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Alternative Ranch Experiments: Better than the BLM

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ALTERNATIVE RANCH EXPERIMENTS: BETTER THAN THE BLM

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I. INTRODUCTION

Once dominating the American West economically, socially, and politically, ranchers were able to protect and defend their access to the public lands which they relied on for the profitability of their businesses and their way of life. Changing demographics, economics, and a growing concern for the environment changed the way American society viewed ranchers.[1] Once robust icons of rugged individualism, many were forced to work harder to maintain their lifestyles as the range they relied on deteriorated from generations of ecological abuse. Competing uses for public lands plus a growing knowledge of how rangeland quality interconnected with wildlife diversity, riparian health, and other important natural resources created a public that was less willing to sacrifice public land for ranch use.[2] This Note

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[1] WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS4 -6 (Charles Davis ed., 2001).

[2] ROBERT H. NELSON, PUBLIC LANDS AND PRIVATE RIGHTS: THE FAILURE OF SCIENTIFIC MANAGEMENT 265-66 (1995) (citing "BLM [Bureau of Land Management] reports . . . that in 1987 there were 496.7 million 'recreation hours' spent on BLM lands (most but not all of them rangelands). If these recreation hours are valued conservatively at fifty cents per hour, the total dollar value of recreation on BLM land in 1987 would approach $250 million" compared with grazing fees of $14.3 million returned on the same land); Kelly DeVine & Dennis L. Soden, *Changing Political Geometry: Public Lands and Natural Resources in Nevada, in* PUBLIC LANDS MANAGEMENT IN THE WEST: CITIZENS, INTEREST GROUPS, AND VALUES 130 (Brent S. Steel, ed., 1997) (describing how urban industries in Nevada have "outstripped" extractive industries). *See also* BUREAU OF LAND MANAGEMENT, BUREAU OF LAND MANAGEMENT FACTS: THE BLM TODAY, *at* http://www.blm.gov/nhp/facts/index.htm ("Public lands are increasingly viewed from the perspective of the recreational opportunities they offer, their cultural resources, and—in an increasingly urban world—their vast open spaces.") (last updated Jan. 23, 2002); JOHN E. MITCHELL, U.S. DEP'T OF AGRIC., GEN. TECHNICAL REPORT RMRS-GTR-68, RANGELAND RESOURCE TRENDS IN THE UNITED STATES 1, 25 [hereinafter RANGELAND RESOURCE TRENDS] (suggesting that land use shifts away from grazing will be greater in areas of rapid population grown such as the Pacific Coast and

analyzes the current dilemma posed by ranching uses of the fragile western range and two new strategies intended to promote the health of western rangeland while preserving ranching on the range. Of the two strategies examined here, alternative ranching and monument designation with provisions for mixed land use, the alternative ranch approach is the best way to avoid the mistakes of the past and promote not only rangeland health, but the self-sufficiency and economic interests of ranchers.

Two relatively recent strategies have emerged to allow a mixed use of public rangeland. Both seek to concurrently preserve ranching on public land and the quality of the land itself. Alternative ranching relies on a sustainable science approach based on information about local conditions and experimentation to improve the profitability of ranching, while at the same time improving the quality of the range.[3] The Quivira Coalition, founded in New Mexico in 1997, is one of the most visible and well known proponents of alternative ranching.[4] Flexibility, creativity, regular data collection, experimentation, and a willingness to change methods in light of changing local conditions or new information are all key to Quivira's alternative ranch approach.[5] The other approach is embodied in the Grand Staircase-Escalante National Monument, so designated by President Clinton in 1996.[6] The Grand Staircase-Escalante is unique as a preserve encompassing both protected and mixed use areas, including traditional uses such as ranching.[7] Administered by the Bureau of Land Management ("BLM"), it is also an experiment in whether a federal land management agency can effectively protect a public range on which grazing is permitted.[8] These new approaches provide a unique opportunity for comparison. A close examination of the positive and negative aspects of each show that alternative ranching is the more practical

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Rocky Mountain Assessment Region),*available at* http://www.fs.fed.us/rm/pubs/rmrs_gtr68.html (last visited Oct. 9, 2002).

[3] *See generally* THE QUIVIRA COALITION, SHARING COMMON-SENSE SOLUTIONS TO THE RANGELAND CONFLICT, *at* http://www.quiviracoalition.org [hereinafter QUIVIRA] (last visited Nov. 21, 2001).

[4] Courtney White & Jim Winder, *The Quivira Coalition*, RANGE, Winter 1999, *available at* http://www.rangemagazine.com/stories/winter99/the quiviracoalition.htm (last visited Nov. 2, 2001).

[5] *Id.*

[6] Proclamation No. 6920, 61 Fed. Reg. 50,223 (Sep. 18, 1996).

[7] *See* Mike Lee, *Lessons of the Escalante*, TRI-CITY HERALD, July 2-3, 2000, *available at* http://www.hanford-reach.com/escalante/story4.html (last visited Nov. 21, 2001).

[8] *Id.*

long-term solution given the current unwillingness of the public to continue to subsidize ranching on public lands, the rapidly changing nature of our understanding of the science of grassland ecology, and the benefits of decentralizing the management in both scientific and economic terms, of very different and unique grassland ecosystems. Finally, alternative ranching is the most sustainable solution for the long-term because it is a fundamental change in attitude requiring buy-in on the part of all participants rather than a solution imposed by the federal government, which is traditionally viewed by ranchers as far away and disconnected from their struggles.[9] Changing ranchers' attitudes about alternative ranching methods may be the most difficult barrier to the success of alternative ranching, but with declining profitability and shrinking public support for ranching subsidies, ranchers have a great incentive to try a new approach. If this change in attitude can be achieved, the alternative ranching solution is more likely to survive political changes than the Grand Staircase-Escalante ("Grand Staircase") approach of turning grasslands into national monuments. This Note discusses how the Grand Staircase approach does not foster the education of ranchers or the promotion of grassland science, as does the alternative ranch model. In addition, the Grand Staircase approach will always be more vulnerable to political attack. The Grand Staircase approach currently replicates some of the historical problems with federal land management. In contrast, the alternative ranching approach may give back to ranchers some of the self-sufficiency that has long been part of their mystique. The analysis of ranching history in this Note, however, shows that the image of rugged self-sufficiency has rarely reflected the historical truth of ranchers' dependence on federal subsidies and access to federal rangelands.[10] In summary,

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[9] See generally WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS, *supra* note 1, for a concise history of Sagebrush Rebellions (ranchers mobilizing to influence federal and local legislatures) from the 1800s to the early 1990s.

[10] Fiction hero Charlie Flagg warned his fellow ranchers away from the lure of government aid,

> [w]e was taught that every man starts with an even chance. We was taught to believe in a man rustlin' for himself as long as he's able. If you get to dependin' on the government, the day'll come when the damn *federales* will dictate everything you do. Some desk clerk in Washington will decide where you live and where you work and what color toilet paper you wipe yourself with. And you'll be scared to say anything because they might cut you off of the tit.

ELMER KELTON, THE TIME IT NEVER RAINED 52-53 (1973), *cited in* Rebecca Fink, *"We're*

alternative ranching provides a way for ranchers to preserve their way of life in the changed social and economic environment of the twenty-first century. Alternative ranching provides a means for ranchers to use science instead of shrinking public subsidies to stay in business. While the Grand Staircase approach is intended to do the same, the politicization of the Grand Staircase-Escalante experiment already echoes the mistakes of the past. While both approaches contain drawbacks and challenges, alternative ranching is the best option for long term success in protecting the quality of public grasslands and the ranching way of life.

II. THE DECLINING QUALITY OF WESTERN RANGELANDS

Rangeland is "land on which the indigenous vegetation is predominantly grasses, grass-like plants, forage, or shrubs and is managed as a natural ecosystem . . . includ[ing] natural grasslands, savannas, shrublands, many deserts, tundras, alpine communities, marshes and meadows."[11] Grazing land is vegetated land that is or has the potential to be grazed, including "rangeland, pastures, grazed woodlands, and grazed croplands."[12] The declining quality of wildland ecosystems is a global problem.[13] Between 1945 and 1990, close to seventeen percent of the worlds vegetated land, twenty million square kilometers, became degraded.[14] Nearly sixty-one percent of the world's productive drylands were classified as "moderately desertified" by 1984[15] and every year an additional 60,000 square kilometers are permanently lost to degradation.[16] In the United States, heavy and traditionally unregulated use of federal grasslands for ranching has taken its toll on the quality of those resources, especially in the western states.[17] In 1918, range professional A.W. Sampson reported on overgrazed Utah

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Here From the Government and We're Here To Help" Farmers and Ranchers' Reliance on Voluntary Governmental Programs May Open the Door to Governmental Control of Private Property Through the Expanding Scope of Wetlands Regulation, 30 TEX. TECH L. REV. 1157, 1158 (1999).

[11] RANGELAND RESOURCE TRENDS, *supra* note 2, at 11.

[12] *Id.* at 16.

[13] STEVEN G. WHISENANT, REPAIRING DAMAGED WILDLANDS: A PROCESS ORIENTED, LANDSCAPE-SCALE APPROACH 2 (A. Bradshaw et al. eds., 1999).

[14] *Id.*

[15] *Id.*

[16] *Id.*

[17] *See* LYNN JACOBS, THE WASTE OF THE WEST: PUBLIC LANDS RANCHING 31-32 (1991).

National Forest land, commenting, "these and similar eroded lands would originally support a cow or the equivalent in sheep on from one-third to one-fifth the acreage required at the present time."[18] In 1936, the United States Secretary of Agriculture submitted Senate Document 199, entitled *The Western Range*.[19] The document stated that "[m]uch of the range, especially in the Southwest, is in severely depleted condition [and] . . . [a]t least 589 million acres of rangeland is eroding excessively, thereby reducing soil productivity and impairing watershed function."[20] The same document, however, stated that over ninety-nine percent of western rangeland was available for grazing livestock.[21] Historically, western lands that proved to be too arid for farming were used for ranching.[22] The introduction of the railroad in 1880 created a boom in livestock production in the West as suddenly markets across the nation were open to whoever could supply the beef.[23] The lack of regulation at that time set the stage for overgrazing of public lands.[24] Western public lands have continued to constitute a disproportionate amount of forage for livestock compared to the rest of the nation. In the 1960s, public lands accounted for three percent of forage consumed by livestock nationwide.[25] However, public lands supplied approximately twelve percent of forage in the western states.[26] Currently, grazing is described by the United States Department of Agriculture ("USDA") Forest Service Resources Planning Act ("RPA") Assessment as "the most widespread land management practice on western public lands."[27] Considering the arid and semi-arid nature of much of the West, the logic of this use distribution is questionable.

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[18] *Id.* at 47.

[19] RANGELAND RESOURCE TRENDS, *supra* note 2, at 5 (citation omitted).

[20] *Id.*

[21] *Id.*

[22] JOHN WESLEY POWELL, REPORT ON THE LANDS OF THE ARID REGION OF THE UNITED STATES (1878), *cited in* Nathan Sayre, *The Urbanization of Ranching*, THE QUIVIRA COALITION, Jan. 1999, *available at* http://www.quiviracoalition.org/documents/newsletter6.html (last visited Oct. 9, 2002).

[23] *See* Sayre, *supra* note 22.

[24] *See* S. Res. 298, 7th Cong., *reprinted in* RANGELAND RESOURCE TRENDS (citation omitted), *supra* note 2, at 5 ("[L]arge parts of the western range have been subject to unrestricted use since settlement and are commonly believed to be more or less seriously depleted . . . .").

[25] RANGELAND RESOURCE TRENDS, *supra* note 2, at 6.

[26] *Id.*

[27] *Id.* at 30.

A comparison of animal month units ("AMU"s) for separate regions in the United States demonstrates the inefficiency and the hazard of grazing overstressed western grasslands. Average BLM rangeland will support one cow for a month on about fifteen acres.[28] 1987 United States Department of Agriculture and United States Department of the Interior figures in the following table show the average amount of grazing land needed per cow for each region:[29]

Iowa	1 acre/ year
Alabama	3 acres/ year
Eastern US	5 acres/ year
Colorado	20 acres/ year
Western BLM & FS land	185 acres/ year
Nevada BLM & FS land	230 acres/ year

Currently, close to thirty percent (625 million acres in 2000) of the nation's land is dedicated to the national interest.[30] This nearly thirty percent is "protected, preserved, and maintained" with less than one percent of the annual federal budget.[31] The National Forest System is thought to have 40.66 million acres of rangelands within its jurisdiction.[32] "The Bureau of Land Management (BLM) has jurisdiction over 137 million acres within grazing districts," along with an additional 108 million acres outside of grazing districts and 19 million acres of other reserved land.[33] Nearly all BLM lands (not classified as reserved) within and outside of grazing districts, are classified as rangeland and are managed for grazing.[34] Grazing is managed through permits within grazing districts and through leases outside of grazing

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[28] NELSON, *supra* note 2, at 114

[29] JACOBS, *supra* note 17, at 29 (basing statistics on United States Department of Agriculture and United States Department of Interior publications).

[30] Sandra Davis, *Fighting over Public Lands: Interest Groups, States, and the Federal Government, in* WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS 49 (Charles Davis ed., 2d ed. 2001).

[31] *Id.* at 50.

[32] RANGELAND RESOURCE TRENDS, *supra* note 2, at 23 (There is some discrepancy about this estimate due to "differences in the way individual national forests determined rangeland area . . . .").

[33] *Id.*

[34] *Id.* at 24.

districts; otherwise there is little practical difference.[35] In addition, the BLM has no rangelands in eastern assessment areas.[36]

III. CURRENT CONDITION OF WESTERN RANGELANDS

The current condition of public rangelands in the United States is a topic of debate.[37] A current (2000) assessment of rangeland quality in the United States from the United States Department of Agriculture and the Forest Service states that "there is no reason to expect significant increases in the rangeland base . . . [and] advances in technology affecting . . . restoration of rangeland health."[38] This projection is particularly significant for the Southwest as a breakdown of Forest Service assessment by region shows that the dry southwestern region is the slowest to meet or progress toward Forest Service goals for improvement of range quality.[39] The following chart shows the percentage of upland range vegetation within grazing allotments on National Forest System lands that are verified or estimated as not meeting Forest Plan Management Objectives ("FPMO"s) for a three year span by region:[40]

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[35] *Id.*

[36] *Id.* at 31.

[37] *Id.* The United States Department of Agriculture notes,

> The two predominant opposing viewpoints are epitomized by Fleischner (1994) and Box (1990). Fleischner believes grazing has caused a loss of biodiversity, disruption of ecosystem function, and irreversible changes in ecosystem structure, while Box concludes that the trend of U.S. public rangelands, on the average, has been upwards over a number of decades and the land is in the best ecological condition of this century.

Id.

[38] RANGELAND RESOURCE TRENDS, *supra* note 2, at 69.

[39] *Id.* at 33.

[40] *Id.* at 34-39.

FIGURE 1

	1995	1996	1997
Pacific Southwest (CA)	5%	5%	5%
Pacific Northwest (OR, WA)	6%	4%	4%
Pacific Coast	6%	5%	4%
Northern (MT, ID, ND, nw SD)	18%	17%	16%
Rocky Mountain	7%	7%	6%
Southwest (AZ, NM)	27%	27%	26%
Intermountains (ID, NV, UT, w WY)	7%	8%	8%

The report credits the lack of recovery in the Southwest to the region's history of fire suppression and overgrazing resulting in vegetation and soil changes that make recovery especially slow.[41] Due to the changes in soil and plant species, some sections of the southwestern range may never recover to their pre-existing condition.[42]

IV. SCIENTIFIC UNDERSTANDING OF GRASSLAND ECOSYSTEMS DEVELOPS AND GOALS CHANGE

Sustainable development became the new goal in many areas of environmental science as a result of the 1992 Environmental Summit in Rio De Janeiro.[43] Sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[44] As a result, range management is now no longer focused primarily on present benefit to ranchers or even benefit to ranchers above other uses. A longstanding textbook definition of range management was "the science and art of planning and directing range use so as to obtain the

[41] *Id.* at 36.

[42] *Id.*

[43] Rio Declaration on Environment and Development, U.N. Conference on Environment and Development, U.N. Doc. A/CONF. 151/5/Rev.1 (1992), *reprinted in* 31 I.L.M. 874 [hereinafter Rio Declaration]. ("To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production . . . .").

[44] U.N. WORLD COMM'N ON ENV'T AND DEV., OUR COMMON FUTURE: THE BRUNDTLAND REPORT (1987), *reprinted in* WHISENANT, *supra* note 13, at 11 [hereinafter BRUNDTLAND REPORT].

maximum livestock production consistent with conservation of the range resources."[45] A new version states, "[p]rior to the 1960's range research was designed primarily to maximize forage production for domestic livestock. Current trends in range research are geared to optimize the functioning of the entire range ecosystem."[46] Grazing harms grasslands through an insidious cyclical process that begins with damage to indigenous plants and ultimately leads to desertification by destroying the natural regenerative processes of the grasslands.[47] As native plants are injured and removed by feeding livestock, fewer roots are left to bind soil together.[48] The dense root masses of the native plants are then replaced by annual invaders with shallow roots that do not hold the soil together sufficiently to prevent erosion.[49] The dense root systems of native plants normally serve to break apart rock fragments.[50] Thus, their loss also hinders soil formation as erosion continues. Without adequate vegetative cover, the less protected topsoil is increasingly exposed to extremes of temperature which causes daily expansion and nightly contraction of the topsoil.[51] This loosens the soil making it more susceptible to erosion. The loss of dense root systems in underlying soil results in fewer pathways for moisture to penetrate the soil and fewer air pockets to protect

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[45] NELSON, *supra* note 2, at 93.

[46] *Id. See also* RANGELAND RESOURCE TRENDS, *supra* note 2, at 1, 9 (Following the 1992 United Nations Conference on Environment and Development in Rio De Janeiro, Canada held a seminar in Montreal in 1993 on Sustainable Development of Boreal and Temperate Forests. A working group established by the conference, whose work is known as the Montreal Process, developed a list of Criterion and Indicators ("C & I") that has become widely recognized to evaluate temperate and boreal forests. The United States Forest Service has been further developing the C & I and integrating the criterion into its planning and assessments including its USDA 1997 Forest Service Report. Three indicators (substituting the word "rangeland" for "forest") directly relate to rangeland health: "[a]rea and percent of rangeland affected by processes or agents beyond the ranges of historic variation; area and percent of rangeland subject to specific levels of air pollution or ultraviolet B that may cause negative ecosystem impacts; and area and percent of rangeland with diminished biological components indicative of changes in fundamental ecological processes." Discussion of Montreal Process C & I was included in the 2000 Rangeland Resource Trends Technical Document.).

[47] RANGELAND RESOURCE TRENDS, *supra* note 2, at 1 ("Invasions of exotic species, fire, drought, and grazing are examples of agents and processes that have apparently occurred beyond their range of historic variation on U.S. rangelands during the past 150 years.").

[48] JACOBS, *supra* note 17, at 71.

[49] *Id.*

[50] *Id.* at 76.

[51] *Id.* at 77.

underlying soil from temperature extremes on the soil surface.[52] Soil temperature fluctuations can become so extreme that seedlings and other sensitive plants are stunted or "scorch[ed]."[53] Creatures such as moles and earthworms that churn the soil, aerating it, helping to break down organic matter, and promoting infiltration of water through the soil are also driven away or killed by the extreme temperatures.[54] Evaporation increases as the topsoil heats up.[55] Capillary action then draws water from lower soil levels to the topsoil which accelerates evaporation.[56] In this way, the natural regenerative powers of the soil are destroyed.[57] While scientists now recognize that the change of species composition in a grassland ecosystem is an initial sign of trouble, it is generally accepted science that as long as the soil, water, nutrients, and organic material remain intact, a grassland still has the ability to regenerate.[58] When these essential resources are lost, the grassland no longer repairs itself and approaches the threshold of becoming a desert.[59]

The degradation of a grassland also has negative effects on the greater ecosystem in which the grassland exists. When the grassland system no longer absorbs moisture, runoff mixed with soil and animal waste damages associated waterways and ultimately ends up in the ocean.[60] Water that previously infiltrated into the groundwater supply is also lost in this manner.[61] As a result, the region's water storage capability is reduced, which is an especially critical problem in the western states.[62]

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[52] *Id.*
[53] JACOBS, *supra* note 17, at 77.
[54] *Id.* at 77-78.
[55] WHISENANT, *supra* note 13, at 33-34.
[56] *Id.*
[57] JACOBS, *supra* note 17, at 82.
[58] WHISENANT, *supra* note 13, at 1. *See also* RANGELAND RESOURCE TRENDS, *supra* note 2, at 27 (describing "a new paradigm for assessing rangeland health—one based upon non-equilibrium, state-and-transition models of succession that focus on ecosystem function rather than ecosystem state (plant community composition, [involving] [t]hree major criteria, . . . soil stability and watershed function, distribution of nutrient cycling and energy flow, and recovery mechanisms").
[59] WHISENANT, *supra* note 13, at 1.
[60] JACOBS, *supra* note 17, at 83.
[61] *Id.*
[62] *Id.*

V. RANCHERS DEFEND THEIR ACCESS TO PUBLIC RANGELAND DESPITE GROWING ENVIRONMENTAL AWARENESS: THE DYSFUNCTIONAL HISTORY OF PUBLIC RANGELAND MANAGEMENT

Even while awareness of the declining quality of public grasslands was growing, government efforts to regulate their use were ineffective due to the political strength of ranchers and the capture of land management agencies by ranching interests.[63] Recognizing the need to protect public rangelands, mainly for the economic stability of western ranchers, the 1934 Taylor Grazing Act ("TGA")[64] called for issuance of permits to ranchers, allowing them to graze a certain number of cattle, horses, or sheep on a tract over a period of up to ten years depending on rangeland conditions at the time, estimates of available forage, and historic use patterns.[65] The TGA was administered by the Grazing Service (later merged with the General Land Office to form the Bureau of Land Management) which charged low grazing fees and gave priority to prior users with a "dominant use" approach.[66] The "dominant use" was ranching to the near exclusion of other "non-economic" uses.[67]

The economic importance of ranching to the western states left little opportunity for change of generous grazing permit terms and low fees, regardless of the reality that the low fees prevented the industry from being forced to absorb the true costs of their effect on public lands.[68] Historically, proposals to make grazing fees reflect the true cost of grazing were rejected. In the mid 1940s, Clarence Forsling, a newly appointed director of Grazing Service, proposed tripling grazing fees based on a range economics study, and thus sparked a congressional investigation.[69] The result of the investigation was that the Grazing Service budget was slashed, making it dependent on grazing fees to pay the salaries of its field administrators.[70] In 1963, Congress considered another proposal to raise grazing fees to reflect

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[63] WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS, *supra* note 1, at 89-90.
[64] *See* Taylor Grazing Act, ch. 865, 48 Stat. 1269 (1934) (codified as amended at 43 U.S.C. §315 (1994)).
[65] WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS, *supra* note 1, at 88.
[66] *Id.*
[67] *Id.*
[68] *Id.* at 89.
[69] *Id.*
[70] *Id.*

the true market value of the permits (in response to another study).[71] At that time over 100 western legislators and governors who were also ranchers, testified that proposed fee hikes would devastate western communities and voted for a moratorium on grazing fee increases.[72] Moratoriums on grazing fee increases were also enacted in 1970, 1975, 1976, and 1978.[73] Throughout the 1970s, BLM's budget was repeatedly cut and personnel policies such as the elimination and transfer of environmental staff such as wildlife biologists reflected the control of ranch interests.[74]

Two important pieces of legislation during this period, however, signaled a change in the philosophy of public land use even if ranchers still controlled the practical reality of what government land agencies could actually accomplish. The Multiple-Use Sustained-Yield Act of 1960[75] broadened the mission of the Forest Service to include promoting recreational uses and wildlife preservation.[76] The 1976 Federal Land Policy and Management Act[77] changed the mandate of BLM, ending the "dominant use" preference of the Taylor Grazing Act. The Act provided,

> "[that] public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use."[78]

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[71] WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS, *supra* note 1, at 89.
[72] *Id.* at 89-90.
[73] *Id.* at 90.
[74] *Id.*
[75] *See* Multiple-Use Sustained-Yield Act of 1960, Pub. L. No. 86-517, 74 Stat. 215 (codified as amended at 16 U.S.C. §§528-531 (2000)).
[76] *Id.*
[77] *See* Federal Land Policy and Management Act of 1976, Pub. L. No. 94-579, 90 Stat. 2743 (codified as amended at 43 U.S.C. §§ 1701-1785 (2000)).
[78] *Id.* § 1701(a)(8).

In addition, the National Environmental Policy Act of 1969[79] opened the floodgates of significant environmental legislation by requiring that federal action be predicated on an analysis of its potential environmental impact.[80] Twelve major environmental laws were enacted in the decade following the National Environmental Policy Act that affected the conservation and management of rangelands in the United States (and thus ranchers' use of that rangeland).[81] For example, the Endangered Species Act of 1973[82] only applied to 109 species at its inception, but "now covers over 700 species with 9,000 more eligible for listing."[83] In addition, the Endangered Species Act has been expanded to cover not only the harming of listed species but also has made it illegal to alter the habitat of an endangered species.[84] Thus, ranching uses are restricted (indeed, even putting up a fence may be restricted) on an increasingly wide area of rangeland that provides habitat for listed species.

VI. DEMOGRAPHIC AND OTHER CHANGES IN THE WEST DILUTE RANCHERS' POLITICAL CLOUT

Since the 1960s and continuing to the present, several factors have changed in the Western social and political landscape culminating in a challenge to the traditional favored status ranching has held in grassland management. First, a western population shift into urban areas has weakened

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[79] *See* National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified as amended at 42 U.S.C. §§ 4321-4335, 4341-4347, 4361-70 (2000)).

[80] RANGELAND RESOURCE TRENDS, *supra* note 2, at 7.

[81] *Id.* (Table 1.3 lists the National Environmental Policy Act of 1969, the Wild Horses and Burros Protection Act, the Endangered species Act of 1973, the Forest and Rangeland Renewable Resources Planing Act of 1974 ("RPA"), the Eastern Wilderness Act, the Federal Noxious Weed Act of 1974, the Federal Land Policy and Management Act of 1976 ("FLPMA"), the National Forest Management Act of 1976, the Soil and Water Resources Conservation Act of 1977, the Forest and Rangeland Renewable Resources Research Act of 1978, the Public Rangelands Improvement Act of 1978, and the Archaeological Resources Protection Act of 1979.).

[82] Endangered Species Act of 1973, Pub. L. No. 93-205, 87 Stat. 884 (codified as amended at 16 U.S.C. §§ 1531-1544 (2000)).

[83] DENNIS T. AVERY ET AL., FARMERS, RANCHERS, AND ENVIRONMENTAL LAW 177-78 (1995), *cited in* Rebecca Fink, *supra* note 10, at 1160.

[84] Fink, *supra* note 10, at 1160.

the political influence of ranching interests.[85] Second, ranching has been displaced as a dominant industry in the western states as other industries, such as gaming and tourism, have moved in that do not share ranchers' interests.[86] Third, advocates of greater efficiency in government have continued to question the favorable terms given to ranchers, characterizing them as a subsidy of an inefficient industry at public expense, a characterization that environmentalists have successfully folded into their other arguments against ranching.[87] Lastly, lawsuits have been successfully used by environmental groups to force land managers to live up to legislation such as the Multiple-Use Sustained-Yield Act of 1960[88] and the 1976 Federal Land Policy and Management Act,[89] while ranchers' lawsuits to establish property rights in their permits and protect the status quo have repeatedly failed.[90] These developments, combined with falling profit margins from ranching, have forced ranchers to consider compromises with the powerful new constituencies to protect their way of life. In addition, the West has experienced a steady wave of new residents into urban areas.[91] Increasing income, education, and support for recreational uses of public lands have been among the effects of the urbanization of the West.[92] As a result of reapportionment in state legislatures, rural interests such as ranching have weakened.[93] A 1993 national opinion survey noted that "most residents of the West live within 100 miles of the Pacific Ocean, where amenity uses of public lands are important but grazing uses are not."[94] The 1993 study also concluded that there was more evidence of an urban versus rural divide in beliefs and attitudes regarding range issues and less difference between

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[85] *See supra* text accompanying note 2.
[86] *See supra* text accompanying note 2.
[87] *See supra* text accompanying note 2.
[88] Multiple-Use Sustained-Yield Act of 1960, Pub. L. No. 86-517, 74 Stat. 215 (codified as amended at 16 U.S.C. §§528-531 (2000)).
[89] WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS, *supra* note 1, at 87.
[90] *See* Pub. Lands Council v. Bruce Babbitt, 529 U.S. 728 (2000); Bradshaw v. United States, 47 Fed. Cl. 549 (2000); Diamond Bar Cattle Co. v. United States, 168 F.3d 1209 (1999); Hague v. United States, 35 Fed. Cl. 737 (1996).
[91] Davis, *supra* note 30, at 18.
[92] WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS, *supra* note 1, at 4-5.
[93] Davis, *supra* note 30, at 18.
[94] PUBLIC LANDS MANAGEMENT IN THE WEST: CITIZENS, INTEREST GROUPS, AND VALUES 39 (Brent S. Steel, ed., 1997).

Eastern and Western views in comparison.[95] Thus, rangeland issues held more importance in rural communities than in the West.[96]

In addition, the economies of many western cities boomed compared with rural economies, impacting the view of public lands in the West.[97] In Nevada in particular, the tourist and gaming industry has "far outstripped the contribution of the extractive industries . . . and owe little of their vibrancy or continuity to . . . [land management] agencies."[98] Reno and Las Vegas are two of the fastest growing areas in the country.[99] Clark County and Carson-Washoe County, home of Reno and Las Vegas respectively, look to the BLM to protect the aesthetic and recreational value of neighboring public lands.[100] Their interests are closer to those of environmentalists than ranchers.

Western communities are not holding out against the national trend of increasing recreational use of federal lands. Statistics show that from 1977 to 1998, recreational uses of federal lands increased steadily, mostly in national parks, national forests, and BLM lands.[101] In a 1996 congressional report, the General Accounting Office revealed that in 1994, lands "managed for conservation" rose to 272 million acres (forty percent of all federal lands), compared with 66 million acres in 1964.[102] The BLM has been hit the hardest as the only land management agency to suffer a decline in acreage under its control in the past few decades.[103] The BLM managed 465 million acres in 1964, but only 264 million acres by 1998, millions of acres transferred to the Fish and Wildlife Service and the National Park Service.[104] The amount of grazing land in the United States is actually expected to decline over the next fifty years as a result of changing land uses in areas of

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[95] *Id.* at 45.
[96] *Id.*
[97] WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS, *supra* note 1, at 5. *See also* Davis, *supra* note 30, at 19.
[98] DeVine & Soden, *supra* note 2, at 129-30.
[99] *Id.* at 130.
[100] *Id.*
[101] WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS, *supra* note 1, at 5.
[102] Jeanne Neinaber Clarke & Kurt Angersbach, *The Federal Four: Change and Continuity with the Bureau of Land Management, Fish and Wildlife Service, Forest Service, and National Park Service, 1970-2000, in* WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS, *supra* note 1, at 35-39 [hereinafter *The Federal Four*].
[103] *Id.* at 37-38.
[104] *Id.*

rapid population increases, particularly in the Pacific Coast and Rocky Mountain areas.[105]

VII. FEDERAL AND STATE POLICYMAKERS QUESTION LOGIC OF RANCHING SUBSIDIES

In the mid-1960s only a small group of legislators questioned the discrepancy between grazing fees and public land values,[106] including the costs of environmental damage to public lands. However, later generations of western representatives scrutinized the logic of continuing old range policies from both fiscal and environmental perspectives.[107] A 1972 study from the Forest Service, with seven other agencies from the Departments of Agriculture and the Interior participating, concluded that livestock grazing was "economically unwarranted" in many parts of the West.[108] In a 1975 victory for environmentalists, a federal judge in *Natural Resources Defense Council v. Morton*[109] required that the government conduct Environmental Impact Studies to "discuss in detail the environmental effects of the proposed livestock grazing, and alternatives thereto, in specific areas of the public lands that are or will be licensed for such use."[110] For the first nine studies, the cost of the studies alone approached the total value of the forage studied, leading to the conclusion that the government could have purchased a large part of the grazing rights in the study area with the funds used to prepare the studies.[111] In 1983 the BLM and the Forest Service estimated their administrative costs for the grazing program were $60.9 million compared with $24.8 million in grazing revenues.[112] The fee required to cover their administrative costs alone was estimated at $2.85 per AMU, while the collected fee for 1983 was $1.40.[113] One researcher from a later study found the economic return on ranching to be so low that cattle ranching must be

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[105] RANGELAND RESOURCE TRENDS, *supra* note 2, at 69.
[106] WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS, *supra* note 1, at 2-3.
[107] *See* DeVine & Soden, *supra* note 2, at 141-43.
[108] NELSON, *supra* note 2, at 96-97 ("Other regions had higher potential for investment in forage production at lower costs. Within the West, grazing should be concentrated in limited areas with high investment potential and should be discontinued in many other areas.").
[109] *See* Natural Res. Def. Council v. Morton, 388 F. Supp. 829 (1974).
[110] *Id.* at 841.
[111] Nelson, *supra* note 2, at 108.
[112] *Id.* at 264.
[113] *Id.*

viewed "as a consumer item comprised of many components, including the utility obtained from consumption of such intangibles as 'love of land' and 'love of rural values.'"[114]

In the early 1990s, irate ranchers responded to less favorable permit renewal terms, as they had to such challenges periodically throughout western history, with a "Sagebrush Rebellion."[115] They lobbied their state representatives for legislation transferring ownership, or at least control, of BLM and Forest Service lands to the states.[116] However, state lawmakers such as Nevada Governor Bob Miller did not support the initiative.[117] His press secretary, Richard Urey, said of the proposed land transfer, "the federal government has borne those costs. To shift those responsibilities to the state casts a shadow of mounting costs on state taxpayers."[118] Urey cited a BLM report declaring that for 1994, the agency provided $73.6 million in payments and services compared to $39.1 million in revenues from BLM lands in the state of Nevada alone.[119] Conservationists added to the economic arguments their ecological challenges against grazing and urged that the grazing subsidies be eliminated and fees increased to collect more revenue for improving the quality of public rangeland.[120]

VIII. COURTS ENFORCE NEW ENVIRONMENTAL LEGISLATION, GIVE NEW TEETH TO AGENCY (BLM) FORMERLY CAPTURED BY RANCHERS

Environmental groups started using lawsuits as a tool to force land management agencies to abide by the new multiple use mandates and environmental protection legislation for public rangelands.[121] George Hoberg noted in the 1960s that the agency averaged about one lawsuit per year.[122] By the early 1970s, land management agencies handled about twenty-four

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[114] *Id.* at 103 (citation omitted).
[115] Charles Davis, *Politics and Public Rangeland Policy, in* WESTERN PUBLIC LANDS AND ENVIRONMENTAL POLITICS *supra* note 1, at 87, 96 [hereinafter Davis, *Public Rangeland Policy*].
[116] DeVine & Soden, *supra* note 2, at 141-42.
[117] *Id.*
[118] *Id* (citation omitted).
[119] *Id.*
[120] Davis, *Public Rangeland Policy*, *supra* note 115, at 97.
[121] *The Federal Four*, *supra* note 102, at 48.
[122] *Id.*

lawsuits per year.[123] The Department of the Interior alone had 1000 new lawsuits brought against it in 1994.[124] At least one commentator questioned the effectiveness of that strategy arguing that the lawsuits divert time and money from actual management of public lands, possibly (and ironically) resulting in more lawsuits over "mismanagement" of public lands.[125]

Ranchers also turned to the courts, but with less success. In *Diamond Bar Cattle Co. v. United States*,[126] the court found that holding valid water rights did not give ranchers a private property right to graze upon public lands, merely a preference among permit seekers.[127] In *Bradshaw v. United States*[128] the court reaffirmed that grazing permits were not compensable property.[129] The most dramatic defeat suffered by ranchers in court, however, occurred in *Public Lands Council v. Babbitt*.[130] In *Public Lands Council*, the Supreme Court upheld all but one of a new series of permit restrictions, most notably the restructuring and redefining of permit preferences for traditional ranching uses of public rangeland, against a challenge from a trade organization representing ranchers.[131]

IX. RANCHER FEELS THE NEED FOR CHANGE: QUIVIRA COALITION IS BORN

Facing more restrictions and falling beef prices, ranching profit margins decreased as ranching became more competitive.[132] Many ranchers

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[123] *Id.*
[124] *Id.*
[125] *Id.* at 49.
[126] Diamond Bar Cattle Co. v. United States, 168 F.3d 1209 (10th Cir. 1999).
[127] *Id.* at 1215, 1217.
[128] Bradshaw v. United States, 47 Fed. Cl. 549 (2000).
[129] *Id.* at 553.
[130] Pub. Lands Council v. Babbitt, 529 U.S. 728 (2000).
[131] *Id.* at 742-43.
[132] *See* NELSON, *supra* note 2, at 102-03. Nelson noted,

> [A]lmost all economic studies of the returns and costs to ranching have concluded that ranch values greatly exceed any reasonable estimate of the capitalized value of the net income that can be earned from ranching. One researcher concluded that the economic returns to ranching were so low that one must view 'cattle ranching as a consumer item comprised of many components, including the utility obtained from consumption of such intangibles as 'love of land' and 'love of rural values.'

Id. See also Jim Winder, . . . *and the New Ranch*, RANCH MAGAZINE, Winter 1998, at 14,

branched out into production of organic foods and tourism simply to preserve their way of life and the economic viability of their ranches.[133] The loss of political and popular support for subsidies created by ranching uses of public grasslands set the stage for some ranchers to consider compromise with environmentalists rather than continuing to fight costly court battles and watch their profits from ranching decline. The alternative ranching movement, exemplified by the Quivira Coalition, was born out of this very dilemma.

The Quivira Coalition, a non-profit organization, was founded by rancher Jim Winder and two environmentalists in 1997.[134] They met at a Sierra Club meeting that Mr. Winder attended to look for solutions to the decline of his ranch.[135] Mr. Winder's ranch was no longer economically viable after several successful generations in his family. "Those same management techniques which had served my family well for generations were failing me . . . ."[136] He had an epiphany of how to make it viable again, and became a founder of the Quivira Coalition. The Coalition is a cooperative effort between ranchers and environmentalists whose goal is "to change ranchers' minds about environmentalism, but also to change

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available at http://www.quiviracoalition.org/Range_Magazine-Winter_1999.pdf. ("These are tough times for ranchers. The economic fundamentals of ranching are poor. Economists consider the beef industry to be mature, meaning that growth is slow and price competition is extreme. . . . We are not losing to the environmentalists, we are losing to the economics and the demographics."); Heather Clark, *Group Urges Cooperation Between Ranchers, Activists*, THE SANTA FE NEW MEXICAN, July 24, 2001, at A1 ("[Mr.] Williams [rancher] bought a pickup [truck] for $5,400 in 1978 when beef sold for 85 cents to 90 cents per pound. In 1999, a new pickup cost about $25,000. The price of beef hadn't changed.").

[133] *See* Clark, *supra* note 132, at A1 ("Facing economic hard times and pressure from conservationists to stop grazing on public land, ranchers across the West are beginning to turn to...production of organic foods and tourism—to preserve their way of life."); *Profile of Good Stewardship: Mark Cortner, The Quivira Coalition, May 2000, at* http://www.quiviracoalition.org/documents/profile11.html [hereinafter *PGS: Mark Cortner*] (describing how a rancher let hunters onto the ranch for a fee, converted a house into a Bed and Breakfast for tourists, and started raising organic beef to supplement a declining income from traditional ranching) (last visited Oct. 9, 2002); *Profile of Good Stewardship: The Davis Family and the CS Ranch*, THE QUIVIRA COALITION, Nov. 1999, *at* http://www.quiviracoalition.org/documents/11_99-stewardship.html [hereinafter *PGS: Davis Family*] (rancher started a hunting and guiding service on his family's ranch) (last visited Oct. 9, 2002).

[134] *See* White & Winder, *supra* note 4, at 1.

[135] *See generally* QUIVIRA, *at* http://www.quiviracoalition.org (last visited Dec. 18, 2001).

[136] White & Winder, *supra* note 4, at 5-6.

environmentalists' attitudes about ranching."[137] Barbara Johnson, Quivira Coalition director, expresses the organization's philosophy, "[i]t's not the cow that's the problem, it's how the cow is managed."[138] Quivira Coalition members tout the economic benefits of environmental management techniques to ranchers in their books, newsletters, workshops, classes, demonstration projects, and a general education campaign.[139]

Specific techniques and initiatives recommended by the Quivira Coalition are rotational management of cattle (herding instead of traditional free-range management of cattle), installing wildlife feeders, seeding with native plants, and long range planning based on local conditions.[140] The Coalition insists that by moving cattle daily as one herd using electric paddocks or controlling access to water sources, ranchers can concentrate grazing on one area while allowing an adequate recovery period for plants on other areas of the ranch.[141] The cattle are moved according to environmental conditions.[142] The recovery period for range vegetation is determined by growing conditions along with other factors such as wildlife needs or seasonal variations in plant growth.[143] The Coalition participates in the establishment of "grass banks," grazing areas set aside for use by participating ranchers only during times of emergency such as drought to relieve the stress on regularly used rangeland.[144] Coalition members work closely with

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[137] *See* Associated Press, *SW Collaborators Discuss Ranching Profits vs. Land Preservation,* ALBUQUERQUE J., Mar. 12, 2001, at 1, *available at* http://www.fguardians.org/news/n010312.html.

[138] *Id.*

[139] *See* White & Winder, *supra* note 4, at 1; *See generally* QUIVIRA, *supra* note 135.

[140] *See Profile of Good Stewardship: Sam Montoya, Pueblo of Sandia,* THE QUIVIRA COALITION, Nov. 2000, *at* http://www.quiviracoalition.org/ documents/Profile13.html [hereinafter *PGS: Montoya*] (Rancher "built electric fences, seeded orchard grass, fescue, clover and other native plants, turned the cattle out, and stood back to see what would happen.") (last visited Dec. 18, 2001).

[141] *Id. See generally* Jim Winder, *The Art of Resource Management in the Chihuahuan Desert,* THE QUIVIRA COALITION, *at* http://www.quivira coalition. org/documents/The_Art_of_Resource_Management_In_The Chihuahan_Desert.html [hereinafter *Art of Resource Management*] (last visited Dec. 18, 2001).

[142] *See Art of Resource Management, supra* note 141. *See also PGS: Davis Family, supra* note 133.

[143] *See Art of Resource Management, supra* note 141, *at* 3-4.

[144] Sandra Blakeslee, *On Remote Mesa, Ranchers and Environmentalists Seek a Middle Ground,* N.Y. TIMES, Dec. 26, 2000, at F4, col. 1. Blakeslee comments,

> [a] grass bank is a large chunk of national forest [in this instance] that serves as a kind of summer camp for cows that usually graze on other

biological assessment experts, range specialists, and scientists from federal, state, and local agencies.[145] The Coalition also encourages participation from the public.[146]

Success stories from the Coalition include the Metzgers, whose livestock competed for forage with elk, whose presence was protected on public rangeland.[147] The Metzgers, who had been practicing rotational management as Coalition members, combined herds with a neighboring ranch to the east and rotated the combined herd together over a much larger expanse of rangeland (400,000 acres) which allowed a greater recovery period for plants in fallow areas.[148] The grasses thrived and both ranches claimed an economic benefit as well.[149] Coalition founder Jim Winder, who claims that the new techniques put his ranch back into profitability, described the level of planning and attention to local conditions that go into the alternative ranch approach:

> I begin my drought planning each year at the end of the growing season in October. I sample the forage, determine the carrying capacity, then compare it to the needs of the current herd. . . . Then I evaluate the stocking rate three more times over the coming months to be sure I have enough

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> federal land. While their animals are away at 'camp' for three or more summers, ranchers restore the land they would normally graze, clearing pastures, building fences around streams and other vulnerable areas, and repairing damage caused by decades of overuse and fire suppression. *Id.*

[145] *See Art of Resource Management, supra* note 141 (thanking United States Department of Agriculture for project assistance). *See also Profile of Good Stewardship: The Empire Ranch*, THE QUIVIRA COALITION, June 1999, *at* http://www.quiviracoalition.org/documents/06_99-stewardship.html [hereinafter *PGS: Empire Ranch*] (Ranchers "work closely with a biological assessment team comprised of range specialists and scientists from federal, state, and local agencies, as well as members of the public.") (last visited Dec. 18, 2001).

[146] *See also supra* text accompanying note 145.

[147] *See* Associated Press, *SW Collaborators Discuss Ranching Profits vs. Land Preservation, supra* note 137, at 1 ("[A]pproaches include using electric fences and herding dogs to keep cattle together in an area. . . . [C]attle are then moved to different sections of a ranch throughout the year."). *See generally Profiles of Good Stewardship: The Flying M and the Diablo Trust* [hereinafter *PGS: The Flying M and the Diablo Trust*], THE QUIVIRA COALITION, Feb.2000, *at* http://quiviracoalition.org/ documents/ profile10. html (last visited Dec. 18, 2001).

[148] *See PGS: The Flying M and the Diablo Trust, supra* note 147, at 2.

[149] *Id.* at 3.

> forage . . . . In February, after the winter rains, . . . May 1st, when weeds have reached their maximum growth . . . [and] again on August 1st when summer rains should have arrived.[150]

He also aligns his production with the year by calving in March and July "when things are green" to reduce the feed bill and conflicts with other wildlife.[151]

The focus in alternative ranching is very different from traditional land agency focus on AMUs or stocking rates. Alternative ranch methods account for periodic changes in weather and range conditions and also require a detailed knowledge of specific facts for each tract of land of a kind beyond the scope of current federal land agency AMU assessments.[152] Claims by Coalition members are impressive. One rancher claimed that within three years of instituting alternative ranch methods, bare ground on his ranch decreased by a third, average distance between plants decreased by two-thirds, and the water table rose due to increased water infiltration on the ranch.[153] The Coalition rancher also claimed that an old well that had been dry since the 1950s showed ten feet of water.[154]

X. CURRENT BARRIERS TO RESTORING RANGELANDS: WHY THE BLM CENTRALIZED MODEL DOES NOT WORK

Any solution to the problem of repairing the quality of public rangelands will have to overcome both practical and economic barriers. Practical barriers include incomplete knowledge about grassland recovery systems. It is still not fully understood or agreed upon as to which methods are best to help a grassland ecosystem begin to repair itself. Defining goals for such a program is difficult without better information. Initial goals of

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[150] *Profile of Good Stewardship: Jim Winder*, THE QUIVIRA COALITION, August 2000, at 2, *at* http://www.quiviracoalition.org/documents/Profile12.html [hereinafter *PGS: Jim Winder*] (last visited Dec. 18, 2001).

[151] *Id.*

[152] *See PGS: Davis Family, supra* note 133.

[153] *Profile of Good Stewardship: The Rafter F Company*, THE QUIVIRA COALITION, March 2001, 2, *at* http://www.quiviracoalition.org/documents/ Profile14.html [hereinafter *PGS: Rafter F Co.*] (last visited Dec. 18, 2001).

[154] *Id.*

returning wildlands to some "original" state have been abandoned for the most part since we have limited data about what historic ecosystems looked like or how they functioned.[155] The current goal of sustainability commonly agreed upon by scientists today, "to repair the processes necessary to return to wild land to self sufficiency," is still limited by our knowledge of what that will require from system to system.[156] Scientific advances in our understanding of grassland systems have yet to be included and reflected in national data collection regarding rangeland conditions.[157] Indeed, even available data about rangeland conditions is not standardized to allow meaningful comparison between federal agencies.[158]

This lack of detailed, updated knowledge about how to help grasslands recover is exacerbated by a lack of qualified experts with significant experience in ecological restoration. Numbers of students training for rangeland research have dropped as have numbers of scientists employed by the Forest Service and BLM in rangeland management.[159] As a result, no significant increase in advances in technology regarding rangeland health is projected for the near future. [160]

Economic barriers include management costs associated with monitoring grassland health.[161] Information must be collected, stored, and analyzed.[162] Detecting degradation at the earliest stage possible is important because each step in the degradation process means more management costs will be incurred.[163] Reversing degradation once it has begun is expensive because it involves reducing livestock (and with it, income) while at the same

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[155] NELSON, *supra* note 2, at 308.

[156] *Id.*

[157] RANGELAND RESOURCE TRENDS, *supra* note 2, at 27.

[158] *Id.*

[159] *Id.* at 2.

[160] *Id.*

[161] *Id.* at 40. The USDA Forest Service RPA Assessment Technical Document hypothesizes that,

> [t]he low level of funding for rangeland vegetation management and grazing management programs . . . may be contributing to the static nature of range condition in recent years. . . . In [some regions] . . . the current budget does not meet administrative costs . . . . Because of declining grazing fees, . . . total range betterment funding declined from $5.3 million in 1993 to $3.1 million in 1998.

Id.

[162] WHISENANT, *supra* note 13, at 255.

[163] *Id.* at 5-9.

time spending resources on vegetation recovery methods such as seeding, burning, herbicide treatments, or selective plant removal.[164] Recovery at later stages in grassland degradation is especially difficult and slow.[165] "Many of these most degraded sites are simply abandoned because repair costs exceed anticipated economic benefits."[166] Because of the potential costs involved with proper monitoring of public rangelands, proposals by range scientists at the BLM have suffered the criticism of having "mostly a rhetorical function."[167] Currently (and most significantly), there is no national monitoring system to collect data on long term or periodic processes and agents that affect rangeland health.[168]

Scientific management tends to be associated with centralized decisionmaking, adding overhead costs to an already long list of expenditures for other elements of rangeland study.[169] Scientific rangeland management is expensive for other reasons as well. Range conditions and management are site specific. One good study will not serve all rangelands; many separate studies, an extra expense, are required for varying sites and conditions. Obstacles to scientific analysis also include the fact that the development of scientific data and analysis has proved to be very expensive, while public rangeland has a low economic value.[170] It simply may not be economically justifiable as a public expense. This suggests that a turn toward encouraging the old-fashioned method of trial and error by the stakeholders themselves (ranchers), the philosophy at the heart of the alternative ranch approach.[171]

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[164] *Id.* at 8.
[165] *Id.* at 8-9.
[166] *Id.* at 9.
[167] NELSON, *supra* note 2, at 94.
[168] RANGELAND RESOURCE TRENDS, *supra* note 2, at 2 ("Montreal Process indicators for productive capacity address the area of rangeland and total biomass available for grazing, and the annual removal of forage compared to that determined to be sustainable. These indicators are difficult to monitor and document on a national scale, and efforts have not been adequate.").
[169] *See generally* Todd M. Olinger, Comment, *Public Rangeland Reform: New Prospects for Collaboration and Local Control Using the Resource Advisory Councils,* 69 U. COLO. L. REV. 633 (1998).
[170] NELSON, *supra* note 2, at 92.
[171] *Id.*

XI. ADVANTAGES OF ALTERNATIVE RANCHING

The Quivira approach has some significant advantages that are difficult to duplicate in a large centralized agency such as the BLM. Critics of land agencies in the past have proposed demonstration projects as a solution to problems of inefficiency, ineptitude, and politicization in management of public lands.[172] Federal agencies, as described above, may not be nimble enough in terms of staffing and funding to provide solutions to local, individualized problems. Yet, "diversification, flexibility, and contingency planning" have been identified as necessary to successful range recovery programs.[173] "While detailed long range plans are useful, uncertainty is most effectively addressed with innovative people operating with considerable autonomy" to combat both technical and socioeconomic risk and uncertainty.[174] Trial and error using site specific data collected from season to season over the long term is at the heart of the Quivira Coalition approach, as are flexibility and long range planning. Thus, alternative ranching Quivira-style provides most of what is lacking in current federal land management.

XII. SOME RANCHERS CRITICIZE THE ALTERNATIVE (QUIVIRA) RANCH APPROACH

Both ranchers and environmentalists have criticized alternative ranching. Ranchers criticize science that hasn't been around long as "junk science."[175] Ranchers disagree that methods are proven effective in the long term.[176] In fact, sustainability science and our understanding of grassland ecosystems are recent and developing. There is little data about long term effects of some of the suggested techniques. Critics argue that only long term studies are likely to generate reliable information about recovery of ecosystems for two reasons: variability in populations of undisturbed ecosystems and rapid change that recovering ecosystems may experience in

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[172] *Id.* at 308.
[173] WHISENANT, *supra* note 13, at 253-54.
[174] *Id.*
[175] Jeff Burgess, *Let's Make Some Deals: Real Common Ground for Ranchers and Environmentalists* (previously published in the CANYON ECHO) (2000) *at* http://www.smallsite.org/library/compromise.html (last visited Dec. 21, 2001).
[176] *See* WHISENANT *supra* note 13, at 2.

the process.[177] In addition, "[n]o hard rules exist for summarizing . . . criteria to determine rangeland health."[178] Given the declining profitability of the traditionally managed ranch, however, critics within the ranching industry may not be in a position to demand long term studies with site specific data that federal land management agencies do not have the staff and resources to collect.

Some ranchers also claim that alternative ranching is not economically viable. They fear that costs associated with sustainable ranching techniques may further reduce their already shrinking profit margins.[179] Alternative ranching does in fact require a long-term commitment and an initial investment in labor, fences, paddocks, and other equipment as well as costs associated with continual monitoring and planning.[180] The fact is that the public is unwilling to subsidize ranching uses of public land through artificially low grazing fees and preferential use of public lands, as described earlier in this analysis. Congress has revoked ranchers' favored status as users of the public range and the court system has ratified the legislature by denying ranchers victory in court.[181] Regardless of whether alternative ranching becomes widely accepted within the ranching industry, ranchers will be increasingly forced to absorb the costs of their activities. Alternative ranching provides a way for ranchers to benefit from these expenditures and perhaps become truly self-sufficient and less dependent on federal land management agencies in the future.

A related problem is the adaptability of alternative ranching to small-scale cattle operations. Contrary to popular image, most cattle ranchers in the United States are small-scale ranchers who do not rely on ranching as their primary or sole income.[182] Only nineteen percent of all cattle owners had herds of more than 100 cows in 1993.[183] Commercial herds of over 500 cattle

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[177] David W. Inouye, *Variation in Undisturbed Plant and Animal Populations and Its Implications for Studies of Recovering Ecosystems, in* REHABILITATING DAMAGED ECOSYSTEMS 367 (John Cairns, Jr. ed., 2d ed., 1995).

[178] RANGELAND RESOURCE TRENDS, supra note 2, at 55 ("Individual conclusions will vary from person to person and organization to organization. Thus, any collective overview can only be reached through values and objectives of society as expressed in goals and objectives, primarily through society's refinement process of laws and regulations.").

[179] Burgess, *supra* note 175.

[180] *See PGS: Jim Winder*, *supra* note 150.

[181] Pub. Lands Council v. Babbitt, 529 U.S. 728 (2000).

[182] RANGELAND RESOURCE TRENDS, *supra* note 2, at 64.

[183] *Id.*

account for only two percent of all cattle raised in the United States.[184] It is an open question whether a sufficient number of small-scale ranchers will have the ability to make the investment of time and resources to convert to alternative ranching in order for it to have a great impact on public rangeland health.[185] It is simply too early to tell whether this approach will work for ranches on the smallest scale. As the economics of traditional ranching decline, those ranchers who cannot afford to convert to alternative ranch methods may find that it is no longer profitable to ranch in any case. Small-scale ranchers with the opportunity to find partners with which to pool labor and resources may be able to take advantages of alternative ranch methods despite the size of their individual operations.[186]

XIII. SOME ENVIRONMENTALISTS ARE SKEPTICAL OF ALTERNATIVE RANCHING ALSO

Some environmentalists have insisted that in most areas grazing (any grazing at all) is just not compatible with the health of public grasslands.[187] They fear that collaborative efforts with ranchers compromise the goal of permanently retiring delicate rangeland ecosystems from use.[188] Instead, they prefer other solutions like government programs to retire range permits or buying land outright from ranchers.[189] They also argue that gains documented by Quivira-like organizations from so-called "alternative" ranch methods are really the results of enforcement of legislation like the Clean Water Act[190]

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[184] *Id.*

[185] *Id.*

[186] *See PGS: The Flying M and The Diablo Trust*, *supra* note 147, at 2 ("The two ranches planned their operations together, sharing the pain and the gain, which helped both ranches economically.").

[187] Tania Soussan, *Ranchers Back New Range Management*, ALBUQUERQUE J., Mar. 7, 2001, *available at* http://www.fguardians.org/news/n010307.html (last visited Jan. 5, 2003) ("John Horning of the Santa Fe based environmental group, Forest Guardians, said commercial beef production in the arid Southwest generally doesn't make sense no matter how the grazing is done. 'In most areas, grazing is not compatible with the health of the land.'").

[188] Burgess, *supra* note 175.

[189] *See* Grand Canyon Trust: Grazing Retirements,*at* http://www.grandcany ontrust.ort/arches/grazing.html (last visited Dec. 21, 2001) [hereinafter *Grand Canyon Trust*].

Federal Water Pollution Control Act (Clean Water Act), Pub. L. No. 80-845, 62 Stat. 11,555 (1948) (codified as amended at 33 U.S.C. § § 1251-1387 (2000)).

and Endangered Species Act,[191] not alternative ranching.[192] They argue that it is enforcement of environmental legislation that produced the gains in water quality and biodiversity claimed by alternative ranchers, not the alternative ranch methods. In regions that have experienced concurrent enforcement of environmental legislation and the growth of alternative ranching, this claim may be hard to refute. One complaint shared by both ranchers and environmentalists skeptical of the collaborative approach is simply that the science of protecting the range and the economic needs of ranchers are incompatible; "[t]he range grows differently every year [rainfall, drought, frost, etc.] . . . livestock producers can't be adjusting their [herd] numbers up and down."[193] In fact, the Quivira Coalition does recommend adjusting herd number according to rainfall and other local range conditions.[194] Flexibility and creativity are central to the concept of the alternative ranch. This criticism of alternative ranching does, however, illustrate that a change in mindset is necessary for traditional ranchers to apply the alternative ranch approach.

XIII. ALTERNATIVE RANCHING: CULTURE CLASH AND OTHER PROBLEMS

Cultural resistance from ranchers may be the most serious barrier to the success of alternative ranching as a long term solution to the declining quality of western rangeland.[195] One Quivira Coalition rancher described the difficulty of getting his neighbors interested in discussing the new methods; "[t]he quickest way to end a conversation is to say 'I'm here to educate you'

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[191] Endangered Species Act of 1973, Pub. L. No. 93-205, 87 Stat. 884 (codified as amended at 16 U.S.C. §§1531-1544 (2000)).

[192] Rocky Barker, *Idaho Ranchers Say New Grazing Practices Can Help Save Streams,* THE IDAHO STATESMAN, Feb. 22, 2000, *available at* http://www.djc.com/news/enviro/11004534.html (citing Linn Kincannon, Idaho Conservation League Central Idaho Program Director, "she credits most of the [positive rangeland] transformation to changes in grazing management forced by the Endangered Species Act and the Clean Water Act").

[193] *Id.*

[194] *See PGS: Jim Winder, supra* note 150, at 2 ("I evaluate the stocking rate three more times over the coming months to be sure I have enough forage, says Jim. . . . [I]f we have good rains, I will consider adding more livestock. . . . [I]f not, I will reduce numbers in a time of seasonally high prices.").

[195] *See PGS: Rafter F Cattle Co., supra* note 153. *But see* ERNEST ATTENCIO, OF LAND AND CULTURE: ENVIRONMENTAL JUSTICE AND PUBLIC LANDS RANCHING IN NORTHERN NEW MEXICO (2001) (A celebration of ranch culture, this piece was published by The Quivira Coalition in collaboration with the Santa Fe Group of the Sierra Club.).

. . . especially if the topic involves the environment. Most ranchers equate any discussion about ecology with environmental activists from the city."[196] Jim Winder, Coalition founder, admits, "Ranchers hate office work, . . . they'd rather be digging a ditch. This method requires them to bite the bullet and do the planning."[197] Considering the increasingly hostile climate that ranchers operate in politically and economically, the outreach programs the Quivira Coalition provides may ease the transition for some traditional ranchers. There is no longer a public will to let ranchers have access to the public range at all costs. Those who are willing to do the planning necessary to protect the range may, one day, be the only ones who are allowed to renew their grazing permits.

XV. ANOTHER ALTERNATIVE: PUBLIC LAND AS NATIONAL MONUMENT

Another recent approach, dating from the year before the founding of the Quivira Coalition, is the approach represented by the Grand Staircase-Escalante. President Bill Clinton proclaimed the Grand Staircase a national monument in 1996.[198] The Grand Staircase is 1.9 million acres in southern Utah described as "a large area of broad plateaus, narrow sandstone canyons, and unique rock formations."[199] With elevations between 4500 and 8300 feet, the Grand Staircase boasts a widely diverse array of vegetation types on land that is undeveloped and remote.[200] Much of the land is arid and hosts a variety of endangered species including bald eagles, peregrine falcons, spotted owls, California condors, and others.[201] The cliffs and other rock formations reveal geology that is 200 million years in the making as well as evidence of ancient cultures.[202] Due to its designation as a monument rather than a park, and due to conditions in President Clinton's proclamation, traditional uses such as grazing are allowed in the Grand Staircase.[203]

Because the Grand Staircase-Escalante National Monument was created under the auspices of the Antiquities Act of 1906, no Environmental

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[196] *Id.*
[197] *PGS: Jim Winder, supra* note 150.
[198] Proclamation No. 6920, 61 Fed. Reg. 50,223 (Sept. 18, 1996).
[199] Lee, *supra* note 7.
[200] *Id.*
[201] *Id.*
[202] *Id.*
[203] *Id.*

Impact Statement, or other public comment or disclosure was required.[204] Clinton's proclamation saved a northern section of the Grand Staircase from a major mining project that pulled out as a direct result of the creation of the monument.[205] Utah Senator Orrin Hatch called the creation of the monument "the mother of all land grabs."[206]

Under the administration of the BLM, the monument's mandate required a three-year restoration plan that included a deadline for the removal of cattle from certain areas.[207] The deadline for the removal of cattle was extended, and enforcement was delayed months after the second deadline passed.[208] Environmental groups charged the BLM with lacking the political will to protect the natural resources of the Grand Staircase-Escalante.[209] The Wilderness Society published a list of expected damage from cattle including: trampling of delicate cryptobiotic crusts (living soil crusts consisting of bacteria, lichen, mosses, and algae), erosion, destruction of ancient ruins and rock art, breaking down of stream banks, fouling springs and creeks, and cattle competing with wildlife for food.[210] Peter Galvin of The Center for Biological Diversity added cattle spreading exotic plant species and disease organisms in their waste to the list.[211]

Many from surrounding communities that relied on the region's mining, logging, and ranching industries for jobs did not welcome the monument status of the Grand Staircase.[212] One particular incident escalated into a feud drawing in the Federal Bureau of Investigation ("FBI") and United States Attorney's Office.[213] When a drought and a series of wildfires compromised the range, ranchers were asked to remove their cattle early.[214] They refused, and federal agents impounded their cattle to sell at auction.[215]

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[204] Lee, *supra* note 7.
[205] *Wild Alert,* THE WILDERNESS SOCIETY, Nov. 7, 2000, *at* http://www.wilderness.org/wildalert/110700.html (last visited Dec. 21, 2001).
[206] Julie Cart, *Grazing Rights Trigger Showdown Between Ranchers, BLM,* L. A. TIMES, Dec. 26, 2000.
[207] *Wild Alert, supra* note 205.
[208] *Id.*
[209] *Id.*
[210] *Id.*
[211] *Grand Canyon Trust, supra* note 189.
[212] Lee, *supra* note 7.
[213] Cart, *supra* note 206.
[214] *Id.*
[215] *Id.*

The day of the auction, the ranchers calmly opened the paddocks containing their cattle and loaded them onto trucks.[216] The sheriff stood by and allowed the cattle to be removed in defiance of federal orders.[217] A series of arrests ensued.[218] Monument Manager Kate Cannon reported, "'[w]e are required to manage this land for grazing, for wildlife, and for other multiuses[sic] . . . [n]ot just for today. That means that if we determine this range land cannot sustain more grazing, we must ask permittees to move their cattle.'"[219] Local rancher Quinn Griffin commented, "'[e]verybody here hates the BLM. If the [local BLM office] burned down, you'd have a car parade going by.'"[220]

The incident did not convince environmentalists that monument status would protect the Grand Staircase. The National BLM Wilderness called it "an inadequate step toward rectifying past mistakes."[221] They calculated that the BLM had 2.4 employees per 100 square miles, while the National Park Service had sixteen employees per 100 square miles.[222] Once the Grand Staircase was fully staffed as planned, it would have three employees per 100 square miles.[223] These calculations suggested that opportunities for abuse still abounded and that the BLM did not have the capacity to deliver on its promise to protect the unique and delicate resources of the Grand Staircase.

Challenges came from the other corner as well. On February 14, 2001, Republican Congressman Chris Cannon of Utah issued a press release promising that "Congress will soon review and revise the [Grand Staircase-Escalante] Monument and its management plan . . . 'created with little forethought and with no local input . . . under a cloak of darkness.'"[224] Calling it "'an impossible management burden, and . . . economic disaster for the surrounding communities'" he promised that it would be redesigned under the leadership of House Resource Committee Chairman Jim Hansen, a Republican from Utah.[225] Suggested changes included re-drawing the monument's boundaries to reduce its size and increase the area designated

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[216] *Id.*
[217] *Id.*
[218] *Id.*
[219] Cart, *supra* note 206.
[220] *Id.*
[221] *Id.*
[222] *Id.*
[223] *Id.*
[224] Press Release, Congressman Chris Cannon (Feb. 14, 2001), *available at* http://www.house.gov/cannon/press2001/feb14.htm (last visited Nov. 26, 2002).
[225] *Id.*

for multiple uses, creating a local review board to allow input into the management plan, reversing road closures and banning future road closures, renewing grazing permits as well all mineral claims and leases, and requiring legislative approval of the new management plan, among other items.[226] A hearing of the Subcommittee on Natural Parks, Recreation, and Public Lands for the National Monument Fairness Act of 2001, elicited testimony from local community leaders from Utah decrying the fact that domestic natural resources were being "locked up" while the country experienced an energy crisis and relied on foreign sources for oil.[227] Representative Jim Henson also proposed dissolving two-thirds of the Grand Staircase to pay for a new monument elsewhere in Utah at a site where Jurassic-era dinosaur tracks had been discovered. No formal proposal was submitted and he was accused of grandstanding to show his opposition to the Grand Staircase.[228]

XVI. THE ESCALANTE GRAND-STAIRCASE SOLUTION REVIVES OLD GHOSTS

The history of the Grand Staircase-Escalante National Monument so far is a familiar story of contention between ranchers and environmentalists. The tension and unwillingness of these two groups to compromise in the past has not furthered the science of how to protect fragile range resources. Rather, the two sides are encouraged to waste resources and energy on political attacks without a genuine forum for compromise, or incentives to do so. As described earlier, the BLM's lack of resources and personnel to commit to the Grand Staircase-Escalante National Monument make it unlikely that the Monument will either be adequately protected or contribute any new information to the study of rangeland science. The dependence of rural economies on such resources still creates a hardship that resonates in Congress to some extent, when access to those resources is threatened. In addition, the temporary and reversible nature of political solutions makes them unreliable as a way to protect the public range.[229] Rather than providing

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[226] *Id.*

[227] *Hearing on H.R. 1518, H.R. 1776, and H.R. 2114 Before the Subcomm. on Nat'l Parks, Recreation, and Pub. Lands,* 107th Cong. 49 (2001).

[228] Rachel Jackson, *Will the Grand Staircase Suffer Shrinkage?*, 33 HIGH COUNTRY NEWS, Jun. 4, 2001,
at http://www. hcn.org/servlets/hcn.Article?article_id=10564 (last visited Jan. 5, 2003).

[229] The antics of Senator Orrin Hatch and Representative Jim Hansen illustrate this.

an innovative solution to protecting public rangeland and ranchers' interests, monument designation presents the old flaws of federal land agency management in a new form.

One positive and likely more permanent solution that has taken place in the Grand Staircase is the gradual purchase of grazing permits by environmental organizations. The Grand Canyon Trust ("Trust"), unsuccessful in getting the BLM to change terms and conditions of public grazing permits, has negotiated with individual ranchers to compensate them for relinquishing their grazing privileges.[230] The Trust also negotiated with the BLM to cancel the permits so that they are never reissued.[231] The water rights associated with the permits are given to the State Division of Wildlife Resources for wildlife use.[232] Using this strategy, cattle have been removed from 325,000 acres of southern Utah in only three years.[233] The entire main canyon of the Escalante River was cleared of cattle by negotiating with five ranching families.[234] In addition, the Trust has purchased its own grazing permits to establish grass banks for use in times of emergency and for research.[235] The Trust has also set up a nonprofit grazing corporation that leases "portions of . . . allotments where grazing is appropriate to exemplary livestock operators."[236] The irony of this is that the Trust, in trying to save the rangeland in the Grand Staircase, has turned to encouraging the use of alternative ranch methods among ranchers within the region.[237]

XVII. CONCLUSION

The damage to public rangeland has been over a century in the making. New science about the complexity of grassland ecosystems and the variable conditions of individual locations make traditional approaches from centralized land use agencies seem quaint. Creative approaches that encourage long-term commitment from all stakeholders are likely to be the most lasting and productive solutions. While the occasional "land grab" may

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[230] *Grand Canyon Trust*, *supra* note 189.
[231] *Id.*
[232] *Id.*
[233] *Id.*
[234] *Id.*
[235] *Id.*
[236] *Grand Canyon Trust*, *supra* note 189.
[237] *See supra* text accompanying note 144.

protect resources in the short-term, cooperation between ranchers and environmentalists is likely to produce more stable results in the long-term, because it reflects a fundamental shift in thinking toward industry and the environment (sustainable development) rather than a temporary political compromise. A commitment by land agencies to protect enormous, far flung, ecologically diverse public rangeland may prove to be hollow if the commitment is not backed by adequate funding, staffing, and a commitment to the advancement of rangeland science.[238] This commitment is currently lacking on the part of land management agencies including the BLM.[239]

Despite the challenges associated with alternative ranching, alternative ranch organizations such as the Quivira Coalition may serve an important function as a laboratory of solutions for regional problems. Given that federal land management agencies have failed to find solutions to environmental damage from ranching, and the current lack of commitment to funding the science needed to protect rangeland health, the Quivira Coalition and other alternative ranch projects are also an efficient way to shift the cost of protecting the environment back to the people who make their livelihood from activities that threaten it. If localized experiments such as the Quivira Coalition's alternative ranch approach prove to be successful in long term revitalization of public rangelands, it might suggest a new model for federal land management agencies, one in which they assist regional economies that rely on public rangelands in finding their own solutions.

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[238] RANGELAND RESOURCE TRENDS *supra* note 2, at 73-74.
[239] *Id.*