

THE ECO-FOLLY OF PUBLIC LANDS GRAZING, OR: MY HEROES HAVE ALWAYS BEEN SUBSIDIZED COWBOYS

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The cowboy is a symbol of rugged individualism, of Western independence. No handouts, no special favors, just man and his determination against the elements. How odd, then, that ranching is the most government-subsidized industry in Wyoming.

- Scott Farris¹

INTRODUCTION

It is surprising how few people understand the ecological costs of cattle grazing on public lands and that this environmental devastation is subsidized by taxpayers. Why then, does it continue? "In part because most people fail to appreciate fully the ecological damage wrought by stock (cattle)."² Also, in part, because "...ranchers are the landed gentry of the West, our self-proclaimed nobility, and they expect to be treated as such,"³ which, thanks to their immensely powerful lobby in Washington, they are.

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1. LYNN JACOBS, WASTE OF THE WEST PUBLIC LANDS RANCHING 381 (1991) [hereinafter LYNN JACOBS].

2. GEORGE WUERTHNER, *Some Ecological Costs of Livestock*, WILD EARTH, Spring, 1992, at 13.

3. Dave Foreman, Confessions of an **Eco**-Warrior (1991), at 100,101.

Beyond the direct subsidies granted ranchers, through the pricing of permits at less than one fifth of market value⁴ for grazing rights to private lands, the government spends millions of dollars each year in developing and improving cattle-raising programs, projects, and facilities.⁵ Millions, if not billions, of dollars are lost to the federal coffers in this process, and yet only three percent of consumed beef is raised in the western states by approximately thirty thousand ranchers.⁶

Rep. Mike Synar (D-OK) recently stated that "[g]razing on our public lands is producing an ecological and fiscal disaster. Since 1975 the taxpayers have lost almost two billion dollars subsidizing 26,000 livestock producers."⁷ Such subsidies are no longer justifiable and should be discontinued. As Rep. Synar said, "[t]he culprit here is an outdated and unjustifiable subsidy for a tiny fraction of the U.S. livestock industry."⁸ The political grip these ranchers have on the seat of government is evidenced by the fact that the grazing of privately-owned cattle on western public lands was not terminated long ago.

ENVIRONMENTAL DAMAGE

Seventy percent of the land in the eleven western states⁹ is grazed and 58% of that is publicly owned. Forty-one percent of western land then, approximately 306 million acres, is public domain used to graze livestock,¹⁰ an activity profoundly detrimental to the environment.

The most obvious ecological impact of livestock is that they eat the forage¹¹ on Western lands. The trampling that accompanies the browsing¹² of forage, however, is also quite destructive. "Vegetation has been broken, beaten down, cut off and crushed for over a hundred years on millions of acres of western land"¹³ and the West's naturally lush terrain has been reduced to wasteland. While grazing and trampling have wiped out much western vegetation, livestock have also damaged native biotic systems, negatively

4. See *infra* notes 51 and 62.

5. See *infra* note 65.

6. See FOREMAN, *supra* note 3, at 99,100.

7. Rep. Mike Synar, Remarks at the meeting of the Wyoming Wildlife Federation (April 24, 1992) in LAUREN McKEEVER, Synar, *Simpson Keep Gloves on in Grazing Debase*, HIGH COUNTRY NEWS, May 18, 1992, at 5.

8. SYNAR, *supra* note 7, at 5.

9. Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

10. Jacobs, *supra* note 1, at 21.

11. Forage is the grass, herbs, and other non-woody plants on rangeland. When cattle eat rangeland forage it is called cropping.

12. Browse is the leaves and twigs on shrubs and trees, so cattle feeding is known as browsing and foraging.

13. Jacobs, *supra* note 1, at 35.

affecting the density, size, health, and diversity of western flora. The greatest impact of cattle grazing on native vegetation, however, has been the depletion and extirpation of hundreds of native plant species over large areas.¹⁴

Grazing has also caused extensive damage to western forests. Livestock strip the grass and small plant cover of forests and when smaller forest plant cover is removed or denuded, soil erosion intensifies, soil moisture decreases, humidity decreases, air temperature rises, animal habitat is destroyed, and seed beds are damaged. Large trees may become stunted or fail to reproduce.¹⁵

These deleterious effects become substantial when millions of acres of federal forest are subjected to grazing. The U.S. Department of Interior, which administers public lands through its agency, the Bureau of Land Management (BLM), estimates that there are approximately twenty five million acres of public forest in the western states, and the vast majority of that land is grazed.¹⁶

National parks, monuments, wildlife refuges, and wilderness areas, all frequently forested terrains, are open to grazing. The Wilderness Act¹⁷ specifically declares the policy of Congress to "secure for the American people of present and future generations the benefits of an enduring resource of wilderness,"¹⁸ but it doesn't exclude private cattle from public forests. Although wilderness areas are protected from trespass, exemptions have been granted for cattle grazing on both designated wilderness lands and Wilderness Study

¹⁴Jacobs, *supra*, note 1, at 40.

¹⁵See Jacobs, *supra* note 1, at 49-55, for a detailed discussion of the detrimental effects of cattle grazing on forest lands.

¹⁶See U.S. Dept. of Interior, Bureau of Land Management, MANAGING THE PUBLIC LANDS.

¹⁷16 U.S.C. sec. 1131-1136 (1988). The Wilderness Act originally excluded administration of BLM monitored wilderness areas, concentrating on areas managed by the USFS, but the Act was eventually interpreted to include BLM managed lands. The BLM reviews Congressional tv designated areas known as Wilderness Study Areas (WSAs) under the auspices of the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. sec. 1701-1784 (1988), to determine which should be designated wilderness. Once a WSA is declared wilderness under the FLPMA it is treated like a National Forest Wilderness Area, meaning cattle grazing is permitted by law. For more detailed discussion of this matter, see HAROLD SHEPARD, *Livestock Grazing in BLM Wilderness and Wilderness Study Areas*, 5 J. ENVTL- Law AND LITIGATION 61 (1990).

¹⁸16 U.S.C. sec. 1131(a).

Areas (WSAs).¹⁹ The Act, affected by the cattle lobby, states that "the grazing of livestock...shall be permitted..."²⁰ in wilderness areas.

When the U.S. Forest Service (USFS) discouraged wilderness grazing in the late 1970s, the House Committee on Interior and Insular Affairs issued a report stating that "there shall be no curtailment of grazing permits in an area simply because it is designated as wilderness."²¹ With wilderness grazing secured, environmental degradation in public forests is assured.

"[L]ivestock grazing is the single greatest cause of desertification in the Western United States."²² Over-grazing turns once well-vegetated areas to barren plain. In the western states, livestock grazing has essentially turned over one hundred million acres of grassland, brushland, and forest to desert.²³ Perhaps one fifth of western land is naturally desert while another fifth has become "wasted" or "cowburnt," as a result of cattle-grazing.²⁴

Environmental author, Jeremy Rifkin, suggests that

[m]illions of acres of public lands are being lost each year to the forces of desertification...The magnitude of the losses and the spread of the deterioration is impressive. Mighty rivers and streams have been reduced to a trickle. Many have dried up altogether, leaving giant mud flats and thousands of miles of cracked and crusted arroyos scarring the landscape.²⁵

Desertification also leads to higher temperatures, greater aridity, less opportunity for native vegetation to re-leaf, and the exposure of the land to wind, which in turn leads to dust storms. This dust ends up in streams, rivers,

¹⁹Wilderness Study Areas (WSAs) consist of twenty-four million acres of land in the western states that, according to Department of Interior policy, were to be studied by the BLM for possible designation as wilderness, the determination to be made by 1991.

U.S. DEPT OF INTERIOR, BUREAU OF LAND MANAGEMENT, WILDERNESS MANAGEMENT POLICY 35 (1981). Livestock grazing, and mining, however, are allowed in both wilderness areas and WSAs. Ranching improvements upon WSA lands can defeat the possibility of designating said lands as protected wilderness, because the grazing and improvements remove the pristine nature lands must possess in order to be designated wilderness. "The BLM's failure to consider the serious environmental consequences of grazing activities, coupled with the statutory exception allowing grazing in wilderness areas, presents a significant threat to these areas." HAROLD SHEPARD, *Livestock Grazing in BLM Wilderness And Wilderness Study Areas*, 5 J. ENVTL. LAW AND LITIGATION 61, 62 (1990).

19. Wilderness Study Areas (WSAs) consist of twenty-four million acres of land in the western states that, according to Department of Interior policy, were to be studied by the BLM for possible designation as wilderness, the determination to be made by 1991.

20. 16 U.S.C. sec. 1133(d)(4) as quoted in HAROLD SHEPARD, *Livestock Grazing in BLM Wilderness and Wilderness Study Areas*, 5 J. ENVTL. LAW AND LITIGATION 61, at 64.

21. H.R. REP. NO. 1321, 95th Cong. 2d Sess. 7 (1978) (as quoted in SHEPARD, *supra*, note 21).

22. WUERTHNER, *supra* note 3, at 13.

²³ See JACOBS, *supra* note 1, at 65.

24. *Id.* at 61.

25. JEREMY RIFKIN, *BEYOND BEEF: THE RISE AND FALL OF THE CATTLE CULTURE* (1992), at 203.

and lakes, causing chemical alteration of the natural water supply, and increased pollution.²⁶

Livestock alter not only the vegetation of an area, but the soil as well. Intensive livestock use breaks and scatters both inorganic and organic layers of topsoil, exposing the underlying soil to the elements. Western lands are losing topsoil at least four or times faster than it's being replaced,²⁷ and agricultural economist, David Pimental of Cornell, suggests that ranching is causing western public lands to lose topsoil twenty times faster than it is being replaced.²⁸

Trampling the soil compacts it, reducing air space between soil particles, which, in turn, reduces the amount of water that can be absorbed. When the dirt has lost its saturation effect, "[t]he soil is less able to hold the water from the spring melting of snow and is more prone to erosion from flash floods that run along the surface."²⁹ Floods take tons of soil with them.³⁰ Plants eliminated by livestock were those most conducive to conserving water, so cattle grazing causes increased flooding.

Water quality in the west has been greatly damaged by grazing (as discussed below), but water quantity has suffered even more. According to wildlife biologist, George Wuerthner,

Because of the water demands of their stock, plus the need to increase forage production, the Western livestock industry has used up much of the West's precious water. In Montana, for instance, water use by industry and communities only accounts for 25% of the water removed from waterways, while agriculture, *primarily stockgrowers*, use the rest-975!³¹

Water supply reduction is attributable to both degradation of watersheds³² and damage to waterways and riparian areas. Denuded and damaged vegetation loses its sponge-like ability to capture and hold water so water that previously infiltrated groundwater supplies now runs quickly off

26. See WILLIAM H. SCHLESINGER et al. *Biological Feedbacks in Global Desertification*, SCIENCE, Mar. 2, 1990, at 1043.

27. See Jacobs, *supra* note 1, at 79.

28. David PIMENTEL, *Land Degradation: Effects on Food and Energy Sources*, SCIENCE, vol. 194, at 149.

²⁹Jeremy Rifkin, *supra* note 25, at 204.

30. In Western Colorado alone, grazed watersheds produce up to 76 percent more sediment than ungrazed areas, dramatically showing how much soil can be removed by a flood. See DENZEL FERGUSON & NANCY FERGUSON, *SACRED COWS AT THE PUBLIC TROUGH* (1983), at 61.

31. WUERTHNER, *supra* note 2, at 11 (emphasis added).

32. See EDWIN G. DAOX, *LIVESTOCK PILLAGE OF OUR WESTERN LANDS* (1990). In Dimicks opinion, livestock grazing operations have severely damaged or destroyed more pristine watersheds in the West than all other uses of the land combined." *Id.*

watersheds, and the West's water storage capability has been seriously reduced.³³

The congregation of livestock around riparian areas (water sources) leads to trampling, defecation, and grazing that turn clean, ecologically balanced water systems into polluted waterholes. Water-borne sediments, manure, and urine, flow to lakes, reservoirs, and beaches, polluting everything in their path.³⁴ Riparian areas are so overgrazed (the BLM found that in the West's Great Basin area, riparian lands cover 2% of the area, yet receive 50% of the livestock pressure),³⁵ they become what is known in ranching jargon as "sacrifice areas"-worthless, devastated zones.

Livestock not only decrease the water supply, they pollute that which remains. Cattle produce large amounts of manure containing nitrates, sodium, phosphates, and other elements which harm plants and animals.³⁶ Cattle urine contains highly toxic ammonia. Ranching activities such as herbicide and insecticide spraying also add to the pollution of western water supplies. Livestock have reduced the surface flow of western waters, lessening aeration and filtering through inorganic elements and vegetation, and further polluting water supplies. Cattle exposed to polluted waters often contract various infectious diseases such as dysentery, anthrax, hoof rot, and giardiasis.³⁷

The toll of western livestock grazing on indigenous animals is catastrophic.^{38*} With vegetation reduced and that which remains often sprayed with insecticides and herbicides,³⁹ millions of native creatures are doomed, but

³³See JACOBS, *supra* note 1, at 82,83.

³⁴See JACOBS, *supra* note 1, at 94-102.

³⁵Douglas M Green & J. Boone Kauffman, *Nutrient Cycling at the Land-water Interface.* the Importance of the Riparian Zone*, in PRACTICAL APPROACHES TO RIPARIAN RESOURCE MANAGEMENT AN Educational Workshop (1989), USDI, BLM, at 61-68.

³⁶Technically speaking, cattle grazing can affect the following measures of water quality: pH, total coliform bacteria, fecal coliform bacteria, temperature, nitrogen, phosphorus, potassium, dissolved oxygen, biochemical oxygen demand, total dissolved solids, total suspended solids, and turbidity. JOHANNA WALD, KEN RAHT, ROSE SQUACLAND, & JOE FILLER, *HOW NOT TO BE COWBOYED* (1991), at 21.

³⁷See Jacobs, *supra* note 1, at 94-102.

³⁸According to Jared Diamond, UCLA physiologist, the destruction of native species in any ecological context can usually be attributed to one or more of the following human factors: 1. overkill of predators by methods such as shooting, burning, strangling, poisoning, dogs, and taxpayer-hired gamekillers. 2. habitat destruction 3. impact of introduced species on native ecology. 4. pollutants, and 5. secondary effects, such as the decline of one species leading to the ecological decline of yet other species. "Livestock ranching is the *only* human activity on Western public land..to include all 5 of these influences to a significant degree." Jacobs, *supra* note 1, at 134.

³⁹The spraying of herbicides to kill trees and brush has been a major factor in the decline of big animals. The BLM and western ranchers often spray thousands of acres in a single operation to eliminate the shrubs and brush these animals rely on to survive." JEREMY RUTON, *BEYOND BEER THE RISE AND FALL OF THE CATTLE CULTURE* (1992), at 207.

when one factors in the diseases introduced by cattle-rearing, fences, ranching roads, hunting and trapping, the loss of wildlife increases exponentially.

The relentless war waged by ranchers and the United States Department of Agriculture's (USDA) Division of Animal Damage Control (ADC)⁴⁰ destroys all types of predators and the ecological imbalances created by the slaughter of natural predators further reduces the native wildlife population in western states. This slaughter continues unabated, in spite of the fact that the total cost in lost stock is minor in comparison to what the government spends to exterminate predators.⁴¹

The presence of grazing cattle depletes animal populations in various other ways. With the loss of riparian water areas, native species have died out. The trampling of vegetation and soil by large cattle destroys the burrows and protective sanctuaries of smaller animals, decreasing their numbers substantially. Such trampling also crushes smaller animals underfoot, destroys nests, and kills the insects many of these creatures eat to survive.

LIVESTOCK MANAGEMENT AND DEVELOPMENT

Although livestock grazing on western lands reduces water supply, increases water pollution, damages watersheds and riparian areas, degrades and destroys vegetation, and harms wildlife, almost no ranching studies suggest

40. ADC is the Animal Damage Control Division of the USDA. It hires people to kill predators on public lands, for the protection of cattle, another form of subsidy to private ranchers. The ADC is highly criticized for both the extent and method of its killing. For more detailed discussion of the questionable practices and economics of the ADC see *infra* note 41.

41. In 1988, Animal Damage Control spent more than \$29 million killing every conceivable kind of predator, including some endangered species. GEORGE WUERHNER, *supra* note 2, at 13. Carol Grünwald, former Humane Society of the United States publications editor, said that the cost to taxpayers of eradicating predators exceeds "the losses suffered by farmers and others to wild animals." CAROL GKUSEWALD, *Animal Activist* AURT, vol. 8, no. 3, 1990, at 3. Destroyed predators include grizzly bear, black bear, wolves, foxes, coyotes, mountain lions, lynx, bobcat, ocelot, jaguarundi, wild mustangs, burros, prairie dogs, countless rodent species, and golden eagles. The destruction of predators that allegedly threaten livestock, when examined closely, is appalling. Two of the last California condors were killed by poison grain set out to eliminate livestock predators. See JENNIFER Raymond, *Consuming Our Public Land*, VEGETARIAN VOICE, Winter 92/93, at 23. The fiscal folly of ADC activities is near-legend; In 1985, Arizona ADC spent roughly one half million dollars to protect livestock, while confirmed losses totalled less than \$60,000. See LYNN Jacobs, note 1, at 389. In 1988 ADC spent \$3.2 million in California to kill 32368 animals, for allegedly causing \$1.4 million (a suspect figure) in poultry, crop, and livestock losses. See MICHAEL Satcheu. & JOANNIE M. SCHROFF, *Uncle Sam's War on Wildlife*, US. NEWS & WORLD REPORT, Feb. 5, 1990, at 3637; MICHAEL SATCHELL, *Last Roundup on the Range*, US. NEWS & WORLD REPORT, Nov. 26, 1990, at 30-32.

removal of livestock from western lands.⁴² Instead, most studies suggest the adoption of almost any management programs, usually taxpayer funded, that protect grazing interests.

Range improvements almost always hurt the environment and cost the taxpayers money.⁴³ Improvements include fences (which kill and maim wild animals), water tanks, which create artificial riparian areas that soon become sacrifice zones, and roads, which cost the taxpayers a fortune and cause substantial ecological damage, sacrificing wildlife and rearranging natural waterflows, which in turn causes either flooding or evaporation of riparian zones. Range management also includes the eradication of unwanted vegetation through the extensive use of herbicides and pesticides.⁴⁴

Livestock, viewed only as economic and agricultural commodities, fair poorly in western ranching. They frequently die or suffer from starvation, thirst, exposure, injuries, infections, snake bites, lightning, fires, predators, disease, barbed wire entanglement, quicksand, and falls. They are shot by hunters, protesters, poachers, and landowners. Many are also killed each year by automobiles. Beyond these tribulations, livestock are routinely branded, dehorned, and castrated by their owners.⁴⁵

They are trucked long distances with inadequate food, water, shelter, or rest. "[T]he temperatures are scorching hot in the summer, and bitterly cold in the winter...[T]he animals may spend as much as three days and night* without being fed or watered,"⁴⁶ in trucks too crowded for them to move. Cattlemen expect to lose a certain number of animals in transit. Their deaths are merely calculated as a business expense.⁴⁷

42. This is not so surprising when one realizes that most grazing studies are funded by government land managing agencies, or departments of agricultural universities with land grants. One term for such skewed perspectives is "cow-centric." "[S]everal range researchers at the the University of Arizona recently confided that they thought grazing public lands was a bad idea, but if they didn't produce grazing promoting studies, they would lose their jobs." Jacobs, *supra* note 1, at 154,155.

⁴³For example, in Oregon in 1985, the BLM spent \$4,777,653 on range management and received \$1,298,783 in grazing fees. FOREMAN, *supra*, note 3, at 100.

44. SEE DENZEL FERGUSON & NANCY FERGUSON, SACRED COUNTRIES AT THE PUECO TROUGH (1983), for a comprehensive discussion of range management and improvement practices and financing.

45. See JACOBS, *supra* note 1, at 346-348.

46. JOHN ROBBINS, DIET FOR A NEW AMERICA (1987), at 105.

47. A consideration of our ethical obligations to animals exceeds the scope of this paper but one may wonder at the attitude which allows living beings to be treated as transportation like gasoline or oil. Regarding the conditions under which most cattle are transported, ethicist Peter Singer has said. It is difficult for us to imagine what this combination of fear, travel thirst, near-starvation, exhaustion, and (in winter)...severe chills feels like to the cattle." PETER Singer, animal Liberation (1975), at 148. For further discussion of moral issues concerning our treatment of animals and other environmental objects, see Tom Regan, The Case FOR ANIMAL RIGHTS (1983); KRISTIN S. SANDER-FLETCHER, ENVIRONMENTAL ETHICS (1981); DESMOND MUMFORD, THE ANIMAL CONTRACT (1990); JACQUELINE RACHELS, CREATED FROM ANIMALS (1990); CHRISTOPHER D. STONE, Earth and Other Ethics: The Case for Moral Pluralism (1987).

permits)⁵² sublet the grazing range to other ranchers at far higher rates than more closely approximate private grazing fees.⁶³

The extent of subsidization is astonishing. Environmental activist, Dave Foreman, states the case in simple terms:

[E]xperts estimate that the Forest Service and BLM lose over \$100 million a year on their grazing programs. When erosion, lowered recreational values, loss of biodiversity, and numerous other hidden costs are factored in, the subsidy to the livestock industry grows to gargantuan proportions—very roughly, \$2 billion annually...The proud, independent public-lands rancher as the paragon of the free-enterprise system? Forget it; he's a welfare bum.⁶⁴

After grazing fees are collected by the government, approximately one third of the money goes to the public treasury, while over 50% of the revenues collected from grazing permits are returned to the ranchers through a Range Betterment Fund which is used to finance continued public grazing.⁶⁵ With over half of fee revenues returned to the ranchers in the form of range developments and improvements, the actual fee private ranchers are paying for the privilege of using western lands is reduced to approximately 10% of what the open market would bear.⁶⁶ In 1985, the BLM and USFS completed a seven-year study of the western public lands grazing program and concluded that the system, as currently operated, amounts to a multimillion-dollar giveaway.⁶⁷

62. Because grazing permits usually remain affixed to the property, realty value of ranches is greatly increased by the grazing rights that run with the land. "Ranchers have made hundreds of millions of dollars over the years selling real estate attached to public land permits." RIFKIN, *supra* note 28, at 106. A 1984 House Committee on Appropriations report cited one rancher who sold his land for one million dollars "over what he would have received because a permit to graze on public range was attached to his private property." See JON R. LUOMA, *Discouraging Words*, Audubon, Sept 1986, at 98.

⁶³ See JACOBS, *supra* note 1, at 376-380.

⁶⁴ Foreman, *supra* note 3, at 100.

⁶⁵ JACOBS, *supra* note 1, at 379. Through a Range Betterment Fund, 50% of grazing fee receipts collected from BLM Section 3 lands (comprising approximately 90% of BLM grazing lands) goes back to the grazing districts it came from, to be allocated by grazing advisory boards for ranching developments, which constitute subsidized ranching improvements paid for out of fee grazing receipts. See *Id.*

⁶⁶ BLM and USFS permittees pay more than half of their federal grazing fees to themselves for ranching development. The actual grazing fee comes to less than 10% fair market value. See JACOBS, *supra* note 1, at 379.

⁶⁷ See LUOMA, *supra* note 62 at 98.

How did this fiscal travesty arise? In 1934, the Taylor Grazing Act⁶⁸ was passed. The law was intended to promote the improvement of Western public land by leasing it to ranchers who would be responsible for its management. "In reality, the act succeeded in transferring tens of millions of acres of public lands to private leases in return for a token permit or lease fee...From the very inception, the fee for permit holders was so low it amounted to a virtual government handout."⁶⁹ As Rifkin has written, "[t]he Taylor Grazing Act quite simply represented the single biggest giveaway of land in modern history. No other constituency before or since has been so completely subsidized by the American taxpayer, a fact rarely raised in the public debates over welfare programs administered by the federal government."⁷⁰

The situation has not gone wholly unnoticed in government circles. In 1988, the Departments of Interior and Agriculture issued a report⁷¹ criticizing federal management of public lands grazing. The report concluded that Federal agencies spent \$52.3 million more on range programs in 1990 than they collected in grazing fees, that federal grazing fees are much less than the appraised value of federal grazing allotments, and that public lands ranchers invest relatively little to maintain or improve their allotments.⁷²

Since the late 1980s, various concerned Congresspersons have asked the General Accounting Office (GAO) to investigate BLM handling of Western public lands grazing. In response, the GAO issued nine reports,⁷³ all

⁶⁸43 U.S.C. sec. 315-315r (1988).

⁶⁹Jeremy Rifkin, *supra* note 25, at 105. The western cattlemen had been lobbying for such a program for over half a century. When they first presented the proposal a journal called the Statist correctly warned that "under this leasing system, the Cattle King of the West would be transformed into a magnate of tenfold power and the importance of an English Duke." Maurice FRINK ET al., *When grass Was King* (1956), at 232. As Rifkin wrote, the Statist's warning proved uncannily prescient. JEREMY RIFKIN, *supra* note 25, at 105.

⁷⁰Jeremy Rifkin, *supra* note 25, at 106.

⁷¹U.S. Department of Interior and Agriculture, *GRAZING FEE REVIEW OF THE 1986 RANGELAND MANAGEMENT PLAN* (1988).

⁷²See JOHN Horning & Caroline Byrd, *Report Says Taxpayers are Being Overgrazed*, HIGH COUNTRY NEWS, June 15, 1992, at 4.

⁷³The nine reports published by the GAO are: GAO/RCED-88-80, RANGELAND MANAGEMENT MORE EMPHASIS NEEDED ON DECLINING AND OVERSTOCKED GRAZING ALLOTMENTS (1988); GAO/RCED-88-105, PUBLIC RANGELANDS: SOME RIPARIAN AREAS RESTORED BUT WIDESPREAD IMPROVEMENT WILL BE SLOW (1988); GAO/RCED-89-171, CALIFORNIA DESERT: PLANNED WILDLIFE PROTECTION AND ENHANCEMENT OBJECTIVES NOT ACHIEVED (1989); GAO/RCED-90-110, RANGELAND MANAGEMENT IMPROVEMENTS NEEDED IN FEDERAL WILD HORSE PROGRAM (1990); GAO/RCED-90-225, PUBLIC LAND MANAGEMENT IMPROVEMENTS NEEDED IN FEDERAL WILD HORSE PROGRAM (1990); GAO/RCED-91-7, RANGELAND MANAGEMENT BLM EFFORTS TO PREVENT UNAUTHORIZED LIVESTOCK GRAZING NEED STRENGTHENING (1990); GAO/RCED-91-64, PUBLIC LAND MANAGEMENT ATTENTION TO WILDLIFE IS LIMITED (1991); GAO/RCED-91-148, RANGELAND MANAGEMENT BLM EFFORTS TO PREVENT UNAUTHORIZED LIVESTOCK GRAZING NEED STRENGTHENING (1991); GAO/RCED-92-12, RANGELAND MANAGEMENT BLM HOT DESERT GRAZING PROGRAM MERITS RECONSIDERATION (1991).

of them highly critical of BLM management policies, finding that public lands are being overgrazed, cattle are favored over wildlife, land management planning is not taking place, and excessive numbers of cattle are being grazed.⁷⁴

The latest report, released in November, 1991, found that current grazing in hot desert areas "risks long-term environmental damage while not generating grazing fee revenues sufficient to provide for adequate management,"⁷⁵ and that the BLM is not measuring the impact of grazing on many desert lands. The GAO found that no BLM monitoring is occurring on 48% of all allotments, concluding that the agency can't adequately regulate grazing activities without such monitoring,⁷⁶ and is therefore failing to meet its legislative mandate to manage public lands under the FLPMA's multiple use principle⁷⁷ "so they are utilized in the combination that will best meet the present and future needs of the American people..(taking into account the) needs of future generations for renewable and nonrenewable resources..."⁷⁵

The BLM and Forest Service spend as much as fifty million tax dollars each year on ranching, over and above the revenues collected from grazing fees.⁷⁹ Because permit fees are so nominal, revenues raised from lessees pay for only a small portion of the improvements made on public grazing land. "The rest of the bill is paid for by the American taxpayer. In 1989, for example, the BLM and Forest Service spent \$35 million more on administering the program than the program took in."⁸⁰

Most western states have ranchland property tax exemptions which collectively save ranchers millions of dollars annually in lowered property taxes. Some ranchers qualify for these exemptions by buying or renting a few cattle to place on their property, further depriving the local government of tax

RANGELAND MANAGEMENT: BLMs HOT DESERT GRAZING PROGRAM MERITS RECONSIDERATION (1991).

⁷⁴See STEVE JOHNSON, *Disaster, Disaster on the Range, Report Says*, HIGH COUNTRY NEWS, April 20, 1992, at 10.

⁷⁵U.S. GENERAL ACCOUNTING OFFICE, PUB. NO. GAO/RCED-92-12, RANGELAND MANAGEMENT BLMs HOT DESERT GRAZING PROGRAM MERITS RECONSIDERATION (1991), at Z

⁷⁶*Id.* See also STEVE JOHNSON, *supra* note 74, at 10.

⁷⁷The multiple use principle of the Federal Land Policy and Management Act of 1976 essentially holds that federal lands shall be managed for optimal resource use to be divided amongst such activities as camping and other recreational activities, hunting, logging, etc. It clearly was not intended to mean that all other potential uses would be sacrificed to logging interests. For detailed discussion of the multiple use principle, see GEORGE CAMERON COGGINS, *Of Succotash Syndromes and Vacuous Platitudes: The Meaning of Multiple Use, Sustained Yield for Public Land Management*, 53 U. COLO. L. REV. 229 (1982).

⁷⁸43 U.S.C 1702(c) (1988).

⁷⁹See JACOBS, *supra* note 1, at 381-401.

⁸⁰GEORGE WUERTHNER, *The Price is Wrong*, SIERRA, Sept/Oct 1990, at 38.

revenues.⁵¹ Regarding this practice, Lynn Jacobs, environmental author and public lands grazing expert, wrote: "Western county governments are being bilked of hundreds of millions of property tax dollars annually because of ranchland exemption laws. The public, as usual, makes up the foregone revenue."⁵²

The political influence ranchers exert over governmental land use decisions in the West also extends to the control of water rights,⁵³ a subject beyond the scope of this paper, but one which further elucidates the immense power wealthy western ranchers hold over the federal treasury. That power has also enabled ranchers to obtain grazing permits in National Parks, on military and state lands, and Indian Reservations.⁵⁴ Without it, Congress would no longer subsidize public lands grazing, an economic disaster of unprecedented enormity.

THE ECONOMICS OF PUBLIC LANDS GRAZING

Economists have written extensively on various aspects of range resource use.⁵⁵ This discussion follows N.K. Roberts' definitive work⁵⁶ on

81. In Pima County, Arizona, for example, the owner of property worth over \$3 million paid less than \$100 in property taxes, although he had very few cattle on the land. Had he not been granted a ranchland exemption, his taxes would have been about \$53,000. JACOBS, *supra* note 1, at 399.

82. JACOBS, *supra* note 1, at 400.

83. For a detailed treatment on the importance of water rights in the West, and the influence ranchers have over those rights, see REISNER, *supra* note 48.

⁸⁴ See JACOBS, *supra* note 1, at 472-485.

85. The literature goes back many years. For a review of the earlier research, see Marion Clawson, *Determination of Sales and Lease Values of Private and Public Ranch Lands*, 20 JOURNAL OF FARM ECONOMICS 641 (1938); *Values of Range Grazing Lands*, 21 AMERICAN CATTLE PRODUCER 3 (1940); 1935, *The Economics of Range Sheep Production in Montana*, MONTANA EXP. STA. BUL. 30Z (1935); *History of Forest Service Grazing Fees*, 6 JOURNAL OF RANGE MANAGEMENT 393 (1953); Phittip O. Foss, *The Determination of Grazing Fees on Federally-Owned Range Lands*, 41 JOURNAL OF FARM ECONOMICS 535 (1959); *Economic Analysis of Land Use on the Western Ranges*, 281 THE ANNALS OF THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE 135 (1935). A partial list of more recent writings would include BOB BERGLAND & CECIL ADAMS, *A Study of Fees for Grazing Livestock on Federal Lands*, U.S. DEPT. OF AGRICULTURE (1977); Ray BROKXEN & BRUCE McCARL, *Theoretical Evaluation of Fee Systems for Private Grazing on Federal Lands*, USDA AG. ECON. REF. #570 (1987); B. DELWOKIH Gardner, *BA Proposal to Reduce Misallocation of Grazing Permits*, 45 JOURNAL OF FARM ECONOMICS 109 (1963); B. DELWORTH Gardner, *Transfer Restrictions and Misallocation in Grazing Public Ranges*, 44 JOURNAL OF FARM ECONOMICS 50 (1962); C. KERRY GEE, *Estimating Economic Impacts of Adjustments in Grazing on Federal Lands and Estimating Federal Rangeland Forage Values*, Colorado State Univ. ag. Exp. Sta. Tech. Bul. #143 (1981); Ray E. Huffaker, James E. WHEN & E. DELWOKIH Gardner, *Multiple Use Benefits on Public Rangelands: An Incentive-Based Fee System*, 71 AMERICAN JOURNAL OF AGRICULTURAL ECONOMICS 670 (1989); Bruce A. McCARL & Ray BROKXEN, *An Economic Analysis of Alternative Grazing Fee Systems*, 47 AMERICAN JOURNAL OF AGRICULTURAL ECONOMICS 769 (1965).

grazing fees and the economic model he developed, although his model is modified slightly here to fit the particulars of livestock grazing on public lands.

In this model ranchers are assumed to be profit maximizers who understand well (if not perfectly) the relationships among the various physical resources involved in livestock production. Livestock are put on a seasonal range for a given period of time, during which they graze the available forage to produce maintenance and gain. The amount of maintenance and gain realized per section from a range of given quality depends upon the number and quality of animals placed on that range. Income from the sale of livestock- Marginal Value Product, or MVP-may be defined as follows:

(Equation 1) $MVP = dR/dX = b + 2cX - 3dX^2$, where:

R = total physical output times the market price of livestock
X = cows grazed per section

The MVP specified here embodies a livestock production function of a particular nature. Increasing the number of cows per section will result in greater total output, but only up to a point. In fact, pasture utilization studies⁸⁷ have shown that output gains (or "marginal product") from increasing the stocking rate will at first be constant, then decrease at an increasing rate, and eventually become negative as the competition for available forage intensifies. Mathematically, such a production function may be represented by the first derivative of a third degree polynomial. Diagrammatically, the result is a MVP curve which is horizontal over some range, then forward- falling, as shown in Figure 1.

Maximizing profit obviously involves cost considerations as well as income. Range utilization costs include grazing fees, transportation, herding, and death losses, among other things, and may be assumed to vary directly with the number of animals grazed on a given section of rangeland. Thus, the Marginal Factor Cost (MFC) in Figure 1 is assumed constant:

(Equation 2) $MFC = dC/dX = e$.

The general relationships in Figure 1 hold for any range or pasture situation. The levels of MVP and MFC, as well as lengths of the linear and

⁸⁶N. K. ROBERTS, *Economic Foundations for Grazing Use Fees on Public Lands*, 45 JOURNAL OF FARM ECONOMICS 721 (1963).

⁸⁷See N.K. ROBERTS, *Establishing Range Input-Output Relationships for Economic Analysis*, W&TEKS Range Resources Committee of the Western Forestry Research Society REP. #2, at 13-32; L.A. STODDARD, *Determining Correct Stocking Rate on Range Land*, 13 JOURNAL of Range Management 251 (1960).

imposes some externalities, but the ecological damage wrought by grazing, together with the direct subsidies granted ranchers, imposes external costs of staggering magnitude.

The "internalization" of external costs can probably best be achieved by adding them into the grazing fee. It is reasonable to assume that total environmental costs associated with higher stocking rates increase at an increasing rate, as critical tolerances are approached and then exceeded.⁹⁰ Accordingly the grazing fee should be progressive, with higher fees *per cow* as the stocking rate increased. For simplicity, the MFC function may be redefined as

(Equation 3)
$$MFC = e + 2fX$$

which is a linear function with a positive slope equal to $2f$. Diagrammatically the result is an upward-sloping MFC curve as depicted in Figure 2.

Ranchers would still choose to stock at a level that equates MVP and MFC, but this would be a lower level, *ceteris paribus*,⁹¹ than before the internalization of external costs. MFQ results in production level q_3 , less than q^* . It is likely that ranchers in some areas would voluntarily reduce stocking rates below current allowable limits, as depicted in Figure 2. A critical value is represented by **OD**. Given the height of the MVP curve, ranching activity on this section would cease when the MFC function exceeded **OD**, as illustrated by MFC.

Would the full internalization of externalities actually put an end to grazing on public lands in the United States? It becomes an empirical question, of course, and the answer might differ from area to area. Still, it is almost inconceivable that ranching would continue on many of the Western public lands: Jacobs maintains that fees would have to be at least *115 times* current rates in some areas even to approach the full value of forage plus tax-

⁹⁰Managing social value also requires an accounting of the externalities imposed by *other* land uses as well
⁹¹MFC is upward-sloping for yet another reason. As ranching activity expands, it "crowds out" alternative activities of ever-increasing value to society.

⁹²This Latin phrase, in an economic context translates approximately as "all other things being equal."

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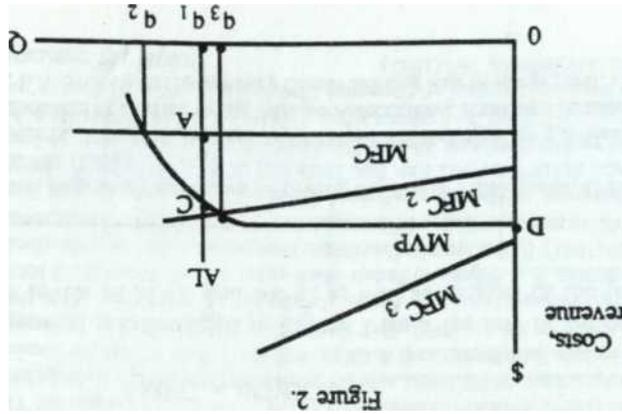
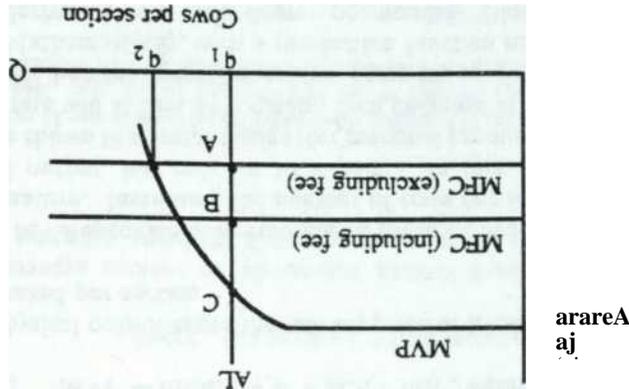


Figure 2.



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supported services.⁹² Even this estimate probably ignores many relevant environmental costs.

Grazing fees are clearly below the levels that would accurately reflect either forage values or the external costs associated with grazing on public lands. The consequences are predictable: Where fees are below the value of forage, compensating price adjustments for ranch resources have resulted; not only is the capital structure thus distorted, but any increase in fees would impose capital losses to many current ranchers. Most importantly, fees that fail to account for the external costs of public land grazing lead to a misuse of important and valuable lands. Livestock production on western public lands maybe rational from the microeconomic perspective of the individual rancher, but clearly it makes no sense from the broader societal point of view.

ALTERNATIVES FOR CHANGE

Can this abuse of natural ecology and public economy change, and if so, how? Ultimately, cattle grazing should be eliminated from western lands.⁹³ Given the enormity of that task,⁹⁴ however, what intermediary steps might be taken to mitigate the ecological damage resulting from this grazing? The most

⁹²See JACOBS, *supra* note 1, at 521, wherein Jacobs calculates that if government grazing fees included the costing of additional non-fee subsidies and other non-tax-related values, the price would be roughly \$200 per AUM, rather than the \$1.81 the government charged when Jacobs wrote his book, or 115 times the current rate.

⁹³Some ranchers deny that a termination of Western grazing would maximize the chances for an ecological re-flourishing of the West. Best known among them is ecologist Allan Savory, of the Center for Holistic Resource Management in Albuquerque, N.M, who claims that huge herds of ungulates are necessary to aerate soil and trample grasses to release seeds necessary for a blooming of the West. Anti-grazing critics are skeptical of his conclusions. See Bob Howells, *Strut in the Cows*, OUTSIDE, May, 1992, at 23,24. Numerous studies indicate that holistic resource management works best in moist climates, but that in dry regions (such as the American West) it can be more destructive than conventional grazing. See JERRY L HOLECHEK, REX D. PIEPER, & Carlton H. Herbel. *Range Management. Principles and Practices* (1989).

⁹⁴There are those who think all grazing might be terminated. Dave Foreman suggests four ways to achieve that end. 1. Establish open bidding for grazing rights; This would bring leasing fees closer to market value, removing substantial portions of present subsidies, and presumably, many welfare ranchers from the industry. 2. Establish an honest welfare system: Determine the average profit from public lands grazing for each rancher, and give him a check for that amount each year for life. This would cost less than traditional subsidies and eliminate hidden subsidies, degraded rangeland, watersheds, wildlife populations, and wilderness. 3. "Buy 'em out": Pay each public lands rancher the actual value of his permit over a reasonable period of time. 4. Run buffalo instead of cows: Bison are native, eat less grass, require less water, and aren't bothered by predators or severe weather. See FOREMAN, *supra* note 3, at 101-104.

obvious steps would be to raise grazing fees⁹⁵ and create competitive lease bidding.⁹⁶

How might the termination of grazing on western public lands be made acceptable? Suggestions include paying each permittee his annual AUM value each year for life, purchasing the capital value of each permittee's AUMs, determining each rancher's public lands income and paying him or her that amount for life, or simply purchasing each rancher's livestock and retiring their permits and leases.⁹⁷

Many opponents of public lands ranching, however, suggest that the optimal approach would be to "buy out all ranches, range developments, and AUMs, lock, 'stock,' and barrel, and be done with it."⁹⁸ While this method would be quite expensive, its advocates claim that in the long run, it would be far less expensive,⁹⁹ and ecologically more sound, than continuing to subsidize public lands grazing.

Welfare ranchers have relied on public ignorance of the realities of public lands grazing to maintain their subsidized boondoggle. The situation is changing, however. Larry Tuttle, director of the Oregon office of the Wilderness Society, foresaw the hard political rain about to fall when he said, "[t]he next great environmental issue is going to be grazing and the desertification of public land."¹⁰⁰

⁹⁵As mentioned *supra* notes 65-66 and text accompanying those notes, several Congressional bills have been sponsored to raise grazing fees on Western lands, and while none have as yet passed, the fiscal and ecological irrationality of current grazing policies assures us that both the grazing fee formula and the funding and policy autonomy of BLM Advisory Boards will be changed in the not too distant future.

⁹⁶Foreman, while favoring the removal of livestock from Western lands, also suggests twelve steps toward allowing grazing to continue, in a far more ecologically sound fashion. *See* DAVE FOREMAN, *Get Along Unit Doggits...*, WILD EARTH, Spring, 199Z at 8. It is reasonable to suggest that there exists a greater likelihood of having all public range grazing terminated than achieving all of Foreman's suggestions.

⁹⁷*See* Jacobs, *supra* note 1, at 536,537.

⁹⁸JACOBS, *supra* note 1, at 537; *See also* FOREMAN, *supra* note 94.

⁹⁹Jacobs suggests, for example, that at roughly one half million dollars each, the 22000 Western BLM and USFS base properties would cost \$11 billion. If the billion governmental dollars spent each year on public ranching subsidies were used to buy base properties, the cost could be covered in eleven years. He goes on to suggest many other purchase option arrangements, agreeing with most opponents of public lands ranching that almost any price, paid in almost any way, would be less costly than the net deficit America pays to support public lands ranching. *See* JACOBS, *supra* note 1, at 537,538.

¹⁰⁰JACOBS, *supra* note 1, at 545 (quoting Larry Tuttle, Director, The Wilderness Society, Oregon office).