no

### **Impacts of Recreation on Ranch Operations**

*Please check any of the following that may influence your willingness to give access:*

- a. less intensive grazing to increase additional hunting opportunities

b. less intensive grazing to maximize habitat for wildlife viewing

*Please check any of the following that may influence your willingness to give access (cont):*

- c. less intensive grazing to increase the opportunity for a showy spring wildflower display
- d. a reduction in the number of fences in the allotment to lessen obstacles for visitors
- e. the removal of barb wire from abandoned fences to reduce the hazards to recreationists
- f. a problematic increase in encounters between recreationists and livestock

*Which, if any, of the following operations do recreationists interfere with, in your opinion:*

Chaining	no	yes
Chemical defoliation of invasive species	no	yes
Managing stock	no	yes
Construction of fences	no	yes

*Do you have concerns that recreationist might bring any of the following:*

Invasive species on tires, clothing, etc.	no	yes
Theft	no	yes
Destruction of equipment	no	yes
Effects on forage and health of land	no	yes
Negative effects on any cultural resources	no	yes

*Please note your level of concern for each of the following:::*

Off-road driving	high	medium	low
Litter from hunting	high	medium	low
Other Littering	high	medium	low
Driving by headquarters	high	medium	low
Disruption of wildlife	high	medium	low
Increased visits by illegals	high	medium	low
Frightening stock	high	medium	low
Need for "rescuing" public	high	medium	low
Vandalism	high	medium	low

**Feedback on Current Access programs:**

*How successful are the following solutions:*

Cattle guard installation	successful	somewhat successful	unsuccessful
Seasonal permit/seasonal closure	successful	somewhat successful	unsuccessful
Volunteers for ranch maintenance	successful	somewhat successful	unsuccessful
Financial and other support for wildlife rehabilitation	successful	somewhat successful	unsuccessful
Financial and other support for habitat restoration	successful	somewhat successful	unsuccessful

**Time and frequency of visitation**

*If you were to open your lands to access on a limited basis what would be your preferred ways to limit access?:*



*Do you feel that wildlife will be negatively impacted by allowing recreation on the land?*

yes, definitely      somewhat      not at all

*Please check any of the following that you feel are destructive to the wildlife and/or the lands under your care:*

- Hiking
- Mountain Biking
- Bird watching
- Hunting
- Off highway vehicles riding
- Horseback riding
- Fishing
- Camping
- Target shooting

*Do you have concerns that opening up your land will encourage the protection of wildlife at the expense of ranching?*

yes      somewhat      not at all

*Are you concerned that inviting more people on the land might encourage the discovery of a federally listed or declining species of plant or animal?*

yes      somewhat      not at all

*In your experience have Habitat Conservation Plans (HCPs) been:*

limiting to your operations?	yes	somewhat	not at all
expensive?	yes	somewhat	not at all
time consuming?	yes	somewhat	not at all

Closing thoughts?

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Thank You!

**Appendix D: Federal questionnaire addressing inadequate access (GAO 1992)**

<b>GAO Report, Table A: Respondents indicating factors contributing to private landowners; unwillingness to grant public access</b>		
<i>Factor</i>	<i>% of Supervisors/land managers</i>	
	<i>FS</i>	<i>BLM</i>
Concern with vandalism	53.5	62.9
Desire of exclusive personal use of their own property	55.1	41.3
Desire for privacy	51.7	37.1
Concern with liability	24.6	35.0
Non-economic desire for exclusive personal use of agency-managed lands adjacent to or intermingled with private lands	32.2	25.9
Disagreement with the agency over the value of the conveyance	11.0	11.2
Potential loss of profits from renting private fishing and/or hunting rights on lands adjacent to or intermingled with agency-managed lands	8.5	12.6
Potential loss of profits form outfitter/guide operations	5.9	14.0
Potential loss of profits from operation of dude ranches on lands adjacent to or intermingled with agency-managed lands	1.7	8.4
Other reasons	3.4	3.5

**GAO Report, Table B: Respondents indicating great or extreme reduction in public recreation opportunities due to inadequate access**

<i>Recreational activity</i>	<i>% of supervisors/land managers</i>	
	<b>FS</b>	<b>BLM</b>
Hunting	12/7	14.7
Off-road vehicle use	10.2	8.4
Hiking	7.6	7.0
Camping	4.2	8.4
Viewing scenery and wildlife	5.9	6.3
Driving for pleasure	5.1	4.9
Fishing	3.4	4.9
Wilderness area uses	3.4	4.9
Mountain biking	4.2	3.5
Rafting, canoeing, and other water sports	1.7	4.2
Cross-country skiing and snowmobile use	1.7	2.1
Recreational mining	1.7	2.1
Developed recreational site use	0.8	1.4
Commercial uses (e.g. outfitting/guiding, providing access to ski areas, etc.)	0.8	0.7

**Appendix E: 1993 Arizona Game and Fish Department Four-question access survey and results**

<b>1993 Table of questions and results</b>				
	More opening weekends with fewer hunters in each weekend	Present number of weekends with the current number of hunters in each weekend	Fewer opening weekends with more hunters in the field during each weekend	No response
	13.0%	42.5%	33.6%	11.0%
Frequency: Total: 148	19	62	50	17
2. Do you presently restrict access to public land?	Yes	No	No response	
	20.5%	76.1%	3.4%	
Frequency: Total: 148	30	113	5	
3a. If you presently restrict hunter access, would you allow access if there were less opening weekends?	Yes	No	No response	
	6.7%	76.6%	16.7%	

1993 Table of questions and results (cont).			
Frequency: Total: 30	3	25	2
3b. If you presently restrict hunter access, would you allow access if there were fewer hunters?	Yes	No	No response
	10.0%	83.3%	6.7%
Frequency: Total: 30	2	23	5
4. If you do not currently restrict hunter access now, are you considering it in the future because of hunters?	Yes	No	No response
	32.4%	60.4%	7.2%
Frequency: Total:113	37	68	8

## *Appendix F: Regional and local partnerships for access*

### *Regional partnerships for access*

#### *The Keystone Center*

The Keystone Center, an organization based in Keystone, CO for the resolution of controversial public policy issues, conducted a year-long consensus building effort centered on needs for public access. Access was found to be considered by management agencies as a support function while the interpretation was that access should instead be regarded as a resource. Lack of direct communication was seen to foster frustration on all accounts. The report found a common misunderstanding on the part of the public to be the fact that administrative access by government agencies did not necessarily include other users. To remedy this, access needs were suggested to be delineated in land use plans by: 1. Type or purpose of access needed, i.e., number of miles of vehicle access required; 2. General area where access is needed; 3. Roads and trails specified to type of use, i.e., OHV or equestrian use or mountain biking; 4. Anticipated level of use; 5. Objective, i.e., short-term access needed for re-vegetation project. 5. Evaluation of projected impacts on resources and landowner; 6. Cost of acquisition for temporary or permanent access, as needed; and 7. Time frame required for acquiring the access. The land use plan once developed was seen as needing to be overseen by the public land manager for coordination with activity plans for transportation and other needs.

Generally, the first choices for access should be done at the state and local level, without federal intervention which may be more restrictive. Existing approaches for obtaining access

include temporary and permanent solutions. *Permissive use* is temporary but a consensual tool to public access across private lands. Advantages of this type are its low cost, flexibility, voluntary nature and promotion of good communication between the official agency and landowner. Disadvantages are that it can discriminate against types of users and revoked without due cause. *Cooperative agreements* made between user groups and the landowner directly made independently of the agency work to benefit each stakeholder. Public agencies may then be freed of commitments to the land owner such as land improvements in return for access. Again, a limitation is that access may be granted for only some user groups.

Local planning may be employed as a tool to determine access needs. Using courts of law to see if access is legally available is of course an appropriate action. Good management of rights-of-way records will help in this regard. Gifts and donations of lands and rights-of-way afford tax benefits and are an alternative means for individual and organization of help in the achievement of access to d federal lands. Third parties such as non-profits like The Nature Conservancy and Trust for Public Lands may contribute this way, as well. Land exchanges may be effective but are fraught with the difficulties of finding suitable properties for exchange and mutual agreement of appraised values for properties in question.

The purchase of a right-of-way or easement has the advantage of being a voluntary agreement which can be tailored to landowners' concerns such as season of use and type of traffic desired. A serious obstacle is the ability to arrive at a mutual price. (Insufficient funding for purchase, administration and maintenance, and hesitancy to use condemnation

interfere with this option). Suggestions for improving the process for seeking easements included: 1. Contact landowners early in the process; 2. Improve lines of communication between planner and access specialists or surveyors who initiate contact with landowner; 3. Train access specialists to discuss potential impacts and landowner and practice negotiation skills (including: a. the need for access; b. any alternative access considered; c. objective of agency for access in question; d. landowner concerns; e. any compensation and how it is determined; f. type of access, whether exclusive or non-exclusive; g. possibilities for reversionary clause) and 4. Expansion of landowner contact group to include county commissioners and interest groups if initial easement is not given.

The advantages of a fee title purchase (i.e., to purchase a right-of-way or easement) is the fact that it is willingly made and a “clean, final agreement” Drawbacks are considered to be the expense and the worries of more lands to manage. Due to its adversarial nature, condemnation is generally considered a last resort, but the report recommended that it shouldn't be overlooked.

The Keystone Center dialogue group labored to evolve new approaches to complement existent options for access. New approaches may depend upon greater flexibility and a wider range of alternative approaches for land managers. *Alternative compensation* in which a landowner receives a license for a use or right on federal land in exchange for access. This approach may be particularly valuable if permit is needed to operate on federal land. For example, a rancher may earn reduced grazing fees. A drawback might be other landowners who are not part of the deal would feel at a disadvantage. Or a landowner could enjoy

facilities or permits related to operations on federal or private land. This may be a concessionaire right such as the concession to conduct horseback trips to a lookout point to a visual resource. This approach has no direct expenditures of government monies with a mutually beneficial solution. Negatives heard are unfair competition for concessionaire rights and the idea of a barter approach applied to public resources. A collaborative effort in which federal agencies could ask for assistance from local government, communities and interested parties, may as mentioned earlier, be less adversarial way to build access routes. Increased communication and understanding through the inclusion of local people would be ancillary rewards. Groups such as The Nature Conservancy and Trust for Public Lands have facilitated land exchanges. The dialogue group recommends that that these groups lend their expertise and financial resources to by assisting in acquisition of right-of-ways or land.

Managing impacts of access was acknowledged to be of vital interest to the landowner. At issue was that although everyone acknowledged the existence of impacts of access, no one agency accepted responsibility for the problem. Also, because agencies also play the role of negotiating for access, they may be reluctant to let landowners know the extent of the problem. A first step in managing impacts is the identification of the problem. Impacts can be tracked by any of the following: an information clearinghouse maybe with an 800 telephone number; costs to correct damages reaching a critical point where an analysis occurs of why the problem exists; a reliance on the discretion of the agency; and/or a political stimulus. If impacts are above anticipated levels, then the agency responsible for the access should generally take the lead in remedying the situation.

The Keystone Center (1989) considered enforcement as problematic in terms of lack of respect for private property, a shortfall of resources, antipathy toward landowners who pursue enforcement actions and inconsistent state trespass law. Generally there was seen to be an inadequate level of enforcement. Recommendations to correct these problems included the investment of more effort and resources into people management on the part of the agencies; the recognition that where there is access to federal lands there are needs for protection of resources and people, needs for prevention through visible law enforcement. And, to remedy the stigmatism assigned landowners who pursue enforcement actions, and have often had to ‘walk up the court house steps alone,’ user groups, as well as local, state, and federal agencies were seen as needing to support the landowners in those enforcement actions. Existing access may suddenly be cut off because of a public agency decision or change in land management practice; different ownership local government action or other reasons. This causes what may be termed an acute access issue as opposed to a longer term chronic problem and requires immediate action to avoid “locked gate” confrontations which can escalate into major problems. The Public land manager should place a high priority on the situation, working with public land user interest, local government and private landowners to bring about a positive resolution of the situation. Critical to problem resolution is effective communication. The better informed everyone involved is and the earlier the problem is addressed, the greater the likelihood for solving the issue to everyone’s satisfaction.

#### *Workshop of Rocky Mountain National Park*

The Resources Management Division of Rocky Mountain National Park held a workshop entitled Gateways to the 21<sup>st</sup> century in 1993, to address many issues concerning neighboring

communities including the first topic billed in the program, access. Recommendations were made to implement ideas for access resolution similar to many of those suggested by the Keystone Center. Concerning Rocky Mountain Park specifically, there was agreement that development and change of ownership was endangering many current access points to Rocky Mountain Park. Although access for hunters was increasingly limited, hunting was one of the only remaining means of controlling the elk and deer population there (Rocky Mountain National Park 1993). Another point of concern was the high priority given the private automobile. The community felt alternative ways for accessing the community and the park should be encouraged. Recommendations to address these problems were the following: 1. Inventory existing prescriptive access points to public lands. Establish a watchdog group to regularly monitor these points and trail heads with specific contacts with Federal and county land managers to alert in case of threatened access. The landowners should also be provided with these contacts to meet with regularly to discuss abuses on private lands. Land management agencies were urged to distribute educational information to visitors who accessed the Park vis-à-vis private lands. A sample admonition might read: "This access to Rocky Mountain National Park is located on private property. Please respect the land and preserve your right to use it." Other education efforts were to be directed at the landowners themselves. Landowners, as appropriate, should be educated about the benefits of hunting to wildlife management. Land managers were encouraged to work with landowners and hunters to encourage landowners to open up their lands to hunting. To assist in developing alternatives to the private automobile the workshop sought to motivate the support for gateway communities to give alternative means of access to the Park and other public lands by: actively participating in transportation initiatives; bolstering volunteer efforts for

building and maintaining hiking and biking paths; garnering support for sales tax and other funding mechanisms to develop recreational paths; eliciting landowner donations of rights-of-way or easements for such paths. An action matrix was built in the workshop to match interested and committed individuals with the recommendations generated at the workshops.

*Other work to secure recreational access*

A national level memorandum of understanding for access to federal lands for hunters and anglers was entered into in 2002 with the Forest Service, BLM and the FWS for a large number of sporting groups such as the National Rifle Association, Theodore Roosevelt Conservation Partnership, Rocky Mountain Elk Foundation, etc. (Sportsmen's access MOU 2003). The memorandum seeks to reinforce the multiple use mandate of the federal agencies in terms of hunting and fishing opportunities and the agencies' jurisdiction over roads and trails within their system to provide access for hunting and fishing on federal lands. Specific obligations agreed to by the agencies included, in brief, to inform the sportsman's groups when management plans are to be developed, revised, or amended, and to cooperate with local groups to assess recreational needs and access opportunities for hunters and anglers. The agencies also agreed to help identify problem areas for access to hunting and angling opportunities and consider potential solutions to improve access to such areas, or alternative areas. Also the agencies promised to help orchestrate cooperative projects for the upkeep of access points and federally managed roads and. The agencies agreed to work with the sportsmen groups to launch a sportsmen's volunteer day to gain visibility for the efforts of the Agencies and Private Organizations on the maintenance of recreation opportunities on public lands. Furthermore, the agencies agreed that they would, consistent with any applicable law, specifically notify the private organizations of significant

management changes for land units that would impact access for sportsmen. The agencies were signatory to working with interested parties at the field, regional and national levels to seek alternative access opportunities and/or work together to notify users of the changes and why the changes were necessary. Last, they planned to explore the use of the web to keep hunters and anglers abreast of the status of access (Sportsmen's access MOU 2003).

What the private organizations agreed to in return: A. bring local chapters and affiliated organizations to participate in agency planning efforts to identify suitable access points and inadequate access areas; B. bring the same people to the table to provide leadership, services, and/or materials, as available and appropriate, for the maintenance of roads, trails and access points on public lands; C. make the agencies aware of any potential sources of funding for hunter and/or angling access related projects; D. bring technology and skill to help the agencies deliver outreach information; E. communicate with local sportsmen with respect to land management planning; and F. facilitate the acquisition of easements for roads and trails across private lands that are necessary to provide public access to public lands for hunting and fishing (Sportsmen's access MOU 2003). It has been reported too that landowners and sportsmen are coordinating efforts through the Arizona Outdoorsmen and Arizona Bowhunters Association to better access conflicts.

### ***Local partnerships for access***

#### *Pima County Trails Association*

Historically one of the first, and recognized as the most important grass roots organization in Pima County, AZ for ensuring recreational access today, is the Pima County Trails

Association (PCTA). Frances Werner, Chairperson of the Resources Advisory Council for BLM explains that Pima Trails is a descendent of original Pima County Citizens Advisory Trail Access Committee (pers. com). Begun in the early 1970's at the instigation of Judge Lillian Fisher a Supreme Court Justice and President of Southern Arizona Hiking Clubs, Fisher was distressed by loss of access in Tucson. There was particular concern for preserving access to Pima Canyon, an area where subdivision plats were in progress. This potential threat elevated interest in maintaining other trails throughout the region (Trail Access Citizen Advisory Committee 1976). An initial job for the committee was to inventory trail access problems and alternatives in eastern Pima County. Data was collected on existing trailheads where present access was across private property and a user-experience assessment was drawn up for the capabilities and constraints of specific trails. Bond monies of \$1.5 million were authorized in 1975 to provide money for trail access. PCTA helped to engineer the Trail Access Plan for the Tucson Metropolitan Area, which may locally be considered the "mother" of all trail planning for Tucson. The Trail Access Plan was officially adopted as county policy in September of 1976 in cooperation with Pima County Parks and Recreation Department (now Pima County Natural Resources, Parks and Recreation), Arizona Game and Fish Department, Forest Service, National Park Service, Arizona State Parks Board and Pima County Highway, Property Management Departments. The plan was written to secure existing trails before subdivisions effectively eliminated access to these trails (Trail Access Citizen Advisory Committee 1976). The authors conceived of the plan as a balance between two issues of recreational management: public use versus private property rights. The guidelines adopted by the committee to support this balance were that access: 1. correspond with a level of trail use acceptable at the time to land

management agencies, and the local environmental, homeowner and user groups; and, 2. be compatible with the surrounding land uses (Trail Access Citizen Advisory Committee 1976). Specific goals for the plan were to: 1. develop an access plan that ensured permanent public access to existing trails; 2. consider a variety of access alternatives for each trail; 3. maintain safe and harmonious relations with those private lands adjacent to access routes; and to 4. encourage management of public lands to control use and protect the environment.

Adoption of the plan meant that if there were a development along public lands, such as near the Catalina Mountains, Pima Canyon, Finger Rock, Tucson Mountains, Rincon Mountains, or Saguaro National Park, a developer would be required through the zoning process to continue the availability of historical access. And, if any road existed into public land, the developer would have to keep it open. “But trails were not mentioned,” (Werner, pers. Com), “it took two years and going to the state legislature to add ‘and trails’ . The Board of Supervisors accepted the plan but to make it functional there had to be an ordinance. Took lots of time. Took trail access near Aqua Caliente years to be fixed. Steve [Anderson, of Pima County Natural Resources, Parks and Recreation] finally got the missing piece.”

The original plan was superseded by the Eastern Pima County Trail Master Plan in 1989. In 1994, the plan at the request of the Parks Director, was updated to align the zoning code with the Master Plan. The amendment process ensured that any recreational trails listed on the master plan would be secured on properties which were listed for development.

Amendments gave the Pima County Natural Resources Department greater flexibility to site trails vis-à-vis new developments. For instance, alternative rights-of-way may be delineated

or the trail requirement waived if topographical or other conditions, such as sufficient trails already in situ rendered trails unsuitable (Pima County Parks and Recreation Department 1996b). In 1996, further changes to the Master Plan were added with a new Trail System Map to respond to the ever evolving boundaries of development. The update was designed to reflect changes in land-use patterns that had potential for affecting the viability of some Master Plan- listed trails. A second reason was to identify the most important trails and access points in the Master Plan in order to concentrate the Park's resources on making them accessible for present and future recreationists (Pima County Parks and Recreation Department 1996a).

#### *BLM and the Sonoran Institute*

The Sonoran institute (SI) works at a local level with communities to help with the restoration and conservation of landscapes. This collaborative approach is accomplished by working with local interests to achieve conservation goals. The partners are diverse including landowners, government agencies, and non-government organizations. The Institute is not per se a trust, but helps with the groundwork for connections, partnerships and matching with conservation buyers (Sonoran Institute 2005). For years BLM and the SI have experimented together to establish a sense of responsibility and stewardship for the public lands under BLM management with local residents (USDI/BLM/SI 2001). This experiment represents a shift away from thinking of governmental agencies as “expert” toward an attitude of shared knowledge and responsibility on the part of the public. Experience has led to the conclusion that BLM field personnel should share in the responsibility for implementing local land use plans. Traditionally federal agencies including the BLM have

involved the public in the initial stages for planning, at the scoping stage, and then returned with a first draft at hand. The BLM is trying to reverse this pattern by bringing in the public each step along the way of the planning process. The BLM applied this approach with the Sonoita Valley Planning Partnership.

### *The Sonoita Valley Planning Partnership*

The Sonoita Valley Planning Partnership (SVPP) is a stewardship groups that is currently busy implementing strategies they have developed over the past several years. (Pregler pers. comm.) An example of the new ecosystem planning and collaborative approach for the BLM, the Tucson Field Office participated in the formation of the Sonoita Valley Planning Partnership (SVPP) (USDI/BLM 2002, 1-9). As part of the major shift toward an ecosystem management approach, which places an emphasis not just on consultation with the public but on actual involvement of the public throughout the process and so brings a truer collaboration, the BLM has with the SVPP continued connection with the public after the initial policy was set in (USDI/BLM 2002, 1-9). The Sonoran Institute is also partnering with the SVPP to exploring new organizational structures that allow the SVPP to be self-sustaining and play a more active role in helping the BLM implement its Resource Management Plan. Separate working groups address three divisions of issues: organizational structure; natural resources; and recreation. (The working groups are open to the public.) The general scope of the recreation committee will include routes (roads, trails, etc.), visitor management, signage, education and outreach (including interpretation), and the interactions among these areas as they impact resources on Las Cienegas Natural Conservation Area (LCNCA) which is part of the Sonoita Valley. The group has agreed to identify critical

priority sites such as: Empirita access from the Whetstones; Arizona Trail; Oak Tree Canyon; North Canyon ; and the Airstrip site as well as other potential priority areas on which to focus their work. Several sign-related recreation management activities such as a map and guide, interpretive plan , sign plan, inventory of location sites for signs, Portal sign and Arizona Department of Transportation (ADOT) signage for the NCA are ongoing. The educational and outreach functions potentially include: a list of and outreach to recreational user groups who currently or potentially use the LCNCA to let them know the status of implementation of the resource management plan, invites them to participate in the work group, and assesses their interest in continued involvement. Also the work group is planning to develop fact sheets for specific uses or user group with their involvement.

#### *Rio Grande Resource Management Plan*

A near-local partnering example for recreational access is the Rio Grande Resource Management Plan, Taos, NM. The Taos BLM field office met with commercial and private boaters, and local residents for the Lower Gorge of the Rio Grande River. Conflicts among these groups necessitated a management plan to mitigate the affects of the boater recreation on the communities lining the river. The group wrote a plan that allocated rafting between commercial and private boaters that included a monitoring strategy. BLM promised that a consensus among the participants would be part of a preferred alternative of the Resource Management Plan (RMP). This enabled the group to persevere in spite of “what was pretty slow going” and to work more cooperatively with greater trust and willingness for compromise. The plan is part of the current RMP. The final group proposal was a reasoned one and a case study in how to share the responsibility for a significant natural resource. The

design limited boating activity by season, water level and part of the river (USDI/BLM/SI 2001).

## ***Appendix G: Partnering to maintain the viability of ranch lands, private and leased***

### *Factors leading to loss of ranching*

Conservationists and others are scrambling to protect the productive private lands before they disappear into the great chasm of development. In the west the fastest growing areas are not the urban or suburban ones but the rural areas according to the work of David Theobald, a geographer at Colorado State University (Christensen 2004). Arizona statistics for the jump in land values relative to the rise in prices for agricultural products show that in the years between 1964 and 1997 land values rose by 632 percent for land and buildings for all farms and ranches in that period while the total market growth of agricultural goods sold over the same period also rose also but only by 21 percent (SDCP 1999, 8). This gap in comparative value between agricultural goods and real estate goes far in explaining the allure of closing the family farm or ranch. Land once thought of in terms of its potential for productivity is now being considered for its potential for development. Subdivisions and entire new communities are fabricated from the 'raw' land at the urban edge. Worsening the development in Pima County is a trend for wildcat subdivisions, unregulated subdivisions of fewer than 6 initial splits, for some privately held ranchlands and other rural lands. The unregulated nature of this subdivision means that development occurs without basic improvements such as paved roads, adequate and safe water, drainage and flood control, utilities and wastewater facilities. This is problematic on two accounts: first, it lowers the quality of life for residents in the unregulated subdivisions and second, it devalues the land.

Generally throughout the West, ranchers are a varied group of big corporations, family corporations, hobby ranches, family ranches and conservation buyers whose main interest is not in selling cows even though they may run a few. With this diversity of focus, there is no “one-size-fits-all solution” for keeping ranching interests intact (Christensen 2004). What the ranchers do have in common is a general age from 55-65. Since nearly half of all cattle businesses have been in the family for several generations the present moment is a vital one in terms of determining the future of land use in the West (Christensen 2004). Researchers predict that in the next ten years, more than half of these ranches will change ownership. The American Farmland Trust in 2002 focused on certain western ranches for protection. Using a Geographic Information System (GIS) 25 million acres in the Rocky Mountain States of Colorado, Montana, Wyoming, Idaho, Utah, Arizona and New Mexico were identified as “strategic ranch lands at risk.” A second evaluation considered which of these were projected, through an analysis of major road mapping, to move from rural to suburban densities in the next two decades. Essentially the lands at greatest risk were those in high mountain valleys or those mixed grassland areas around the major mountains of the region (Christensen 2004).

In recent years, a rancher’s privileges for grazing on public lands have been increasingly disputed. 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. Range scientist, George Ruyle articulates for the Sonoran Desert Conservation Plan the importance of access to 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." Lawsuits for non-compliance with the Endangered Species Act put National Forests allotments at risk. Changes for competitive bidding versus preferential grazing rights on State Trust Lands are another financial pressure. These and other issues are confronting ranchers at a time when declining cattle prices and extended drought have subjected them to severe economic stresses, states George Ruyle (SDCP 1999). Encapsulating the issues, Ruyle says, "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 (SDCP 1999)." Stan Irby, a rancher in Gunnison, CO is a believer in the capacity of ranching to maintain open space and plans to reinvest some of the monies he generates from selling easements on his ranch back into the purchase of more land.

*Partnering to retain, through the preservation of ranching, open space*

In order to preserve vast tracts of open space, agencies and private enterprises are recognizing the importance of offering economic development programs for ranch businesses and the need for promoting public education about ranching. As a demonstration of the country's commitment to preservation of open space and the heritage of ranching, the number of land trusts in the Rocky Mountain West has more than doubled. Across the country as of 2002, approximately 6.5 million acres of land have been set aside through conservation easements (Alexander and Propst 2002). Usually termed *agricultural conservation easements* when maintaining the working character of the land, these do not generally grant public access, unless that is specifically granted by the landowner.

*The Nature Conservancy's collaborative efforts*

The Nature Conservancy's efforts are extensive: working to unite land use with conservation across entire ecoregions (Weeks 1996). In 1997, The Nature Conservancy of Arizona elicited the support of the Udall Center for studies in public policy at the University of Arizona to work with ranchers toward a shared goal for "sustainable landscapes". This group of ranchers, scientists and environmentalists joined together as the Arizona Common Roundtable ranchers, scientists and environmentalists who subscribe to the goal of "shared sustainable landscapes." Explains, Tom Sheridan, "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 (SDCP 1999). Through discussion, it was "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" (SDCP 1999). Sheridan points to a vivid example of the work the Nature Conservancy has contributed to the landscapes of the region: "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” (SDCP 1999).

### *Conservation development and planning*

Merely ranching on lands will keep them from development, but common knowledge suggests that it will not be enough to preserve biodiversity and the vital functioning of the grassland ecosystem unless these lands are actively managed as reserves. Planning for the management of rangelands, like that for any landscape, is important to begin first at the regional level. Noss and Cooperrider (1992, 248) suggest that a role be assigned for each area within a landscape for a certain function such as a core reserve, buffer, corridor, corridor buffer, or multiple-use matrix with changes in management and designation as necessary. Changes in land designation, for example of a BLM land to a wilderness area, may require purchase, trade or other acquisition. An agricultural parcel may claim high monetary worth, such as a BLM parcel near Phoenix but offer limited biodiversity, and may be traded for more acres with a smaller price tag but of higher biodiversity in a more rural area such as the San Pedro Riparian National Conservation Area in southern Arizona. No cost would be accrued to the taxpayer for this type of exchange but it may facilitate ranching as well as wildlife (Noss and Cooperrider 1992, 248).

### *Limited development*

The concept of ‘limited development’ facilitates the rancher in keeping the rest of the ranch by strategic selection of lots for sale (Alexander and Propst 2002). Conservation easements or less secure instruments such as “mutual covenants” may restrict the location and number

of lots that can be sold for development. Higher values for these fewer homes enable the rancher to gain more income while saving land for agricultural use. Further, some of the tax liability from the sale of protected or limited home sites may be offset by the donation of an easement as part of the limited development planning process (Alexander and Propst 2002). Ranching families can also sell a home site that includes some limited recreational access to the rest of the property: the buyer get privacy and the amenities of ranch ownership including opportunities for recreational access (Alexander and Propst 2002).

#### *Agency partnering programs*

The Grassland Reserve Program is an effort built into the 2002 Farm Bill by the National Cattlemen's Beef Association and The Nature Conservancy. In brief, the Grassland Reserve Program compensates ranchers for leaving grassland in a viable: read not developed, state. However, lack of adequate funding has blocked the larger scale implementation of the program to date (Peck 2004b).

The partners with NRCS for conservation in the Western region include the National Association of Conservation Districts (NACD), the National Association of RC & D Councils (NARCD & DC), the National Conservation District Employees Association (NCDEA), the National Association of State Conservation Agencies (NASCA) and the Western Governors' Association (WGA). The organization includes a local infrastructure for bringing technical assistance to farmers, ranchers and communities. Because of increasingly complex patterns of land ownership in the West today, NRCS has recognized that greater coordination is needed for conflicts between adjacent land uses. Effective planning for

interwoven private, public and tribal lands requires the NRCS to coordinate multi-stakeholder planning for a mix of recreational, habitat protection and grazing goals. For example, the Southwest Strategy is a partnership for the coordination of monetary and technical resources. Southwest Strategy works across New Mexico and Arizona with Mexico to plan fire and grazing management and address other concerns such as illegal immigration and other border issues across landownerships. And, the U.S.-Mexico Border Coalition of RC&D Councils works to guide resource protection along the borderlands (USDA/NRCS 2000). Because the trend is towards financial assistance rather than technical assistance, land management agencies suggest that the Conservation Security Program (CSP) under the auspices of the NRCS, which rewards farmers and ranchers for their management, will become a key funding source for ranchers in Arizona as it is becoming elsewhere in the country (MBG, Douglas, AZ, April 12, 2005).

#### *The Sonoran Institute's Working Landscapes Program*

The Institute's goals in The Working Landscapes Program is geared to research, communication, community work and capacity building. The focal research is findings that influence ranching and the conservation tools that help to preserve land integrity and stewardship (Sonoran Institute 2005). Through publications such as *Preserving Working Ranches in the West* and *The New Frontiers of Ranching* and other means, the institute works to deliver the message of available resources for supporting "economically viable ranching and a healthy environment" (Sonoran Institute 2005). The SI's reach is inclusive of landowners, elected officials, government agencies and the conservation community at large (Sonoran Institute 2005). Among the community work in practice with the Sonoran Institute

are Wet Mountain Valley, Colorado; Madison Valley, Montana; Eagle Creek, Arizona; and Lemhi County, Idaho. With each of these communities the institute seeks to nurture community abilities for self- directing their conservation efforts. The Institute helps to plan speaking engagements, conferences, socioeconomic training, and publications (Sonoran Institute 2005). What the institute terms “Capacity Building” is another thrust of the program with a focus on forming partnerships, teaching acceptance and skills for conservation, and helping to teach methods for curbing development of ranchlands (Sonoran Institute 2005). Highlights of the program’s work include community efforts in Custer County, Colorado, which has brought protection of 10,000-plus acres of conservation easements, innovative county land use planning, studies on the cost of community services and larger public support of ranching and conservation (Sonoran Institute 2005). The institute formed the San Rafael Valley Land Trust of Southern Arizona which precludes 20,000 acres of ranch land from development (Sonoran Institute 2005). The Working Landscape Program believes that the very concept of *ranching* is an inclusive one that extends beyond livestock to conservation (Sonoran Institute 2005).

### *Wrapping ecology into ranching*

A recent graduate from Stamford’s MBA program, Carl Palmer, is working with his recent purchase of the Adobe Ranch on the east side of Sierra Nevada in CA to demonstrate that economics and ecology can ‘work hand-in-hand’ (Christensen 2004). The ranch is the first his company, Greenbridges, is building to ‘yield returns for investors while also conserving natural resources, biodiversity, and open space’ (Christensen 2004). He and his partners, traditional farm and ranch real estate investors have put several million dollars into the

property with the expectation of doubling their investment in the next 5 years, for a rough return of 14 percent per year, a rate they compare to what a 'reasonably savvy investor' can expect to make elsewhere (Christensen 2004). Palmer plans to increase the return on the investment (ROI) by both generating greater revenue and by getting some of the initial capital back "If you take out half of your capital, you double your return' Palmer explains. To accomplish this, Palmer was intending to put the ranch's core riparian areas along the Adobe Creek into the Federal Wetlands Reserve Program. In exchange for a permanent conservation easement, the Program pays for the agricultural value of the land and restoration, as necessary. In this case, restoration would be a boon since the riparian areas were heavily grazed under previous ownership (Christensen 2004). The Palmer group also is planning to exchange some lands with the Forest Service that focus on expanding a currently urban area and preserve some meadows. Their positioning makes the targeted ranch meadows virtually inaccessible since their onetime connection to the rest of the ranch is now gone because of lost grazing leases with the Forest Service. The ranch would ask that the Forest Service take these parcels in exchange for public land it owns near the growing town of Mammoth that wants the land for expansion. Money that the Forest Service would get for the sale of this land would then go back to the ranch (Christensen 2004). In addition, there are plans for Palmer to sell a 40-acre parcel on the highway for 10 times the price Greenbridges averaged for the entire ranch. To raise more revenue, the investors will charge recreational trout fishing fees, initially set at \$100 per half day and scheduled to rise the restoration paid for by the Federal Wetland Reserve program improves the fishing! Predicts Palmer, 'the recreational revenue stream will very easily exceed the ranching revenue stream pretty quickly.' In terms of the cattle business, he plans to continue with grazing about 300 to

400 cattle but isn't figuring out a way to actually increase the revenue stream on what was once the heart of the business: "We're lucky to generate a 1 to 2 percent return. It's not an economic return on what is a valuable asset," admits Palmer (Christensen 2004). In fact his perspective seems ultimately one of game playing: through the heightened visibility that recreational fishing and general outdoor recreation visitation will bring he hopes that the core of the ranch is eventually to be sold off with a conservation easement on it to a conservation buyer, in other words someone who doesn't count on making a ranching profit but who will consider it "for its many layers of value, not just as a ranch" (Christensen 2004). Essentially after the above plans are enacted he won't need in Palmer's view 'an astronomical price' for the residual value of the lands with conservation easements and some sell-off: he is hoping that through his projected plans he will simply have to find a buyer for a restored and protected ranch for about the same price he paid for a 'distressed ranch.'" However, the next prospective buyer would have to have different ambitions, including a lower one for turning a profit. Could Palmer's approach work for a ranching family that wants to continue living on the land? Palmer explains that the same principles he is capitalizing on for the Adobe Ranch could work elsewhere depending on the parameters: 'For a ranch on the edge of a booming metropolis, this won't work unless there is some with deep pockets willing to pay for an easement.' However, 'for ranchers who have a really low basis on their property, the returns from a nontraditional approach like this can be comparable to a traditional approach.'" "Traditional" doesn't here refer to grazing, but splitting off the land into 40-acre development parcels (Christensen 2004).

### *Local efforts to reconfigure ranching*

Coordinated Resource Management Planning (CRMP) helps ranchers who volunteer to work with CRMP to contend with a complexity of land ownership such as exists in Pima County and throughout Arizona. In addition to multiple ownership, there is also usually multiple use on these lands: hunters, recreationists, miners and others. CRMP in Pima County, for instance includes involvement with the following agents of support: Arizona State Land Department, USFS, BLM, USDA/NRCS, USF&WS, University of Arizona and Pima County! All of the expertise embodied in these groups is available to help ranchers cope with inventory, monitoring and follow-up with field visits, etc. By working with CRMP ranchers gain both technical assistance with such matters as setting up a management plan, monitoring sites with photos and frequency transects, etc. On the agency side, this collaboration assists in habitat health for wildlife and plants, overall rangeland health (Mayro and McGibbon 1999, 70).

### *Pima County*

Pima County has been involved in a number of successful ranch conservation efforts to retain ranchers as land stewards while preserving the land's scenic, wildlife and cultural resource values. One of the biggest ranches in Southeastern Arizona, the Empire-Cienega Ranch was purchased in 1987 to avert development of some 20,000 homes. Purchase was made over concern for urban sprawl and groundwater depletion. The Bureau of Land Management participated in the land purchase and conversion of land to a federal conservation area. The Las Cienegas National Conservation Area was established in 1999 in collaboration with the Sonoita Valley Planning partnership. The act was passed in 1999 to "conserve, protect, and

enhance various resources and values while allowing livestock grazing and recreation” ( Las Cienegas National Conservation Area Establishment Act 1999).

### *The Malpai Borderlands Group*

The work of the MBG is at the forefront of collaborative planning for ranching issues. Cooperators include from the private sector: cooperating ranchers from Arizona, New Mexico and Mexico; and from the public sector: USDA, DOI, Arizona State University, University of Arizona’s Desert Lab, University of New Mexico and New Mexico State University. Founding ranchers, Warner and Wendy Glenn who have been working the Malpai Ranch for over 40 years, write in the first newsletter of the group of their concern for the “lack of understanding by policy makers in the government, of how we work and survive” among other concerns. Bill McDonald, past MBG President and current Executive Director explains the organizations perspective on ranching and land use: “In a political climate where the traditional position on the issue of land use is usually to be had at one end of the spectrum or the other, we find ourselves in the *radical center: we invite you to join us right there.*” (The Malpai Borderlands Group 1995).

The NRCS cost shares with the MBG, as with other ranchers, through the Environmental Quality Incentive Program (EQIP) and the Wildlife Incentive Program (WHIP). Forest Service has shared in payments for projects such as the prescribed Maverick Burn (MBG 2002).

*The Southern Arizona Cattle Growers Protective Association*

The Southern Arizona Cattle Growers Protective Association was instrumental in the creation of the San Rafael Valley Land Trust that protects more than 20,000 acres of ranch land from development in southern Arizona. The Association meets regularly to apprise ranchers and agency members of current concerns such as appropriate monitoring of rangelands and other issues of mutual interest to the ranching industry.

*A new option: public allotment buyout*

Activists are willing now to pay ranchers to move them off the land, a recent tack away from bringing lawsuits to limit cattle numbers. For instance, the National Public Lands Grazing Campaign is made up of veterans of many legal and political battles over grazing (Reese 2005). Now they are offering money instead. The Campaign's leaders are also working on two congressional bills that would pay ranchers to voluntarily give up their federal grazing permits (Reese 2005). Because at present only the Federal government can permanently retire a grazing allotment, The National Public Lands Grazing Campaign is introducing legislation for allowing buyouts on 257 million acres of public lands throughout the West. A second bill sets up a pioneer buyout program in Arizona. Each would deliver to ranchers \$175 per AUM. This offer is substantially above the average AUM value of \$35 to \$75. If all grazing permittees, that is about 18 million AUMs leased by 25,000 ranchers, were to sell, it would cost the taxpayers, according to the National Cattlemen's Beef Association, a total of \$3.3 billion (Reese 2005).

Some environmental groups that have historically used litigation and administrative appeals to force cattle reductions don't want to give ranchers anything, says Andy Kerr, who directs the Public Lands Grazing Campaign. In response to questioning about what environmentalists may see as a high price, Kerr explains that the system of grazing permits is not a far market system at all, "You and I can't go buy a grazing permit. It's a closed system. So the campaign seeks to create a market in order to end a market" (Larmer 2005). According to Kerr, the federal grazing program loses half a billion dollars a year, so the \$175 per AUM price is in reality a favorable break for the tax payer. Plus, Kerr insists, "the ecological benefits will be huge." (Larmer 2005). Rep. Mike Simpson of Idaho, R, has introduced separate legislation that would pay ranchers in central Idaho even more, almost twice that much. Local towns and communities would not in Kerr's view be hurt economically by the disappearance of ranching: "The ranchers aren't supporting the towns; the towns are supporting the ranchers. Most ranching families have to get second jobs in town to support the ranch. (Larmer 2005).

When asked if buyouts wouldn't accelerate the new wave of development in the West, Kerr asserted that development was already a reality. Reasons Kerr, "If the best agricultural lands in the country in California's Central Valley and Oregon's Willamette Valley can't compete with development, then how can our poorer agricultural lands in the interior West?" (Larmer 2005). Again because buyouts would capitalize ranchers, he feels that they might serve to stem development. If ranchers aren't forced to sell quickly, they might take the time to put conservation easements in place that would allow them to continue. (Larmer 2005). "I tell my enviro friends, "Hey, it's just money." We environmentalists are always saying there is

more to life than money, so why get hung up on giving these ranchers a generous deal? (Larmer 2005). When asked if an argument couldn't be made that since grazing is a privilege and not a right the government should be able to retire allotments without any payments to ranchers, Kerr offers that no payments ignores reality. In fact, he argues, although a grazing permit is not a property right, it is a property interest. This is true because ranchers can use their permits as collateral for borrowing money at a bank. Also, when they sell their private base properties, part of the price includes the federal permits inked to that base (Larmer 2005). Most cattlemen's groups, oppose a federal buyout but some ranching groups are growing more receptive: The Oregon Cattlemen's Association just supported the buyout of a federal permit in the Cascade-Siskiyou National Monument, for example. And, The National Cattlemen's Beef Association recently said that they would back ranchers who chose to sell their grazing permits because of regulatory hardships (Reese 2005).

When asked if he thought the legislation will ever pass in Congress, Kerr replies, "It will take a while to pass national legislation. But site-specific legislation is on the move. In Arizona, ranchers on the Tonto National Forest are pushing an Arizona buyout bill; the Central Idaho Economic Development and Recreation Act, backed by Republican Mike Simpson, has a buyout provision and it is moving forward; and we have congressmen and senators supporting a buyout of ranchers in the Cascade-Siskiyou National Monument (Reese 2005). Since the National Public Lands Grazing Campaign, who have proposed the legislation are environmental activists, some groups who view themselves as moderates are not willing to support what they view as a radical movement. For instance, Mike Ford, a BLM for 25 years before joining the nonprofit Conservation Fund, has actually been

practicing buyouts for years. Ford explains, "We don't want to be perceived as being anti-grazing, because we're not. We're really about balance." (Reese 2005). Another potential bonus of the buyout campaign has been the negotiating that the issues has forced Hedden says between hard-nosed advocates in the anti-grazing campaign and ranchers, "There's been a humanizing on both sides that I think is a good thing." (Reese 2005).

Funnily, some ranchers view buyouts as "a god send" for rural communities with the money pocketed used to continue ranching on more suitable land or start other businesses." (Reese 2005). In terms of the future for one Arizona rancher, after the buyout, Whitney is hoping to sell his own base property as a dude ranch. High recreation pressure on the Tonto National Forest from "the 2,000 to 3,000 ATVs that are running around helter-skelter on any given weekend" make it unlikely that a conservation group would buy his property. Whitney laments, "Everybody's given up on trying to keep the fences up." "If somebody said we'd buy it from you for fair market value, we'd love to sell it," he says. Then, with a grin: "And then they'd have to deal with the Forest Service." (Reese 2005).

Part of the appeal of the buyout proposal has been explains Kerr, its pragmatism: "The market for cattle ranchers has changed; today, there is intense international competition in the beef industry that makes grazing on vast acreages in the arid West uneconomical. Plus, we've changed the rules. Ranchers have to deal with federal laws protecting water and endangered species, and also with more recreational users who don't understand or respect ranching. The public-lands ranching industry is going extinct; not as fast as the sage grouse or the grizzly,

but it is going extinct. And the buyout is a fair way to address this inevitability. It's a politically elegant solution: The golden saddle." (Larmer 2005).

Writer April Reese asks if this isn't a nod to ranchers' longstanding claims to ownership of the public range? Well, not quite. "All we're acknowledging is that those ranchers who have purchased ranches and have public-land allotments are paid money," says Bill Marlett, one of the leaders of the buyout campaign and director of the Oregon Natural Desert Association. "The cattlemen's organizations remain opposed, viewing buyouts as a first step toward moving ranchers off public land. Whatever the outcome of these Bills, buyouts may become a tool for the future, predicts Kerr, "When there is an endangered species or recreation conflict with grazing on public lands, a buyout should always be one of the options" (Reese 2005).

### *Outlook for the U.S. rangelands*

Stepping back to a broader perspective, one may see two seemingly opposing factors shape the nature of ranching operations today, consolidation and subdivision (Mitchell 2000, 24). Consolidation is the process of distributing private rangelands among fewer and fewer ranchers. In recent years fewer than 2 percent of farmland owners have come to own more than one-third of U.S. farmland (USDA Economic Research Service 1994). In the years between 1988 and 1997 the number of farms dropped from 2.20 million to 2.06 million, while the average farm size grew from 452 acres to 471 acres (USDA National Agricultural Statistics Service 1998). [However the rate of decrease will likely slow in the future] (USDA National Agricultural Statistics Service 1998). Simultaneously, farms and ranches are being

broken up into smaller units. Primary drivers for subdivision by the landowner are the needs to raise capital for payment of debt and allocation of land among descendants. Both consolidation and subdivision can be seen in the changing distribution of farms and ranches in terms of economic scale. For example, the number of smaller working farms and ranches in the 13 western states (where most rangelands occur), including Alaska and Hawaii, decreased while those making more than \$100,000 increased between 1995 and 1997 (Mitchell 2000, 25). At the same time the number of farms and ranches bring in less than \$10,000 rose, representing the popularity of small “hobby” farms with farm-related incomes between \$1,000 and \$10,000 (Mitchell 2000, 25).

The future of ranching will in part be determined by the federal agencies which manage grasslands and the employees they hire. In the past fifty or so years many laws promoting various conservation practices, including public involvement in federal land management planning, have been written into U.S. law. Conservation and stewardship opportunities tied into farm bills have added to the legal framework for sustainable management. At a national scale this framework implements public involvement, periodic planning, assessment and policy reviews, and human resource skills across relevant disciplines (Mitchell 2000). In the 1990’s, both the job market and undergraduate curriculum began to change for those interested in rangeland management. Working for regulating agencies, environmental organizations, and companies specializing in rangeland restoration became a much more promising career choice (pers. comm. to Mitchell from Dr. R. Dennis Child, Colorado State University, Fort Collins). Employment as a rangeland conservationist with federal land management agencies started to involve new skills. The planning process has taken on an

increasingly important role in rangeland management. It now must provide for alternative actions, be developed on a multi-resource basis, and include public involvement.

Employment trends with the three principal Federal land management agencies, FS, BLM and NRCS show the FS and BLM jobs for rangeland conservationists have dropped in the last ten years, while employment opportunities remain about equal for NRCS in the same period (Mitchell 2000). In the Forest Service, each staff member has been expected to perform more jobs for his or her position. This coupled with downsizing has “resulted in an erosion of career ladders in several natural resource management disciplines, including rangeland” Also, jobs in the FS have shifted away from research foresters and rangeland scientists toward ecology and wildlife biology positions (Unpublished report, National Academy of Public Administration, Washington DC). The present career paths for rangeland science are not clearly defined since science is at work creating disciplines related to monitoring and assessments, and ideas about what constitutes sustainable management is becoming more complex (Mitchell 2000).

It is the present generation that will determine the future shape of the West. To answer the question “who will take over the ranch?” One should ask the follow-up question: “Is the public willing to act, in a sense, as investors in private lands?” In another words, is the public willing to pay private landowners, like ranchers, the money needed to protect public values—like open space, wildlife habitat, and access to public lands? In other words paying with conservation easements and other measure for the development not to happen (Christensen 2004). ‘I have never seen the kind of assault on the environment that we are experiencing now. It is broad. It is deep. It is comprehensive. And it is relentless,’ concedes Johanna

Wald, environmental lawyer for the West in the past 33 years. Luther Propst predicts that many 'pretty places' will succumb in our time but that many will also be saved. Left behind will be tapestry of lands interwoven in a tapestry of lands ranging from undeveloped to developed with all degrees of development in between.

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