

# Free Market Policy for Public Land Grazing

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There has been growing conflict between ranchers and environmentalists on the issue of livestock grazing on federal lands. We believe present government policies encourage rather than discourage adversarial confrontations. These conflicts waste scarce funds that could be better used in land management. In this paper we will identify what we believe to be problems with current federal rangeland policies and provide some suggestions for changes that might lead to greater management efficiency and equity between users.

## Financial Aspects of Federal Land Grazing

At present more than 30,000 permittees graze cattle on federal lands (18,000 on Bureau of Land Management and 12,600 on Forest Service rangelands). This is about 2 percent of the nation's ranchers or approximately 7 percent of the ranchers in the 11 western states (Godfrey and Pope 1990). Bureau of Land Management and Forest Service rangelands provide forage for about 11.5 and 5.2 million animal unit months (AUM's), respectively, for a total of 16.7 million AUM's. This represents 1.39 million animal units (AU's) or 3.43% of the nation's beef cattle herd (40 million AU's). At an average fair market value of \$80 per AUM, the total value of federal land grazing permits is roughly 1.36 billion dollars.

Although federal rangelands provide only a small part of total livestock forage requirements, they are seasonally important in the production process (Quigley and Bartlett 1990). Around 22% of the yearling cattle in the U.S. spend a portion of their lives on federal rangelands. Federal rangelands play an even bigger role in sheep production. They support about 20% of the nation's stock sheep from which about 21% of the nation's wool is shorn.

It is doubtful that discontinuation of federal land grazing would have much impact on the price of meat to the consumer. Increases in beef production on private lands in the Great Plains and Southeast would likely compensate for any reduction on federal lands in the West.

Discontinuation of federal land grazing would severely harm some local economies. Negative impacts on wildlife populations would be likely if private land holdings associated with federal land grazing are subsequently subdivided into ranchettes. Further, many water points on federal lands would no longer be maintained. Those watering

points play a crucial role in supporting many wildlife populations.

Various economic reports indicate that net returns from federal land grazing presently average \$80 per animal unit (USDA-ERS 1986, Torell and Word 1993). This does vary quite a bit with range type and size of ranch. Generally, desert ranches have lower returns (\$60–80/AU) than those in the coniferous forest (\$80–100/AU) or on prairie ranges (\$100–120/AU). Small ranches (100–200 AU's) have averaged about \$20–55 profit per AU while profits for medium sized (250–350 AU's) ranches have averaged about \$80–90 per AU. On large ranches (over 350 AU's) profitability is better (\$100–150/AU), but these operations represent only 12 percent of the total. Overall, during the last 5 years total annual net returns to federal land ranchers have been around 110 million dollars (\$77 million on BLM lands; \$33 million on Forest Service lands).

Perhaps the most interesting aspect of these numbers is that the BLM spent more on range management (89 million dollars) than ranchers collected in profits from BLM land grazing (77 million dollars) in 1992. In 1993 the Bureau of Land Management budget was slightly over a billion dollars, but only \$100 million were used for operations related directly to range management. It collected around \$22 million in grazing fees of which, by law, \$11 million were given back to individual grazing districts for range betterment. In other words, not only is the grazing program running deeply in the red, but millions of dollars in annual savings could accrue to taxpayers if the federal government paid ranchers not to graze federal lands.

Although only 18% of the ranchers on federal land have permits over 200 animal units, they account for around 60% of federal land grazing pressure (Godfrey and Pope 1990). Approximately 10% of the grazing permittees on federal lands derive \$20,000 or more annual income from federal land ranching, and could, therefore, be classified as full-time ranchers. Various reports indicate that annual net income per federal land grazing permittee is presently about \$4,100. Studies from New Mexico, for example, suggest that ranches on federal lands smaller than 200 AU are marginally profitable at best and may entail net losses as great as \$60 per AU in some years (Torell et al. 1990, Torell and Word 1993). If these numbers hold west-wide, then more than half of all federal land ranches may be economically unsustainable.

The point here is that federal land ranching is more a way of life than a source of income or an essential component in meeting food needs in the United States. We are not challenging the validity or legitimacy of federal land

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grazing. However, we do believe its relative importance must be considered when conflicts occur with alternative uses, and if more cost-effective range management strategies are to be developed.

### **The Real Problem: Over-obligation of Grazing Privileges**

In our opinion over-obligation of forage is the most serious problem on federal rangelands, even though the magnitude of the problem has been reduced over the past 30 years. Overstocking has been difficult to reduce because federal law and policy have encouraged ranchers to develop a vested interest in preserving livestock numbers rather than in conserving the land and forage base that sustain those numbers.

Although the government holds basic control over stocking rate decisions, and can penalize ranchers for exceeding or failing to meet authorized permit specifications, real-world factors erode the effectiveness of that control. Unlike private land ranchers whose long-term financial interest lies in sustaining the forage base, the interest of federal land ranchers lies in sustaining licensed numbers of livestock. Private land ranchers can reduce stocking without fear of diminishing their financial net worth but federal land ranchers jeopardize their permit value by voluntarily understocking their grazing allotments. This is not to say that many public land ranchers do not intentionally stock their allotments below permit specifications to sustain or improve the rangeland resource. But when they do, they often act in secrecy or pay grazing fees for the unused portion of their permit out of fear that their grazing privileges will be transferred to another rancher, or will be eventually taken from them to benefit wildlife or recreation. Under present BLM policy, if a permittee does not exercise his grazing privileges within two years, they can be transferred to another qualifying applicant.

Making matters worse, federal policies discourage ranchers from investing in the improvement of federal rangelands—improvements that might mitigate the problem of over-obligation of grazing privileges. The relative shortness of the federal lease period (10 years), prohibitions against rancher ownership of range improvements on federal lands (particularly Forest Service lands), and growing uncertainty regarding the security and profitability of private investment has created an environment adverse to rancher stewardship. Further, and more importantly, in the 1950's and 1960's massive range improvement projects involving brush control and seeding were often used to avoid stocking rate reductions on federal lands (Hess 1992). More recently, the National Environmental Policy Act of 1969 shifted emphasis from rangeland reclamation to environmental monitoring and grazing capacity adjustment on federal lands. We believe that both the monitoring and range improvement approaches are flawed.

### **Range Reclamation Projects**

Many concerned individuals in the environmental community have questioned the massive range rehabilitation programs implemented by the Forest Service and the Bureau of Land Management in the 1950's and the 1960's (Wuerthner 1990, Jacobs 1991). In their view, these programs have rewarded ranchers for bad management. Further, they claim rangeland reclamation programs were often harmful to wildlife, and that costs were higher than benefits. The largest of these projects, the Vale Rangeland Rehabilitation Program, sheds light on these arguments. Our source of information for the following discussion is a report edited by Harold F. Heady (1988).

#### **The Vale Program**

Before 1963, the Vale District was characterized by severe degradation from over-obligation of grazing privileges. Livestock numbers were estimated to exceed grazing capacity by 40 percent. The majority of the allotments were both small and communal (shared by two or more ranchers). Low levels of private investment because of ranch size, unwillingness of permittees to invest in communal allotments out of fear of free-riders, and uncompromising protection of permitted livestock numbers explain why stocking remained too high and why range betterment was neglected.

When finally faced with the prospect of livestock reductions, ranchers, local politicians and the BLM joined forces to pressure Congress into funding massive range reclamation (1963 Vale Rangeland Rehabilitation Program). This federal program provided for widespread spraying, plowing and seeding of overgrazed rangeland along with fencing and water development all at tax payer expense. Between 1963 and 1985, a total of about 18 million dollars were spent on the Vale project. At the beginning of the program (1963) there were approximately 332 permittees, but by 1985 the number had dwindled to 184. Roughly \$97,000 had been spent for every permittee remaining on the Vale District in 1985. In 1992 dollars (adjusted for inflation), this amounts to \$56 million total or \$304,348 per remaining permittee. About 750,000 acres were involved in the Vale project (119,000 seeded, 170,000 sprayed, 461,000 native range). Looking at it another way \$24/acre actual and \$75/acre inflation-adjusted 1992 dollars were spent on the project.

In terms of grazing capacity, the Vale project was considered to be capable of handling 285,000 AUM's in 1963, though the actual number on the area was 400,000 AUM's. In 1986 the estimated grazing capacity was near 485,000 AUM's but the actual number on the area remained at 400,000 AUM's. Seedings showed the best sustained grazing capacity increases while the sprayed areas had declined to about the same productivity as untreated range at the beginning of the program. It is of particular interest that average grazing capacity on untreated native rangeland increased about 40 percent between 1963 and 1986. This was attributed to reduced stocking, water development, fencing to facilitate grazing systems, sea-

son of use changes and more favorable precipitation patterns.

There was no definite trend in numbers of most wildlife species over the course of the Vale project. It does appear that pronghorn benefitted from water developments and crested wheatgrass seedings that included alfalfa. Sage grouse were declining on the area in 1986, but this could have been partially due to wildfires in the early 1980's. Riparian areas in 1986 generally were in fair or poor condition for fish and wildlife with the exception of those fenced off from livestock.

The bottom line on the Vale project is that the BLM created about 200,000 AUM's of forage at a cost of \$90/AUM in absolute dollars or \$280/AUM in 1992 inflation-adjusted dollars. This represents 3.5 times the present fair market value of BLM grazing permits in most areas (\$80/AUM). Interestingly, there is uncertainty regarding whether the 200,000 additional AUM's created between 1963 and 1986 can be sustained over the next 30 years. After detailed economic analysis using several scenarios, it was concluded livestock benefits alone were not sufficient to justify the Vale project.

The option of destocking Vale program rangelands from 400,000 to 250,000 AUM's through government purchase of over-obligated grazing privileges from permittees apparently was never considered. Our estimates indicate that this could have been done at about 16 percent of the final cost of the program. Although long-term benefits of conservative stocking have never been evaluated on Oregon sagebrush ranges, research from other range types indicates they could be substantial from vegetation, livestock, financial and wildlife standpoints. The impressive improvement (35–40%) in grazing capacity on the untreated native range in the 1963–1986 period on the Vale project supports the destocking approach in conjunction with low cost management practices (fencing for grazing systems, water development, season of use changes).

In recent years there has been a widely held view that grazing management alone has low potential to increase forage production on arid rangelands dominated by brush (Westoby et al. 1989, Laycock 1991). Although we acknowledge such situations, we believe they are more the exception than the rule. We support this conclusion with broad long-term studies from the Chihuahuan desert (McCormick and Galt 1993), and Salt desert (Yorks et al. 1992), as well as the Vale project itself. These studies all show major increases in forage plants and improvement in range condition from grazing management alone over 30–40 year periods. Although these increases occurred slowly and non-linearly, low cost, low risk and high sustainability are advantages of the grazing management approach. In contrast, brush control and/or seeding involve high risk, high cost and are generally decaying assets after the first 10–15 years.

One aspect of the Vale program completely overlooked is opportunity cost. We hold the view that monetary resources are scarce. Public benefits realized from the

Vale program (most of which accrued to 184 permittees) entailed public benefits lost to the rest of society—benefits that would have occurred had Vale project resources been allocated to ranches in other areas or, for that matter, to the retirement of the national debt.

### Problems with the Monitoring Approach

Since the early 1970's the BLM and the Forest Service have emphasized the monitoring approach. After a five-year period of intensive monitoring, stocking rate adjustments are typically made depending on whether a definite downward or upward trend is observed in range condition. We have worked closely with both agency monitoring programs: Holechek during his 14 years with the Animal and Range Sciences Department at New Mexico State University (NMSU) and Hess during his 17 years with the New Mexico Department of Agriculture (NMDA).

It is our experience that the monitoring approach, as a *tool for grazing capacity adjustment on federal lands*, has been a costly failure. First, because the federal agencies must adhere to costly procedures and must meet standards of data collection and analysis that can withstand public scrutiny and challenge, the costs of monitoring frequently exceed the benefits. Second, the high costs of the monitoring approach frequently rule out data collection and data analysis that are rigorous enough to prove to the satisfaction of administrative and civil courts that authorized livestock numbers do in fact exceed carrying capacity. As a result, even when the federal agencies are able to identify allotments they believe to be overstocked, the lack of adequate data and the threat of rancher resistance often prevent them from implementing needed reductions in livestock numbers. At best, the federal agencies negotiate a minor reduction in stocking. At worst, the federal agencies back-off from stocking adjustments, choosing instead the economically questionable alternative of federally financed range improvements.

We do not argue with the importance of monitoring. After all, monitoring is the only tool we have to evaluate management and to improve it as needed. Instead, our argument is with a monitoring approach that exceeds economic rationale and that obscures the more important actions that are needed to make public land ranching economically and ecologically sustainable.

### A Market Approach

Our conclusion is that public policy for dealing with over-obligation of grazing capacity on federal rangelands has been costly, adversarial, inefficient, and unfair. We believe that it has created disincentives rather than incentives for good land stewardship. The reader is referred to Anderson and Leal (1991) and Hess (1992) for a more detailed critique of federal grazing policy.

Our recommendation for reform of federal grazing policy is simple and straightforward. We ask that market forces be given greater leeway in the determination of how rangelands are used and how they might best be protected in the future. Basically, our reform plan centers



on two pivotal changes in public policy. First, holders of federal grazing allotments should have the option of converting to uses other than livestock grazing. Second, federal land users, not the general taxpayer, should shoulder the costs of land administration. Here are the general details of our market answer to the over-obligation of grazing privileges.

**1. Make allotment permits fully transferable and marketable.** Today, forage on federal lands is allotted to ranchers for only one lawful use—the pasturage of domestic livestock (primarily cattle and sheep). The laws and policies that mandate such use lie at the heart of the rancher-environmentalist conflict. Ranchers are perceived to have special privileges on federal lands that are denied to the non-ranching public. However, ranchers have no choice but to graze their allotted lands with livestock. Nonuse for the purpose of enhancing recreation, building big populations, or protecting biological diversity may be desirable to the public at large, but to the rancher it means the loss of income and the loss of perceived “forage rights.”

By changing the laws and policies that restrict forage use to the production of livestock and by making grazing-allotment permits marketable to non-ranchers, we could remedy the major problems that plague federal grazing lands. First, the “forage rights” that ranchers defend would be tradeable on the open market and convertible to any number of uses. Ranchers currently holding grazing permits could diversify their operations by allocating forage to paying uses other than livestock. There is no reason why public policy could not accommodate ranchers who choose to use their allotted forage to improve riparian conditions, expand elk populations, or restore endangered species—and to do so while making money at the same time.

Environmentalists who want to make rangelands cattle free, or to simply reduce their numbers to more acceptable levels, could do so more quickly and less expensively than is now feasible by political or judicial means. By purchasing “forage rights” from ranchers on a willing buyer-willing seller basis, they could pursue their conservation goals peacefully and securely. Indeed, environmentalists might find the tool of conservation easements a more practical option on federal lands. Instead of purchasing all of a rancher’s “forage rights,” they might simply purchase the forage equivalent of a conservation easement along a critical riparian zone or in an upland site known for its critical habitat or unique environmental value.

Allotment permits could be acquired by states, cities and towns, particularly when erosion control, wildlife, or recreation values exceeded those of livestock. Agencies, private organizations and individuals seeking to protect endangered species such as the desert tortoise could buy allotment permits and apply the “forage rights” to species recovery. In fact, over-obligated grazing privileges could be purchased by almost any one—and done at a fraction of the cost that would otherwise be imposed on taxpayers

for sophisticated monitoring and range improvement programs. Our estimates show that over-obligated livestock “forage rights” could be purchased for under \$200 million. This sum is about 20% of the BLM budget and 4% of the Forest Service budget for 1993.

Letting market forces operate on public lands means that ranchers would have a way of responding to societal demand for more recreation and wildlife. It also means that non-ranchers would have the opportunity to assume direct responsibility for innovative changes in the use of federal lands. Environmental, recreational, and wildlife groups spend tens of millions of dollars each year fighting political and judicial battles to conserve and protect natural resources. We believe those dollars would better conserve and protect natural resources if spent on acquiring marketable “forage rights.”

**2. Make allotment fees cover cost of administration.-**

Enormous amounts of public resources have been expended on the grazing fee debate. We sympathize with the argument that grazing fees should be set at market value. However, the reality is that grazing fees on federal lands are set by political, not market, forces.

We believe that sound public policy should set its sights on making allottees, whether ranchers or environmentalists, shoulder the full costs of allotment administration. In proposing this, we are acutely aware that “covering the costs of administration” is a wide-open proposition. What is to ensure that administrative costs are not unduly high? Well, we believe there are two solutions. The federal agencies should allocate their resources to evaluating and approving allotment plans that are submitted by permit holders and to overseeing allottee compliance with the terms of those plans. Further, we believe budgetary incentives can be developed to encourage the federal agencies to streamline administration and to focus their efforts more on education and less on regulation.

**3. Establish user fees at market prices.** The BLM’s historic bias toward livestock production and the Forest Service’s marriage to below-cost timber sales tell much about the funding of all those agencies. Neither of the two agencies earns significant income from providing the recreational and wildlife services demanded by the general public. Rather, their budgets are based on Congressional appropriations. As a result, the BLM and the Forest Service are heavily influenced by partisan and pork-barrel politics. We believe that agency funding that is responsive to market rather than political forces would better serve both the environment and the general public.

Specifically, we call for the establishment of market-based user fees for all federal land amenities that have economic value. By pricing resources and land uses like wildlife and recreation, and by allowing the BLM and the Forest Service to retain the income, powerful incentives would emerge to compel those agencies to give the American people what they demand. Market forces would attain what politics could never obtain: the multifarious public interest.

One other advantage to user fees is evident. By pricing

formerly free resources, the federal agencies would be creating markets for activities and land uses other than livestock and domestic grazing. Ranchers, for example, would be able to assess the opportunity costs entailed in growing cattle versus some alternative recreational venture. Like the federal agencies, they would have strong incentives to use their allotted forage to meet public demand for non-ranching products.

Getting the public to accept user fees may not be difficult. Recreational use of public lands more than doubled between 1985 and 1990 based on USDI (1985, 1990) data. In many areas recreation is a much larger problem than poorly controlled livestock grazing. If a minimal two dollar fee was charged per day per season for public land recreational visits, federal revenue would run well over \$200 million (per year). These fees would help balance supply and demand for recreation and would generate the income needed to help make the BLM and the Forest Service self-financing organizations.

**4. Reliance on incentives for land stewardship.** We firmly believe that the goals of land stewardship are best advanced when land users are accountable for their actions—when they alone shoulder the costs of what they do and reap the benefits of their good management. Under such conditions, monetary incentives would exist that encourage better management and penalize bad land practices. To this end, we call for several basic changes in public policy.

First, the term of allotment permits should be greatly extended. Extending the term of permits would provide the degree of certainty and stability needed for environmentalists and ranchers to implement wide-ranging land and wildlife improvement projects.

Second, all subsidies to allottees, such as the return of 50% of grazing fees for range betterment, should be discontinued. Historically, subsidies have tended to encourage bad land practices by bailing out land users who have neglected their lands or stubbornly stuck to bad land practices. Allottees who assume responsibility for the costs and benefits of land management are likely to steward their lands and seek out the best ideas and technologies.

Third, public policies and regulations that impede good stewardship should be eliminated. Specifically, current restrictions on the taking of grazing nonuse should be immediately expunged. Federal policies that encourage small allotments or favor community grazing should be reconsidered in light of the economics of ranching and the lessons of the tragedy of the commons.

Fourth, allottees, whether ranchers or environmentalists, must have assurances that investments in federal lands are protected and that the benefits derived from those investments can be captured and enjoyed by the responsible parties. This does not mean that a portion of benefits cannot or should not be allocated to the general public. It only means that stewardship should not be

expected to sustain itself on goodwill alone. For people to invest of themselves over the long run, they must have access to the fruits of their labors.

**5. Bio-Diversity Fund to protect non-market resources.** We call for the creation of a biological diversity trust fund financed from user fees, administered at the local level, and available to all Americans through competitive grants. Not all resources on federal lands have an economic value. Biological diversity, for example, has no price tag and therefore cannot be stewarded effectively through market mechanisms. However, by taking a substantial proportion of users' fees that are generated through the market process, we can create a source of funding for critical federal land resources.

We believe the bio-diversity trust fund would round-out the program of market reforms outlined above. Such funds would empower ranchers and environmentalists alike to play a major role in the restoration and protection of federal lands. Environmentalists, for example, could use trust funds to buy out "forage rights" for site-specific protection of species and habitat. Likewise, ranchers could use trust funds to expedite species recovery and habitat restoration on their allotments or, for that matter, to pay land practices which have benefits not measurable in dollars and cents.

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