BULL RIDERS FOR BIODIVERSITY?



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By Tyler Sutton, for The Conservation Alliance of the Great Plains
www.conservationalliance.org

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"Now the face of all the land is changed and sad. The living creatures are gone. I see the land desolate, and I suffer unspeakable sadness. Sometimes I wake in the night and feel as though I should suffocate from the pressure of this awful feeling of loneliness."

– White Horse, Omaha Indian

Quoted in *An Unspeakable Sadness* by David Wishart

"Bull Riders for Biodiversity? — And Other Heresies for the Northern Great Plains"

By Tyler Sutton, for The Conservation Alliance of the Great Plains

The title of this talk grew out of a conversation I had a few weeks ago with Jim Stubbendieck, a Professor of Grassland Ecology and Director of the UNL Center for Great Plains Studies. I was at the Center to participate in a panel discussion about the New Homestead Act.

The New Homestead Act is proposed federal legislation sponsored by Senator Chuck Hagel and Congressman Tom Osborn, among others.[1] The purpose of the Act is to stabilize rural population loss and economic decline by providing individual and business tax incentives and access to a venture capital pool to people in high out-migration counties; counties that are primarily on the Great Plains.

At the discussion, I basically said the legislation was a step in the right direction for federal policy because it sought to diversify the region's economy, which at the moment rests largely on the single leg of agriculture. I suggested, however, the New Homestead Act could be improved by providing incentives to change the way some land in the region is used. I specifically suggested the Act be amended to provide a capital gain exclusion or partial exclusion to landowners that sell land to a community-based land trust working to create a conservation area as part of a community development plan.

What I want to do today is amplify what I said at the panel discussion as to why I believe federal rural development policy should encourage the creation of large-scale conservation areas in the region through community-based institutions. I also will talk about some of the biggest impediments to moving federal policy in this direction, which are the region's own attitudes and beliefs about land use and stewardship. By discussing these impediments, I hope to explain the title of my remarks, Bull Riders for Biodiversity, which I have used metaphorically to respectfully suggest that people in the region need to reexamine these attitudes and beliefs if we are to solve the region's ecological and economic problems.

Such a reexamination is necessary because economically, agriculture alone is unable to sustain the Northern Great Plains (northwestern Nebraska, western North and South Dakotas, and eastern Montana and Wyoming), nor is it likely to do so in the future--if it ever did in the past.

The reality is the region has always been dependent on federal subsidies of one kind or another -- free land for settlers under the original Homestead Act of 1862, transportation subsidies in the form of railway land grants, and more recently in the form of dams and other irrigation projects. The commodity subsidies of today are really just a continuation of the federal assistance that has always supported the region's agriculture.

But irrespective of history, the fact is modern agriculture in this region is heavily subsidized. Over the past five years states in the Northern Great Plains have been propped up by nearly 16 billion dollars in agriculture subsidies and disaster relief and by the below-market leasing of 13 million acres of federal land for livestock grazing.[2]

Notwithstanding these subsidies, today, the Northern Great Plains is one of the poorest regions in the country. In 2001 seven of the twelve poorest counties in the nation were in Nebraska and all of them rely heavily on the livestock economy.[3] In the recent past, the federal policy response to the region's economic woes was more agricultural subsidies, in one form or another, whether commodity payments, drought relief, or irrigation projects.

These subsidies have not stemmed the exodus of people from rural areas. Seventy percent of the rural counties in the Great Plains have experienced a population decline of one-third or more over the last two decades.[4] Subsidies to agriculture have just fueled farm and ranch expansion, thereby accelerating rural community decline. As agricultural units got bigger, people left agriculture, but at the same time, the economic base of small towns deteriorated further, which led to even greater out-migration.

This situation has gotten so bad that rural advocates now argue the nation should fundamentally change the farm program and create a new federal rural policy. Chuck Hassebrook, Executive Director of the Center for Rural Affairs, and a member of the University of Nebraska Board of Regents, recently wrote: "It is time to establish a national rural policy that revitalizes rural communities through new initiatives and reforms existing policy."[5]

Karl Stauber, president of the Northwest Areas Foundation, a Minneapolis-based foundation active on the Northern Great Plains, in an article published by the Federal Reserve Bank of Kansas City,

wrote: "Current federal agricultural policies are actually hurting rural communities—by absorbing the vast majority of the resources directed to rural areas, by continuing the myth that rural and agriculture are the same, and by making it difficult for rural communities to develop new areas of competitive advantage."[6]

I am not suggesting that we simply eliminate agricultural subsidies to help rural communities that are struggling. What I am saying, though, is that there are some pretty big cracks developing among rural advocates about the importance of ag subsidies to federal rural policy and about the importance of the agricultural economy to the region's future.

At the same time that people are leaving and the economy is in a tailspin, ecologically, the Northern Great Plains is also in real trouble. Perhaps 40 percent of its grasslands have been converted to crop production.[7] Native prairie continues to be converted to crops, mainly because of Farm-Bill subsidies.[8]

The majority of plant and animal species that are endemic, and thus dependent on the region, are in trouble. Grassland birds have shown steeper, more consistent, and more geographically widespread declines than any other behavioral grouping of North American species, according to a report by The Nature Conservancy. Thirty-four species of flora and fauna are considered globally imperiled and of these, ten species are listed as threatened or endangered, and four are proposed for listing.[9]

Of course, the landscape today is just a shadow of what it once was when Lewis & Clark made their way up the Missouri River. Meriwether Lewis stood at the confluence of the Marias and Missouri Rivers in what is now Montana, and observed that "…in every direction around us was one vast plains in which unnumerable herds of Buffalo were seen attended by their shepherds the wolves; the solitary antelope, which now had their young were distributed over its face; some herds of elks were also seen; the verdure perfectly clothed the ground."[10]

Even 150 years ago, the abundance of wildlife and prairie grasslands in the Northern Great Plains rivaled Africa's Serengeti. But since then, millions of buffalo were senselessly slaughtered, primarily by market hunters, but also to starve the Native American population into submission and to pave the way for cattle. Wild buffalo and all the large predators that once depended on them were

extirpated from the region; so too were the elk and Big Horn Sheep, though recently some of these species have made a come back in places.

Today, no matter how you count them, prairie dog numbers have been radically reduced, along with the number of large prairie dog complexes.[11] Many species associated with the prairie dog ecosystem are in trouble. The black-footed ferret is one of the most endangered mammals in the nation. The burrowing owl, swift fox, mountain plover and ferruginous hawk are species of concern.[12]

The destruction of the natural environment is perhaps one of the most serious issues facing mankind, according to Niles Eldredge, a curator at the American Museum of Natural History and author of *Life in the Balance—Humanity and the Biodiversity Crisis.*[13] No one knows for sure, but as much as 50 percent of the world's know biodiversity may go extinct by the end of the century. It is not just species that are at risk of extinction, now, so too, are entire ecosystems, whether the uplands of the Amazon basin, the mountain forests of Tanzania, or the Florida Everglades, and yes, the North American Great Plains.

Haunting are the words of White Horse, an Omaha Indian, as quoted in David Wishart's book on the dispossession of Nebraska Indians, words which were spoken shortly after the turn of the twentieth century: "Now the face of all the land is changed and sad. The living creatures are gone. I see the land desolate, and I suffer unspeakable sadness. Sometimes I wake in the night and feel as though I should suffocate from the pressure of this awful feeling of loneliness."[14]

In short, the "cattle culture" that evolved with the transformation of the plains has not been kind to the living creatures that it perceived as competing with it. By "cattle culture" I mean a set of shared attitudes and beliefs that are common in the region among people on the land, though they certainly are not found only among people engaged in agriculture. But these attitudes and beliefs are part of the mythology of ranching and even today ranchers are the most important source of these attitudes, which continue to grip the region's politics, and in my view, limit the region's economic development, as well as conservation options.

I mean no disrespect here. The rancher's historic struggle with the forces of nature is to be admired in many respects, as is their reluctance to plow the region's grasslands. Ranchers are tough, resilient, honest, hard working, and love the landscape and nature in their own way.

There are, however, aspects of the cattle culture that are very troublesome as we contemplate the future of the plains, particularly the future of the region's biodiversity and small communities. Generalizations about anything are always risky, but let me risk a few that are relevant to this discussion.

The cattle culture's definition of stewardship is obviously very narrow. It basically includes caring for and protecting only those parts of the prairie grassland ecosystem that it perceives as not competing for grass or interfering with the production of cattle. It also is hostile to the idea of public access to land and is contemptuous of government involvement in land ownership or management.

To be fair, ranchers struggle to exist within an industrial society and a corporate enterprise system that places severe limitations on how they can operate. To put it simply, ranchers do not get paid to manage wildlife and biodiversity; they only get paid what packer-dominated markets yield. There is also very little direct government subsidization of cattle ranching, thereby giving the impression that cattle ranchers are self-sufficient, which then justifies the cattle culture's resistance to outside involvement in wildlife and land use issues, which it perceives as matters of local control or private property rights. The bottom line is that many of the cattle culture's attitudes and beliefs about land use and ownership, though problematic as we move into the 21st century, are nevertheless understandable adaptations to the social and economic forces with which it must contend.

Further, the cattle culture is not alone it its war on nature. Really, it's more of a foot soldier for a war that is being conducted on a planetary scale. According to Harvard biologist E.O. Wilson, rising world population and the conspicuous consumption of resources are the root causes of biodiversity loss.[15] And of course the conspicuous consumption of resources is mainly associated with the lifestyle of urban residents, certainly not the cattle culture's lifestyle.

In other words, I am not saying the cattle culture is to blame for the sorry state of the plains. There is plenty of blame to go around. Nevertheless, the cattle culture had a significant role in

fundamentally altering the region's grassland ecosystems and, as I will discuss in more detail in a moment, I believe it must come to terms with that role for the region to recover from our collective mistakes.

In my panel presentation I argued the New Homestead Act should be improved by providing incentives to change the way some land in the region is owned and used because I believe the natural landscape is an important source of new economic opportunity. In my view changes in the way a portion of the land on the Northern Great Plains is owned and used will lead to a more diverse economy that will benefit rural areas, and at the same time it will lead to a more diverse and sustainable prairie landscape.

This is not a radical idea. Rather, the idea of merging the protection of biodiversity with economic development that benefits local communities is basic to applied conservation as we enter the 21st century. You might say it is Conservation Biology 101.[16]

Nor is it a particularly new idea. People like Dan Licht, author of *Ecology and Economics of the Great Plains* [17] and Francis Maul, a former UNL Ph.D. student in environmental history and author of *Prairie Grass Dividing: The Land, Life and People of Sioux County, Nebraska*,[18] have mapped out rudimentary reserve concepts for portions of the Northern Great Plains. Later this year, the Northern Plains Conservation Network, a group of twenty-some loosely affiliated conservation and environmental groups, lead by the World Wildlife Fund's team of scientists, will release a biological assessment of the Northern Great Plains eco-region with some suggested places for communities to develop large conservation areas.[19]

Rural development advocates are supportive of exploring how community-based conservation projects can benefit the region's small towns. In fact, Karl Stauber, in the article I previously mentioned, argued that one of the most important reasons for the rest of the nation to invest in rural America is to protect and restore the environment.[20] Chuck Hassebrook has written that access to the natural landscape in rural areas should be a community development priority.[21] Sandy Scofield, Director of the University of Nebraska's Rural Initiative, and a western Nebraska landowner herself, is quoted as saying: "Nebraskans may want to look for ways to convert even more land to recreation and conservation purposes and forget about agriculture, forget about the cattle business."[22]

On balance though, rural development proposals involving land ownership and use change have been slow to develop and unimaginative because most people do not believe such alternatives are politically feasible given the cattle culture's current attitudes.

Notwithstanding this conventional wisdom, and based on this previous work, at the panel discussion, I suggested that people in the Northern Great Plains should actively support the idea of making it a public policy goal to put between 10-15 percent of the eco-region into permanent grassland conservation areas. (Let me say parenthetically, the precise percentage at this point is not what is important, rather what is important is the commitment to move in this general direction.)

These areas would be managed primarily for wildlife. Presently, about one percent of the region is in such a status (conservation area, park, or refuge) and globally temperate grasslands are the least protected terrestrial habitat from human exploitation. Other areas of the country may have mountains or oceans, but this region has miles and miles of open space still covered in many areas with spectacular prairie grasses, an essential building block for restoring the ecological health of the region. In my view, this is a competitive advantage for the region, but only if there are changes in land ownership and use.

These areas would not be traditional parks, nor would they encourage the type of tourism associated with parks, which often is high volume and can lead to low wages and high infrastructure costs. These newly created areas would open to hunting, fishing, hiking, horseback riding, wildlife viewing, and tribal cultural practices, but even high quality tourism would be a secondary motivation for communities to create these areas. The areas would be community assets first, much like urban parks and open space are for cities that want to attract highly skilled people. Only secondarily would these areas be for tourism.

Many small communities are blessed with a responsible work force, good schools, and safe streets.[23] But economic revitalization of this region will require that communities attract and retain well-educated entrepreneurs who can participate in the global and national economy. To succeed, communities will have to find innovative ways to provide residents access to the surrounding landscape in order to compete with other areas of the country that can offer access to public lands and other natural amenities. Right now, most communities on the Northern Great Plains are

enclaves, surrounded by an inaccessible landscape, used in ways most Americans do not find attractive.

The federal government need not be directly involved in creating or managing these areas. These areas would be created ideally through community-based conservation initiatives and community-based land trusts, though supportive rural development and wildlife policies and funding at the state and federal level would certainly be helpful. This is also not to say that expanding the amount of public land in the region in order to achieve certain conservation and recreation objectives does not have a place in the region's future. I believe it does, but it should not be the focus of this initiative.

The size and characteristics of the conservation areas would be determined at the local level, though to be successful they need to be based on principles of conservation biology. They should be comprised of core areas, where land would be managed to maximize biodiversity and allow wildlife to return. In outlying areas, which may or may not be continuous, a management regime should be developed to provide different levels of protection depending on numerous factors, including local support.

In an op-ed piece I previously wrote for the *Lincoln Journal Star,*[24] I suggested that the initial focus of such a strategy should logically be the National Grasslands because they are already publicly owned. There are nearly three million acres of National Grasslands in the states of Nebraska, the Dakotas and Wyoming.[25] Nearby communities should work to create special management areas for the National Grasslands using community-based land trusts and innovative public-private partnerships to own land, acquire conservation easements and set wildlife management objectives. Communities should work directly with the grazing associations that basically control most of the National Grasslands and much of the private land surrounding the public land to provide for a voluntary, gradual buyout of the grazing associations members. In fact, if the grazing associations were innovative, they would establish and market their own land trusts to accomplish the buyouts. Think of it as a golden parachute for landowners when they are ready to retire from ranching. If local projects were part of a region-wide effort to protect 10-15 percent of the eco-region, the effort would be nationally and globally significant.

The creation of these areas would have direct economic benefits. The land trusts would attract private conservation capital to purchase land from willing sellers, thereby providing a buyer to

landowners who wished to sell land to a conservation purchaser. Today, national groups like The Nature Conservancy raise millions of dollars to purchase land in the region. Why not have, for example, the Northern Sioux County Community Land Trust do the same thing? Similar community-based arrangements are working in other parts of the United States (though admittedly there has been more federal involvement than I am suggesting here), Canada, and in other parts of the world. Perhaps someday these locally controlled entities might become conduits for various types of public funding, particularly if the nation supported the restorative effort. I will say more about this in a minute.

Local people would benefit from jobs created to manage the lands on a day-to-day basis. Perhaps sellers would be able to tie the sale of their land to continued employment, much the way small business owners often sell their businesses with employment agreements. Other business opportunities would be associated with the change in land use, from prairie restoration contractors to nature-based tours, guiding and outfitting, horseback riding, lodges and similar businesses.

While I concede such an initiative is no panacea for the region's economic problems, I firmly believe it will help. In Colorado, for example, a state with relatively abundant wildlife and public access land, wildlife viewing alone (not including hunting and fishing) generated $1.3 billion dollars for the state's economy and supported 13,000 full and part-time jobs during 2001.[26] Direct expenditures for wildlife photography and observing wildlife and birds was twice the cash receipts of the state's corn crop. In Nebraska, on the other hand, a state with little public access land and more limited wildlife viewing opportunities, wildlife viewing expenditures accounted for $130,000,000 in the same year.[27]

The Nebraska figure shows that there is already a large market for wildlife viewing in the region. But the Colorado figure shows there is also clearly a lot of up side potential to the economics of wildlife viewing if plains states are willing to address the land use issue.

These areas would also potentially benefit from a shift in future spending under the Farm Bill, as world trade pressures lead to reductions in agriculture subsidies. In fact, this may be the most compelling reason to begin thinking seriously about what I am saying.

In a September 7, 2003 editorial the *Omaha World Herald* warned that U.S. companies wanting more liberal trade policies for their industrial products may over time lead to cuts in farm commodity

subsidies. The recent breakdown in the Cancun WTO trade negotiations lends even more support to this concern, as a major reason poor nations walked out of the talks was the amount of U. S. and European agricultural subsidies. Conservation spending may be the only way to avoid a catastrophic collapse in federal payments to the region.

Research dollars from universities, non-governmental organizations and other institutions that want to study the restorative effort would also undoubtedly flow to the local economy. And, yes, the areas would be targets for state and federal spending relating to species of concern and to develop outdoor recreation opportunities. But beyond the direct economic benefits, these areas would be a reason for people to stay in the region's small communities and for people to move there to retire or start entrepreneurial businesses. Research has shown that those communities in sparsely populated areas that have access to natural amenities, which these areas would be, do better economically and demographically than areas without access to these natural features.[28]

I also observed at the New Homestead Act presentation that the region had some impressive national conservation partners that are willing to work with communities if such a public policy goal were established and communities started working locally for such an initiative. Two of the best groups in the country at saving the earth's biodiversity are the World Wildlife Fund (WWF) and The Nature Conservancy.[29] Both have active programs in the Northern Great Plains. In fact, WWF recently made the Northern Great Plains one of its six national eco-regional priorities and one of its top two hundred global priorities.

From a conservation perspective, setting aside 10-15 percent of the region is no substitute for good private land conservation. We need that, too. But shifting the management objective on 10-15 percent of the land in the region from cattle to biodiversity has the potential to capture the nation's imagination and turn its attention to the possibility the region has for large-scale wildlife conservation, whereas private land conservation simply does not.

Ranchers need not fear their way of life will disappear. Cattle will still be king in the region, with the overwhelming majority of the region's grasslands used for cattle production for generations to come. And over the next several decades, even these conservation areas would need to be grazed by cattle, until wildlife populations and other disturbances could replace cattle grazing as biodiversity management tools.

My previous presentation was well received by the rural development panelists and the audience. Senator Hagel's representative was even respectful, saying at least it deserved further consideration, though he was probably just being polite, and he did add the obligatory warning about the need to respect private property rights.

After the panel discussion was over, I mentioned to Professor Stubbendieck that even though I grew up in Lincoln, like many urban people, I enjoyed watching rodeo events. I told him that in fact the greatest athletic feat I had ever seen was when years ago a bull fighter named Miles Hare, from Rushville, Nebraska, I believe, jumped onto the back of a bull to rescue a hung-up rider.

Jim responded that he, too, is a rodeo fan, having come from rural Nebraska to UNL on a rodeo scholarship to ride bulls and broncs. I knew Jim shared my interest in protecting and restoring biodiversity on the plains, and the future of rural areas, so I jested he should form a group called Bull Riders for Biodiversity to start a dialogue with urban folks on ways to solve the region's economic and ecological problems. I was thinking of Bull Riders for Biodiversity as a metaphor for new, more enlightened (at least from a biodiversity perspective) ranching leadership that would build bridges to urban conservationists so the two groups could develop a common agenda. He said it might be a good idea but it would be a very small group right now. I laughed at the time, but the more I thought about it, the more I came to realize how tragic the comment really was.

It's tragic because in my opinion the effort to stabilize small towns and to protect the region's biodiversity is going to take inordinately longer and be inordinately more difficult unless agricultural interests, mainly ranchers, come to realize they must become leaders in the effort to preserve the region's biodiversity. At the same time, over the long term, I believe the economic survival of ranching itself is tied to changing the way ranchers manage their land and get paid for it.

I'm sure a lot of other people feel the same way, though you do not hear a lot of public discussion about it. In fact, politicians and rural advocates are very timid about saying anything that might offend the cattle culture's present views on stewardship and land use. But at the same time, it also strikes me that the champions of proposals like the New Homestead Act are going to find little support for them in urban America. It seems to me, urban America will view the New Homestead Act as simply throwing more federal money at a problem without a solution.

That is why I believe the New Homestead Act, for example, while basically sound policy, will not go anywhere as a package, though bits and pieces may be slipped quietly into various bills, unless it is tied to something the nation as whole wants. (Of course, I recognize that legislation is often passed this way.) I believe, therefore, the legislation should become part of a broader conservation agenda of national and global significance. While support for agricultural subsidies may be waning, support for conservation spending remains high, and for reasons I've mentioned, will probably grow in the future. At the same time, interest in the Northern Plains will remain strong in coming years with the Lewis & Clark Bicentennial activities.[30]

Actually, we need to think bigger than just the New Homestead Act. We need to think in terms of a Northern Great Plains Restoration Act, a comprehensive land restoration and community revitalization policy tailored to the unique needs of the region. If the nation is willing to support restoration of the Florida Everglades,[31] I believe it will support restoration of one of the planet's most spectacular grasslands, provided people in the region have the vision and fortitude to attract the nation's attention.

But who in the region is going to provide the leadership? As I mentioned, it is unlikely politicians are going to speak out about the need for land use change or challenge the cattle culture's views on stewardship. So unless rural people in the region themselves are willing to take on these issues, who in the nation is going to care what happens on the Northern Great Plains?

Are people in small towns going to speak out about land use change or stewardship issues? Perhaps in some cases they will. They apparently did recently in Valentine over changes in the administration of Merritt Reservoir. But for most small town folks, it is not in their short-term economic interest to risk offending their agriculture constituents. They're trapped by their present dependence on agriculture and the region's rural economic development options are thereby limited because of it.

In my view the inescapable conclusion is that unless new leadership develops soon in the ranching community, the most likely scenario on the Northern Great Plains is that the region will continue to die a slow, painful, economic death. It is a death that will be accompanied by poverty, larger farm and ranch operations, mega-confinement feeding facilities, fewer and fewer people, as well as fewer small towns and further ecological decline.

Whether or not folks in the region embrace the metaphor of the Buffalo Commons, in my opinion their future is tied to certain aspects of it.[32] Not the public image of the Buffalo Commons; not a region filled with wild bison on public land with no people. Rather, to stabilize the region will require the cattle culture to gently embrace a broader vision of its role in preserving life on earth, and of land use and ownership possibilities, while ranching and agriculture still dominate the region's economy and land use.

But having said that, I would prefer to talk metaphorically about the future by referring to Bull Riders for Biodiversity, rather than a Buffalo Commons. I think the metaphor is more respectful of the central role the cattle culture must play in transforming the region. Ultimately, the future of the region is about human attitudes, imagination and creativity, not buffalo.

When it is all said and done, the fact is ranchers hold the key to the future on the Northern Great Plains. They will not dictate the outcome, so much as the timetable. But their leadership is critical to getting on with the job of restoring the region ecologically and economically.

I would respectfully suggest that ranchers need to start thinking more in terms of what is good for the entire community, not just their individual operations, and bring their definition of conservation into line with contemporary standards. The prairie dog issue is not going away. At the same time, urban folks need to work on ways to sustain ranchers economically in their effort to adjust to new land use patterns and for embracing a broader definition of stewardship.

It is time for the cattle culture and its leadership to start defining the conservation agenda, and then seek urban support for it, rather than simply fighting against the agenda set by urban conservation groups. The agenda must address the needs of the region's biodiversity, as well as the needs of those folks living in small towns, and towns that are not so small anymore.

I guess I will believe the region is on its way to a bright future when Bull Riders for Biodiversity is not just a metaphor, but is actually a loud, powerful voice among the ranching community and rural residents for positive change on the Northern Great Plains. I hope that happens soon, for the sake of the region's people and its biodiversity.

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[3] Lincoln Journal Star (June 8, 2003); Lester Thurow, USA Today (Sept. 30, 2002).
[4] Senator Byron L. Dorgan, *The New Homestead Act, Section 602, Where History Meets Hope and Opportunity.*
[5] Chuck Hassebrook, Center for Rural Affairs Newsletter (Dec. 2002).
[6] Karl Stauber, *Why Invest in Rural America – And How? A Critical Public Policy Question for the 21st Century,* 33 Economic Review (Federal Reserve Bank of Kansas City) (Second Quarter 2001).
[7] Carolyn Hull Sieg, *et al.*, *Recent Biodiversity in the Great Plains: Implications for Restoration Management,* 9 Great Plains Research 277-313 (Fall 1999).
[8] *Conversions to Farmland Threatens South Dakota Environment*, Argus Leader (April 8, 2003).
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[10] B. DeVoto, *The Journals of Lewis and Clark* (1953).
[11] Craig J. Knowles, *et al.*, *Black-tailed Prairie Dogs Abundance and Distribution in the Great Plains Based on Historic and Contemporary Information*, 12 Great Plains Research 219-54 (Fall 2002).
[12] Northern Great Plains Conservation Network, *Oceans of Grass: A Conservation Assessment for the Northern Great Plains*, (draft Sept. 13, 2003).
[13] Niles Eldredge, *Life in the Balance – Humanity and the Biodiversity Crisis* (1998).
14 David J. Wishart, *An Unspeakable Sadness*, "The Dispossession of the Nebraska Indians" (1994).
[15] Edward O. Wilson, *The Future of Life* (2002).
[16] Richard B. Primack, *Essentials of Conservation Biology* 5 (1998).
[17] Daniel S. Licht, *Ecology & Economics of the Great Plains* (1997).
[18] Francis Maul, *Prairie Grass Dividing: The Land, Life and People of Sioux County, Nebraska* (Unpublished Ph.D. dissertation, UNL History Department)(1998).
[19] *Supra*, Note 12.
[20] *Id.*, Note 6.
[21] *Id.*, Note 5.
[22] Don Gabelhouse, *What's Sport Fishing Worth to Nebraska?* (Presentation to Governor's Water Task Force) (Nov. 15, 2002).
[23] *Supra*, Note 4.
[24] Tyler Sutton, *Restore Grasslands Ecologically, Economically*, Lincoln Journal Star (May 5, 2003).
[25] USDA Forest Service, *Summary of the Final Environmental Impact Statement for the Northern Great Plains Management Plans Revisions* (2001).
[26] Email Correspondence with Todd Malmsbury, State of Colorado.
[27] U.S. Fish & Wildlife Service, 2001 National Survey of Fishing Hunting and Wildlife – Associated Recreation, Nebraska.
[28] David A. McGranahan and Calvin L. Beale, *Understanding Rural Population Loss*, Rural America, Vol. 17, Issue 4 (Winter 2002).
[29] www.worldwildlife.org> (accessed October 27, 2003), www.nature.org (accessed October 27, 2003).
[30] <www.lewisandclark200.gov> (accessed October 27, 2003).
[31] <www.evergladesplan.org> (accessed October 27, 2003).
[32] Frank and Deborah Popper, *Fate of the Plains in Repoening the Western Frontier* (ed. Ed Marston 1989).