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Montana:
On the Verge of *Collapse?*

By Kendra Okonski

Jane S. Shaw
SERIES EDITOR

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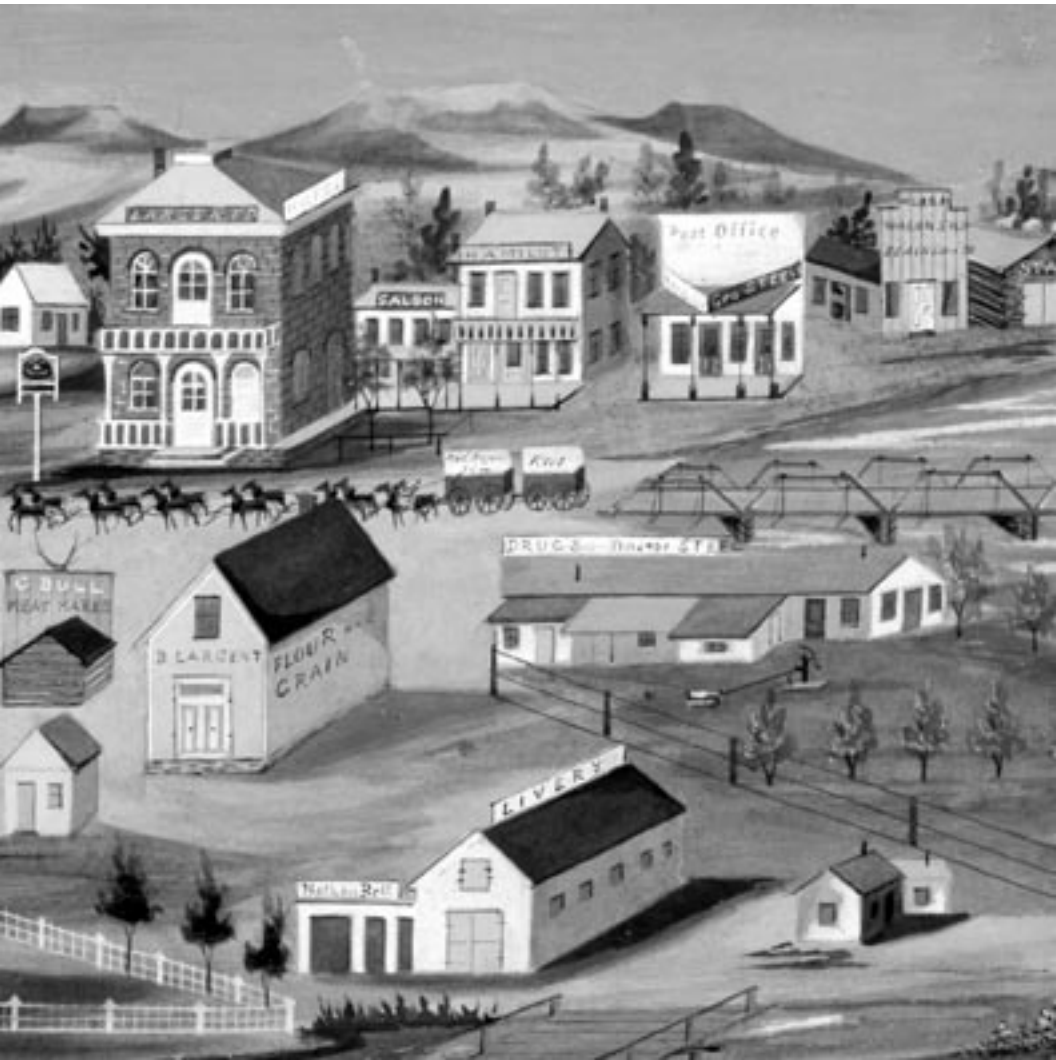

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To the Reader

In his latest book, *Collapse*: *How Societies Succeed or Fail,* Pulitzer Prize-winning author Jared Diamond attempts to explain how a number of small, isolated societies, from Easter Island to Greenland, destroyed their environments and disappeared. A chapter of the book is devoted to the state of Montana. Diamond says that Montana's environmental problems "include almost all of the dozen types of problems that have undermined pre-industrial societies in the past, or that now threaten societies elsewhere in the world as well."

Kendra Okonski, a native of Montana who now lives in England, doesn't accept Diamond's treatment of Montana. In this essay, "Montana: On the Verge of *Collapse*?" she argues that Diamond has misread Montana's history and misunderstands its environmental conditions and their causes. Her essay is adapted from an essay published in *Energy & Environment* in 2005 as part of a special issue dedicated to the book *Collapse*. We are publishing it as part of the *PERC Policy Series* and, specifically, a series on the changing western United States sponsored by the DuFresne Foundation and the M. J. Murdock Charitable Trust.

Since 2001, Okonski has been the environment program director for the International Policy Network, an institute based in London. She is editor or coeditor of several books, including *The Water Revolution* (forthcoming), *Environment and Health* (2004), and *Adapt or Die* (2003), and is a fellow of the Royal Society for the Arts. Previously, Okonski worked as a researcher at the Competitive Enterprise Institute in Washington, D.C. She has a degree in economics from Hillsdale College.

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"Perhaps we can still learn from the past,
but only if we think carefully about its lessons."

—Jared Diamond, *Collapse* (2005, 8)

Montana:
On the Verge of *Collapse*?

KENDRA OKONSKI

In his recent book *Collapse: How Societies Choose to Fail or Succeed,* the Pulitzer Prize-winning author and scholar Jared Diamond sets out to establish his theory of "ecocide," or "unintended ecological suicide." He believes that many past societies—such as those of Easter Island and other South Pacific islands and seventeenth-century Japan—failed to recognize environmental degradation before it was too late. The subsequent environmental crises in those societies led to their collapse.

Similarly, he has analyzed several modern societies—including Haiti, the Dominican Republic, Rwanda, Australia, and the state of Montana—and wrapped these examples into an examination of modern society at large. In sum, he argues that human beings are ignoring environmental problems to our peril.[1]

Diamond's book begins with a discussion of Montana. He presents Montana as a modern microcosm of the larger forces that he believes lead to societal decline and devastation (in societies both modern and

ancient). But this essay will show that Diamond's portrayal of Montana's problems does not adequately explain their origins, nor does he plausibly assess Montana's likely future.

Background

Diamond is familiar with Montana not just as a scholar but as a visitor. He and his family have spent many summers in the Bitterroot Valley in the western part of the state. He obviously loves its beauty and treasures the people he meets there. But he also warns that Montana represents "a microcosm of the environmental problems plaguing the rest of the United States" (32).

Montana has symptoms of a society that may fail, says Diamond. It suffers from a host of environmental problems. These include global warming, water scarcity, unhealthy forests, and endangered and invasive species, among others. "Montana's environmental problems today include almost all of the dozen types of problems that have undermined pre-industrial societies in the past, or that now threaten societies elsewhere in the world as well," he writes (35).

These are particularly troubling to him because "Montana's own economy already falls far short of supporting the Montana lifestyle" (74). Instead, it is "supported by and dependent on the rest of the U.S." He explains: "If Montana were an isolated island, as Easter Island in the Pacific Ocean was in Polynesian times before European arrival, its present First World economy would already have collapsed, nor could it have developed that economy in the first place" (74).

Diamond's Argument

Diamond's claim that Montana resembles the failed island societies rests on two lines of argument. First, he asserts that half of Montana residents' income doesn't come from "work in Montana" but from "money flowing into Montana from other U.S. states" (74). This puts it in a fragile and dangerous condition.

Second, he says that Montana has been environmentally exploited. While Montana is "[s]eemingly pristine," it has "serious environmental problems" (56). In his view, this exploitation explains why Montana's economy has been declining in recent decades. And Montana's residents, he believes, resist governmental action that he thinks is necessary to solve the state's environmental and economic problems. Thus Montanans are experiencing three of the characteristics that led to the collapse of other societies—environmental damage, climate change, and failure to respond adequately to the challenges.

Montanans' resistance to governmental intervention stems from their "pioneer commitment to individual freedom and self-sufficiency" (432). Traditional extractive industrial activities such as mining, logging, and ranching "have become bound up with Montana's pioneer spirit and identity." Montanans have strong economic and cultural links to these industries and are "reluctant to accept their new need for government planning and for curbing individual rights" (432).

Montana—Dependent on Handouts?

Diamond argues that abusive activity during the nineteenth and twentieth centuries, especially by business, ruined the state's wealth-generating capacity by overexploiting natural resources such as timber, minerals, and land and by harming the environment. The decline of Montana's commodity industries has left a gap that has been filled with federal funds and wealth transfers from other states. Diamond claims that the state of Montana relies on handouts to support its existence and comments that Montanans "don't bristle at the federal government's money, of which Montana receives and accepts about a dollar-and-a-half for every dollar sent from Montana to Washington" (64).

Is it true that Montana is incapable of supporting itself, as Diamond implies?

Table 1 (page 4) contains an analysis of 2003 payments by Montanans to the federal government versus funds received. In 2003, Montana received a total of approximately $8.83 billion in federal government spending. (This

Table 1:
Federal Spending in Montana vs. Remittances from Montanans

Federal Spending on Government Operations in Montana (2003)	
Salaries and Wages of Federal Government Employees	$ 844,555,449
Grants[1]	1,938,455,188
Procurement contracts[2]	497,284,221
Loans[3]	789,353,814
Insurance[4]	948,767,908
Total	**$5,018,416,580**
Payments to Individuals & Communities from the Federal Government (2003)	
Retirement & Disability Payments[5]	$2,315,004,564
Direct Payments for Individuals[6]	1,032,487,284
Other Direct Payments[7]	464,644,893
Total	**$3,812,136,742**
Total Federal Government in Montana 2003:	
	$8,830,553,322
Total Federal Tax Remittances by Montanans in 2003:	
	$4,126,000,000

1. Medical assistance, highway construction, disaster program, Head Start, temporary assistance for needy families, etc.
2. Department of Defense, U.S. Postal Service, etc.
3. For farm operation and ownership, low-income housing, business and industry, rural electrification, etc. (contingent liability).
4. Crop insurance, bond guarantees for surety companies, life insurance for veterans, flood insurance (contingent liability).
5. Social Security, retirement and disability payments, plus livestock compensation.
6. Food stamps, Medicare, unemployment benefits, Pell grants, etc.
7. Agricultural subsidies, crop insurance, commodity loans, conservation reserves, etc.

Sources: U.S. Census Bureau (2005), Tax Foundation (2004).

figure is even higher than Diamond's because it includes contingent liabilities such as federally backed loans.) At the same time, Montanans paid $4.126 billion in federal taxes.

Superficially, those figures seem to support the claim that Montana is subsisting on federal welfare. But simply comparing federal government funds received versus taxes paid does not constitute sufficient evidence that Montana's economy "falls far short of supporting the Montana lifestyle" (74).

In 2003, the U.S. federal government spent $8.83 billion in Montana (including its contingent liabilities). But it is important to understand the nature of this spending:

- Montanans received $3.812 billion (43 percent of total federal spending in the state) in the form of individual payments from the federal government, including Social Security payments, Medicare, and other programs.

- Approximately $5.018 billion (57 percent of total federal spending in the state) was used for federal government activities in the state. Expenditures ranged from paying the wages and salaries of military staff and U. S. Postal Service employees to highway construction and low-income housing grants. Of this $5.018 billion, 16.8 percent paid the wages and salaries of federal employees, 9.9 percent was for procurement contracts (goods and services purchased by the federal government), and 34.6 percent was for loans and insurance.

These figures lead to several observations about the relationship between the federal government and the state.

First, the impression that Montanans, unlike individuals in other states, each receive a lot more from the federal government than they pay in taxes may be erroneous. Although total federal spending exceeds remittances by Montanans, Montanans do pay more in federal taxes than they receive in the form of payments to individuals (Social Security, Medicaid, subsidies), as Table 1 indicates. Some people who live part of the year in Montana may pay federal taxes that don't show up as coming from Montana. Diamond

himself notes that many people who have second homes in the state do not live there on a full-time basis. Although they do not pay federal income taxes from Montana, they do pay federal income tax from another state. Indeed, many people who have second homes are in high income tax brackets and pay substantial taxes.

Perhaps more important, it is not clear that the federal spending provides a net benefit to Montanans. As Table 1 indicates, a significant contributor to federal spending in Montana is agricultural crop subsidies and other sorts of farm protection programs (such as insurance) from the U.S. Department of Agriculture (see also Environmental Working Group [EWG] 2005). Not only does this form of federal spending distort market prices for agriculture (leading to waste of resources), it spurs greater farm production and thus more use of fertilizers and chemicals than would otherwise be the case, and makes it difficult for farmers to appropriately assess the trade-offs involved in their activities (Organization of Economic Cooperation and Development [OECD] 1998; Myers and Kent 2001).

Another consideration is whether the federal expenditures on loans and insurance are worth their cost to taxpayers. Insurance and loans are routinely provided in the private sector. A private bank loan for a business enterprise, for example, reflects the judgment by the lender that the funds are best used for that loan. If no loan is made, that may be because the lender feels that the return on the loan would not justify the investment of funds. Government loans and insurance, usually provided at below-market rates, subsidize services that would either be provided privately at full cost or would not be provided at all. It is impossible to calculate accurately the value of these government-provided loans and services.

This observation also applies to federal procurement. Compared to the private sector, the federal government tends to perform inefficiently or it crowds out those who would otherwise supply goods and services privately. This is true across a wide range of issues: education, health care, urban and industrial planning (Beito, Gordon, and Tabarrok 2002); fire fighting services (Ahlbrandt 1973; Poole 1992); air travel (Davies 1971); waste disposal (Bennett and Johnson 1979); recycling (Desrochers 2002); and conservation of wildlife habitat (Bate 2003), to name a few. Dollars that were not distributed

via government taxation might be spent on goods or services elsewhere or on other goods and services altogether; alternatively, tax dollars might be left with the taxpayer.

Another factor that affects federal spending is the scale of the federal government's jurisdiction over lands in the state of Montana, which is large in comparison to many other states. The federal government owns approximately 27 percent of the state's land (Bureau of Land Management [BLM] 1996). Federal government wages and salaries alone in the state totaled $844 million in 2003. Yet Montanans have little influence over the use of federal tax money on those lands. If the federal government's land were owned by the state of Montana or by individuals, the amount of federal spending in the state would decline substantially.

The Goal of Economic Independence

Although Diamond uses the statistics on federal tax money to bolster his argument, his more fundamental position is that Montana isn't economically self-sufficient. He attempts to draw a parallel between Montana and ancient and modern island societies that he believes undermined their own natural environment and resources and then collapsed. According to Diamond, Montana depends on resources drawn from elsewhere because its own environment and resources have been undermined and depleted.

Diamond's underlying assumption that economic self-sufficiency must be a good thing for Montana is highly doubtful. To use a familiar economic example, surely it makes more sense to grow bananas in Central America and for Montanans to import them than for Montana to grow its own bananas. Although Montana could grow bananas, it would expend far too many resources compared to importing the bananas from those who can produce them with fewer resources. Likewise, it makes more sense for Montanans to produce beef for sale to people in New York, rather than for New Yorkers to attempt to raise cattle in the confines of the city. These two simple examples invalidate Diamond's idea that self-sufficiency is inherently desirable (and it is probably not attainable, either). Diamond violates his professed preference for self-sufficiency when he cites approvingly the idea that Montana's

environment would have been better off if it had never mined copper and instead imported it from Chile (a passage discussed in more detail below).

Even if Diamond has simply included this idea of self-sufficiency as a thought experiment (e.g., what would happen if Montana were an island?), we must recognize that Montana is one state in a country with 49 other states with an interdependent and interconnected history. In the United States people are largely free to trade with one another and to move from one place to another.

Perhaps more than anything else, Montana is today experiencing the effect of a growing U.S. economy. An increasing segment of the population is attracted to natural scenic beauty, which becomes a source of economic activity. One result is that many people have chosen to move to the beautiful parts of Montana such as the Bitterroot Valley. Some are now wealthy enough (unlike most Montanans) to own two homes, to afford to travel between those homes, and to enjoy a large amount of leisure time.

Montana's residents, as Diamond repeatedly observes, now constitute an array that includes individuals whose families have lived in the state for decades as well as wealthy retired or semi-retired people who have migrated to the state from elsewhere. It is only logical that some earnings come from out-of-state pensions or business income, but this doesn't mean that Montana's ability to generate income has disappeared.

Recently, Montana's production of commodities from its natural resources has fallen off, becoming a smaller portion of the state's income than it was in the past. But this is not due to environmental degradation. The chief cause is federal government policies, exacerbated by state and local government policies. Many of the state's businesses have been bankrupted or are no longer viable, not because their activities have overexploited the state's resources or ruined the natural environment but because of a history of extensive government intervention. Indeed, many Montanans (especially young Montanans, this author included) moved away from the state because they perceived that fewer economic opportunities would be available than in the past. But the decline in economic activity has little to do with any of the environmental phenomena Diamond describes in *Collapse*.

Taxation and spending policies, for example, have a significant effect on

the state's economy. Robert Natelson, a professor of law at the University of Montana, studied Montana's economy from 1969 to 1984 and compared it to the size of state and local government in Montana. He found that during the period Montana's "state and local government revenue rose sharply, both in absolute terms and as a percentage of income" while Montana's economic performance declined (Natelson 1994).

Later, Natelson (1998) compared states in the Rocky Mountain region between 1980 and 1996 for their level of dependence on federal government payments. Four states that relied less on the federal government—Colorado, Idaho, Arizona, and Nevada—experienced economic booms in that period while the economies of states such as Montana and Wyoming (which were relatively more reliant on federal aid) lagged behind. He concluded that "Rocky Mountain states with moderate levels of government enjoyed increases in per capita personal income nearly double that of Rocky Mountain states with higher levels of government." Wyoming and Montana have historically been less hospitable to business operations (measured by state taxation and the regulatory burden) than have other states in the Rocky Mountain region.[2]

Natelson's findings underscore the increasingly recognized fact that the prosperity of a state, region, or nation has little to do with absolute physical resources or environment per se, and more to do with the area's economic freedom (Gwartney, Lawson, and Holcombe 1999; Gwartney and Lawson 2005, 21–27). Economic and legal institutions such as private property and the rule of law are the factors that enable entrepreneurs to operate and to perceive opportunities to use resources more efficiently or in new ways in order to provide consumers with goods and services that they desire.

Montana's Environmental and Resource Issues

Diamond contends that environmental problems are making the state's economic problems worse, and that in some cases those problems were caused by business enterprises seeking short-term profits. He makes a series of claims about specific environmental and resource issues in Montana, including logging and burning of forests (41), mining (35), and

water (49). Unlike other parts of *Collapse*, passages discussing Montana do not provide a detailed historical account of these issues, but he does suggest that the pioneer spirit of native Montanans imbues them with an inherent stubbornness and reluctance to rely on government intervention to solve problems (except, perhaps, for agricultural subsidies).

Diamond's discussion of forests, water, and minerals omits important information. At least 70 percent of Montana's forests are controlled by the federal government directly or indirectly through federal regulation (Smith et al. 2004). More broadly, federal agencies and regulations have created perverse incentives that have negatively affected Montana's ability to use its forests and minerals.

Another factor is that Montana's minerals and water are governed by rules that were developed in the nineteenth century and that suited the needs of early settlers. These rules, appropriate in their day, have generally not been allowed to evolve in response to changing preferences and demands on resources, though there is reason for hope in some areas. More detailed discussion of the three major resources follows.

Forests

Diamond claims that the origin of Montana's forest problems lies with previous uses of the forest. For instance, clearcut logging was used rather than selective logging. The rationale, he explains, was that clearcuts made it possible to "re-establish uniform even-aged trees of chosen tree species, and thereby to maximize timber yields and increase logging efficiency" (41). But against this advantage, he says, must be placed the environmental effects of clearcutting: higher water temperatures in adjacent streams, faster-melting snow, increases in sediment runoff, and what some believe to be ugly empty spaces. He then goes on to say that logging, as well as fire suppression and sheep grazing, have caused Montana's forests to be unhealthy (46) and therefore more subject to catastrophic forest fires.

Diamond also argues that solutions to catastrophic fires in dry parts of the West are not forthcoming because of their cost. In particular, removing the fuel load from the national forests with mechanical thinning "is consid-

ered prohibitively expensive" (437). "In an ideal world," says Diamond, "the Forest Service would manage and restore the forests, thin them out, and remove the dense understory by cutting or by controlled small fires. But that would cost over a thousand dollars per acre for the one hundred million acres of western U.S. forests, or a total of about $100 billion. No politician or voter wants to spend that kind of money" (45).

This discussion of forests in Montana pays little attention to its history or the fact that the federal government owns so much of the state's forestland. Thus, Diamond doesn't mention that in contrast to the U.S. Forest Service, private forest owners often use mechanical thinning or controlled small fires to keep down the fuel load and keep forests free of insects, as researcher Holly L. Fretwell (1999, 14, 24) points out. "Private land owners who grow trees for commercial harvest have a long-term commitment to the value of the timber and a strong incentive to manage for a productive forest," explains Fretwell (1999, 30).

The federal government does not seem to have the same incentive. It has been the dominant forest owner for most of the state's history. Out of 93 million acres of land in Montana, 23 million are forested, the majority of these in the western part of the state. A total of 16.5 million acres—72 percent of the total amount of forested land—are administered by federal government agencies, primarily the U.S. Forest Service (which manages approximately 14.6 million acres) and the Bureau of Land Management (which manages 804,000 acres) (Smith et al. 2004).

Several decades ago scientists and researchers showed that management of national forests by the U.S. Forest Service was flawed, not due to lack of expertise but to inappropriate incentives that are common to government bureaucracies. The late Marion Clawson, a natural resources economist and former government official, published an article in *Science* saying that the U.S. Forest Service had a "disastrous" management record (Clawson 1976). Clawson also wrote that popular conceptions of logging (for instance, "select cutting" compared to clearcutting) are not always the best practice for the health of a forest; indeed, depending on the type of tree species, a clearcut might mimic the effect of a fire in nature.

Economist Robert Nelson (2000) has observed that the national forests

have consistently imposed large net claims on the U.S. Treasury—even though they should represent a natural resource of immense value. The General Accounting Office reported that between 1992 and 1994, the Forest Service earned $1 billion less on timber sales than the cost of preparing the sales (cited in Nelson 2000). More recent analysis of federal government accounts (e.g., Anderson, Smith, and Simmons 1999) shows that the Forest Service and Bureau of Land Management have consistently earned negative returns—that is, they are hemorrhaging money.

To understand the origin of many of Montana's contemporary forest issues, Diamond should have looked at their historical background. In particular, two factors—the nationalization of unsettled lands in the late nineteenth century and the rise of the Progressive movement in the United States—had a devastating effect on the state's ability to manage the land within its borders.

Under the 1862 Homestead Act, much of the land in the fertile Mississippi River valley and to the east was brought under private ownership. The Homestead Act also applied to the arid West, but the limitation of 160 acres per homesteader was unrealistic for farming. According to one historian (Shannon 1936), nearly two-thirds of the homesteaders between 1862 and 1890 did not stay on their land long enough to obtain ownership.

In addition, the laws had few provisions that allowed commercial enterprises to obtain and own federal land in the West; perhaps the only commercial enterprise that could was the transcontinental railroad (Anderson and Hill 1994, 116–7). At the end of the nineteenth century, much land remained unsettled. By failing to transfer the federal lands to the private sector, the federal government kept millions of acres, which it owns and manages today.

The second contributing factor to the disarray found in Montana's forests (and other western forests) was the change in attitude reflected by the Progressive Era in the first half of the twentieth century. Those who called themselves Progressives, writes Karl Hess Jr. (1992), had "a single-minded commitment to purging inefficiency, waste and greed from society"; this required nothing less than "a complete revamping of American society" (77). One result was a new "conservation ethic," which defined the government's

approach to its recently acquired western lands. This conservation ethic, says Hess, "signalled a profound loss of faith in the ability of all but a select few to steward and care for the western landscape . . . ." (79–80).

The Progressive Era in many ways reversed the principles of self-determination, private initiative, and a non-intrusive state on which the United States was founded. Its proponents placed their confidence in enlightened bureaucrats rather than the private sector. They believed that government officials could achieve greater efficiency, more economic growth, and more progress than could the private sector. They believed that this would occur through "scientific management" conducted by political bodies (Nelson 1998).

Strengthening the popularity of the Progressives' position was the condition of the forests in the late nineteenth century. Throughout the Midwest, trees had been cut down rapidly—partly due to the desire to farm, but also because of soaring demand for lumber. The rapid growth of the U.S. economy and the expansion of the railroads led to demand for wood for home building and for railroad ties. Fears of a "timber famine" erupted.

There were few if any legal ways to log publicly owned land. Even the 1878 Timber and Stone Act, which authorized the sale of 160 acres of timber land, allowed logging only for the owner. So some loggers simply took what they could, illegally, from the federal land.

This created a sordid image and intensified public outcry against the private sector (Pinchot 1910). In response, government agencies were established to carry out the Progressive vision. In 1905, all federal forest reserves were transferred to the Department of Agriculture, and its Division of Forestry was renamed the United States Forest Service (Hess 1992, 76). Gifford Pinchot, a key Progressive intellectual, was appointed its leader.

The Progressive Era set the stage, but in the mid-twentieth century the federal government was even more aggressive in controlling how natural resources would be used, or not used. Officials adopted the view that human activity should diminish on federal government lands. Congress passed a variety of laws that embodied this view, including the Wilderness Act of 1964, the Endangered Species Act of 1973, and the National Forest Management Act of 1976. In subsequent decades, these laws were invoked by preservationists in court cases seeking to reduce or halt extraction of

natural resources on federal government lands.

In the 1990s, the Forest Service shifted toward a policy of "ecosystem management" (Nelson 1998). This shift reflected the growing environmental awareness of the American public, who demanded that the government keep America's forests pristine, but also stemmed from substantial lobbying efforts by environmental groups.

As part of this heritage, Montana's federal forests are neither "natural" nor well-managed. Their condition today is the result of a political history that is absent from the story that Diamond has presented in *Collapse*. A large majority of Montana's forests have not been controlled by local people or private interests but by federal officials who have tended to centralize, rather than decentralize, control. In doing so, the federal government has undermined local incentives to manage forests.

Sadly, Diamond leads his readers to believe that there are few solutions to the problems he believes exist with Montana's forests. Yet once the problems are accurately understood, solutions can be forthcoming. Decentralizing control of the federal forestlands is one valuable direction to move in.

This could be done by devolving management to local regions while retaining federal ownership or by shifting ownership of some land to the state or even to private owners. Donald R. Leal (1995) compared Montana state forests with national forests in Montana, many of them adjacent to state forests. He found that the state forests are managed more efficiently than, and with equal or greater consideration for environmental objectives as, federal forests. He concluded that the requirement that the state forests had to make a profit explained the difference. There are many examples suggesting that private and local conservation is more effective than federal control. Evidence occurs not only with forests (Fretwell 1999) but with other resources such as marine fisheries (De Alessi 1998; Leal 2004), wildlife (Sugg 1994), and stream conservation (Bate 2003).

Mining

Diamond claims that many of Montana's environmental problems are the result of industry. Nowhere does he make it clearer than in the case of

mining: "By far the biggest toxic waste issue is posed by residues from metal mining," he writes (35).

Specifically, Diamond claims that Montana has over 20,000 abandoned mines (36), whose tailings (the residues left over after minerals are extracted from rock) are leaching toxic minerals into the state's already-scarce water supply. He blames mining companies' "short-term financial interests," which lead them to deny or minimize responsibility (37).

It is unclear from what source Diamond's figure of 20,000 abandoned mines was obtained, and Diamond provides no reference. A variety of sources have analyzed abandoned mines in Montana, reaching conclusions quite different from Diamond's:

- William Janklow (2000) says that the Montana state governor's inventory of non-coal mine sites found 245 abandoned mines with "the potential to impact surface waters." Of these, "71 sites have discharging adits (mine entrances emitting acid mine drainage into the environment)."

- A 1998 report by the Western Governors Association suggested that a total of 6,000 sites existed in Montana, 1,656 of which had been reclaimed (WGA 1998).

- The Montana state office of the U.S. Bureau of Land Management identified about 1,000 sites on BLM-managed land in Montana (BLM 1996, 4). (Those sites are included in the 6,000 estimate by the Western Governors Association.)

- Economist David Gerard (2000), citing a 1998 study by Montana's Department of Environmental Quality, concludes that the state of Montana "evaluated more than 3,800 sites based on their environmental and safety characteristics, and has designated 380 priority cleanup sites from this list." (Table 2 on page 16 outlines these figures.)

According to Diamond, the cleanup costs are so severe that some Montanans now doubt the value of the state's mining past. "Some of my Montana

Table 2:
Ownership of Inactive Mines & Priority Cleanup Sites in Montana

	Priority Cleanup Sites	Inactive Mines
Private	262	1,820
Public	85	1,325
Unclassified	33	709
Total	**380**	**3,834**

Sources: Gerard (2000) citing Montana Department of Environmental Quality (1998), "Montana Inactive Mine Inventory and Mine Reclamation Priorities."

friends now say: in retrospect, when we compare the multi-billion-dollar mine cleanup costs borne by us taxpayers with Montana's own meager past earnings from its mines, most of whose profits went to shareholders in the eastern U.S. or in Europe, we realize that Montana would have been better off in the long run if it had never mined copper at all but had just imported it from Chile" (36).

This dismissive statement ignores the fact that the U.S. economy benefited hugely from the copper extracted from Montana, particularly because the transportation and extraction technology of much of the nineteenth and twentieth century precluded many kinds of mutually beneficial trade from occurring. Diamond's statement also contradicts his announced preference for self-sufficiency for Montana's economy.

It would seem that Diamond has vastly overestimated the number of abandoned mines and therefore the extent to which toxic waste is a problem in Montana. He has also failed to understand the reasons that 3,834 abandoned mines exist in Montana (other western states have similar numbers).

When mining began in the western United States in the nineteenth century, miners evolved informal rules and property rights to govern their claims. Indeed, the U.S. Mining Law of 1872 was a codification of those informal rules (Anderson and Hill 2004, 114). The industry flourished

because this law provided the security that miners needed to explore and produce minerals (Anderson and Hill 2004; Gordon and VanDoren 1998). They knew that for a nominal fee they could obtain property rights to the land they explored. Without that security, mining activity would have been sporadic at best.

Problems arise today because of changing attitudes, higher population around the mining areas, and government regulations. When much of Montana's land was mined, regulations requiring reclamation did not exist (Gerard 1997). In that era, most Americans probably thought little about the visual impact of abandoned mines or the potential for water contamination from mining waste. But today most Americans are wealthier and their environmental consciousness is higher; only in the past few decades have many people become aware of the effects of mineral extraction. Furthermore, until recently the lands occupied by the mines contained rather scattered populations, so that few people were aware of them.

During the past few decades, technological innovations have enabled mining companies to carry out their activities with less damaging impact than in past eras and even to clean up old mine sites. Often, new technology gives companies the ability to return to mines that were "played out" under the old technology and to extract additional treasure. It could make sense for companies to reclaim old waste while obtaining new minerals. However, a federal government regulation known as Superfund (the Comprehensive Environmental Response, Compensation, and Liability Act of 1980) discourages such reclamation because it creates retroactive liability. A new firm may become responsible for wastes left by previous operators. This "creates a disincentive for returning to previously used sites that may be economically viable," writes Gerard (1997). In many cases, this means that if abandoned mines are to be cleaned up, it will be by taxpayers or it will not be done at all.

Other federal regulations have had similarly chilling effects. For instance, states that clean up old sites must reduce water pollution to levels specified by the Clean Water Act, regardless of the cost of doing so. This can be extremely costly, even though little benefit comes about. "Faced with this level of cleanup or nothing at all," says Gerard, "states often have an incentive to do nothing."

Diamond advocates regulations as the solution to Montana's environmental problems. But with respect to the state's toxic wastes, a new, creative and decentralized approach is needed. Diamond's claims are not only wrong and intended to alarm the reader, they are counterproductive. As Gerard suggests, if we are genuinely concerned about pollution emanating from old mines, we should look at the whole range of reasons why cleanup is not occurring, including the incentives (and disincentives) created by regulations.

Water

Diamond argues that water scarcity in Montana is caused by climate change and exacerbated by Montana's growing population. "While global warming will produce winners as well as losers in different places around the world," he writes, "Montana will be among the big losers because its rainfall was already marginally adequate for agriculture" (49–50).

He says that Montana's Bitterroot Valley is experiencing a "continuing population explosion," which means "more people drinking more water and flushing more toilets" (52). He alleges that this will inevitably lead to severe water scarcity. "Sections of the Big Hole River have actually dried up in some recent dry summers" (51), he observes, explaining that "leaving water in the river for fish and for tourists trying to float down the river on rafts is not considered a 'beneficial' right."

Diamond is in fact highlighting a complex historical problem, but one that he does not explore. The origin of the problem was not a normative decision on the part of legislators to disadvantage tourists or fish. Rather, the problem reflects Montana's history. Most of Montana's water, as in other western states, is used for agricultural purposes, and inflexible institutions make it difficult to transfer that water to other uses.

During the homesteading era, states in the western United States faced greater water scarcity than their eastern counterparts. Western settlers, writes Terry L. Anderson (1983) "devoted more efforts to defining and enforcing property rights," and a system of water law evolved in which "water rights were defined and enforced and made transferable" (33). Anderson and Pamela Snyder observe that water in the West was "a limiting factor in

agriculture and mining" and it was imperative to provide incentives "for private owners to invest in delivering water to where it was most productive" (1997, 44).

The states developed a new system of water law. Water rights were based on the prior appropriation doctrine (in contrast to traditional common law riparian rights) (Morriss 2002), which gave the people who initially diverted water a right to keep diverting that amount, as long as it was directed to a "beneficial use" (Morriss, Meiners, and Dorchak 2004; Anderson and Snyder 1997). If they did not use it, they lost the right to use it. Settlers understood the importance of not wasting the limited supply of water, and they recognized that if someone with a water right stopped using it, the water should be available to others.

The beneficial use doctrine, along with others such as "no-injury rules, public interest reviews, use-it-or-lose-it requirements, and limitations on conserved water" (Landry 2001, 1) does restrict trading of water today. The initial designations made sense at the time, but the law has not evolved to accommodate changing preferences among potential users of water, and these narrow definitions have a negative effect on environmental uses of water. In many states—including Montana until recently—leaving water in the stream to benefit fish was not a "beneficial use."

The solution, however, is not likely to come from more regulations but from loosening or eliminating restrictions on private action. Trading between water users is one way of resolving the problem of streams drying up in the summer months due to irrigation. Tourists might very well value water in a stream more than a farmer who grows alfalfa. Ideally, tourists and farmers could engage in a mutually beneficial trade whereby the tourists compensate the farmer for the water that he or she has forgone. This is only one example of the positive outcomes that could be generated for both water users and the environment by allowing water to be traded as a commodity.

Today, some organizations in Montana—such as Trout Unlimited and the Montana Water Trust—have begun to negotiate mutually beneficial trades in water, as have similar groups in other western states. Such voluntary, private transactions could constitute the future of water conservation in the western United States—if they are allowed.

Changing Preferences and Values

Diamond offers little in the way of hope for those who want solutions to problems in the state of Montana. He implies that Montana's future is imperiled both because past actions have destroyed its natural environment and because the core values held by some Montanans—such as their "long-standing and continuing opposition to government regulation" (65)—stifle environmental protection. He remarks that he doesn't know whether Montana's environmental and economic problems will improve, or worsen.

One of the overarching views that Diamond reflects in *Collapse* is that societies cannot hold values that conflict with one another. In his comments late in the book he suggests that societies' values may explain whether they fail or succeed. "Perhaps a crux of success or failure as a society is to know which core values to hold on to, and which ones to discard and replace with new values, when times change" (433).

But throughout the chapter about Montana, and indeed the entire 576–page book, Diamond provides no metric by which a society could choose its values. Many of the isolated past and present societies that he has analyzed in *Collapse* are culturally homogeneous and truly isolated. In contrast, modern, interdependent societies—including Montana—are unlikely to hold collectively the same values.

Although Diamond believes that one of Montana's problems is the arrival of people with diverse values, he finds no concrete philosophical reason (because there is none) to prevent non-native Montanans from moving to the state. Indeed, one value that Americans cherish is the freedom to move from state to state within the United States.

Throughout *Collapse*, Diamond's analysis of human values misunderstands modern, pluralistic societies. He suggests that some values are right and some are wrong. But individuals—not societies—have values. Importantly, most modern pluralistic societies are made up of individuals who—because of institutions such as the rule of law that form boundaries for our behavior—can hold quite different values without going to war or killing each other.

Diamond's comparison of Montana with ancient, isolated societies

doesn't work. Although these societies varied in degrees of sophistication, many of them dictated values from on high. Such collectivism fails to accommodate different values that are often held simultaneously among members of a society. And it is no surprise that collectivism has dismally failed in every society where it has been tried—whether modern or ancient. Even if good intentions may have motivated it, collectivism applied to public lands in the United States is no exception. In contrast, private markets encourage individuals to look for ways of accommodating one another, and conflict over values is reduced (Hill 1989).

Diamond leads his readers to believe that political solutions are the only way to resolve Montana's problems. But when government imposes particular values through policy rather than allowing individuals to express their values through voluntary and mutually beneficial exchanges in the market, one value must ultimately be sacrificed to another.

Collective action via government is one of the main reasons Montana faces the problems it does. Since Montana became a state in 1889, a variety of philosophies have informed the state's public lands and resource policies. Instead of being subject to market processes, most resources on Montana's federally-owned public lands have been managed through the political process. Political decisions have precluded the evolution of arrangements that might enable parties to bargain with each other over competing uses of resources—whether for logging, mining, ranching, tourism, or preservation.

Devolution through Institutions

An alternative to collective decision making would be decentralization. The federal government could give the citizens of the state the authority to govern the state's resources and environment. In this situation, the federal government would step back and allow experimentation and the evolution of solutions and better approaches to decision making.[3]

To do this, states would need to protect the institutions of the free society—specifically, property rights, contracts, aspects of the common law, an independent judiciary, a transparent, accountable and predictable legal

system—to enable individuals and entities to make decisions, receiving both the costs and benefits of those decisions. Decentralization would likewise entail a limited federal government that completely respects and upholds these institutions.

Diamond tends to view natural resources and the environment as "absolute" concepts. Yet the changing philosophies that have governed public lands policy in the United States suggest that people do change their views about the environment as time marches on, especially as they grow wealthier (Yandle 1998; for an overview, see Yandle, Bhattarai, and Vijayaraghavan 2004). As humans become materially better off, they are more likely to hold the natural environment in higher regard in their scheme of values. Economist Bruce Yandle (1998, 149) calls this an "ever changing definition of environmental rights." Importantly, there is no specific, predetermined goal to which modern societies are aspiring. Sustainable development is a process, not an outcome.

Combined with the development of new technologies that enable resources to be conserved and protected, institutions that encourage flexibility and mutually beneficial exchange enable societies to have a process-based approach to development, rather than Diamond's absolutist approach. In contrast to regulations or state dictates imposed from above and from afar, the institutions of a free society provide a neutral environment where differing individual values can coexist. Over time, these institutions, which include property rights, can act as a bridge for human preferences to shift.

Indeed, in the case of Montana's water management, Jack Sterne (1997) believes that the reticence of many Montanans to deal with the state means that "private parties can play an important role." Private parties have more local knowledge and they are comfortable operating in the free market.

In some cases, private initiative is currently being harnessed to protect Montana's environment and resources. For instance, Diamond writes approvingly of the Montana Land Reliance, which has secured easements along rivers to ensure the quality of water for the long-term future. In the Bitterroot Valley, Trout Unlimited has contributed funds to ensure that sufficient water will keep flowing in the Bitterroot River and protect fish. A new proposal by the Environmental Protection Agency called the Good Samaritan Initiative

may reduce the liability of private firms that return to abandoned mining sites, so that they mine them again while also cleaning up the past wastes.

Such institutional experimentation is probably the most effective way to ensure a better future for Montana. Over time, Jared Diamond may see that individuals with different values can coexist in ways that preserve the natural environment and ensure continuous improvements in quality of life. Rather than verging on collapse, Montana can experience vitality and growth in an area that remains as beautiful as ever. ■

Notes

1. An analysis of the full book, including detailed discussion of societies such as Australia and Easter Island, can be found in Morris and Okonski 2005.
2. E-mail communication with Robert Natelson, May 26, 2005.
3. *The Not So Wild, Wild West*, by Terry L. Anderson and Peter J. Hill (2004), makes this argument in the context of nineteenth-century western history. And *Branching Out: Case Studies in Canadian Forest Management*, by Alison Berry (2006), an essay in PERC's Dufresne Foundation series, is a contemporary illustration.

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"Perhaps we can still learn from the past,
but only if we think carefully about its lessons."

—Jared Diamond, *Collapse* (2005, 8)

In his latest book, *Collapse: How Societies Succeed or Fail*, Pulitzer Prize-winning author Jared Diamond attempts to explain how a number of small, isolated societies, from Easter Island to Greenland, destroyed their environments and disappeared. A chapter of the book is devoted to a modern-day "microcosm" illustrating many of these problems: the state of Montana. Diamond says that the state's environmental problems "include almost all of the dozen types of problems that have undermined pre-industrial societies in the past, or that now threaten societies elsewhere in the world as well."

KENDRA OKONSKI, a native of Montana who now lives in England, doesn't accept Diamond's treatment of Montana. In this essay, "Montana: On the Verge of *Collapse*?" she argues that Diamond has misread Montana's history and misunderstands its environmental conditions and their causes. Her essay is published as part of a series sponsored by the DuFresne Foundation and the M.J. Murdock Charitable Trust. The goal of the series is to examine ways to reconcile the changing demands for use of the West's natural resources. Okonski's essay is adapted from an article published in the journal *Energy & Environment*.

Since 2001, Okonski has been the environment program director for the International Policy Network, an institute based in London. She is editor or coeditor of several books, including *Environment and Health* (2004) and *Adapt or Die* (2003), and is a fellow of the Royal Society for the Arts. Previously, Okonski worked as a researcher at the Competitive Enterprise Institute in Washington, DC. She has a degree in economics from Hillsdale College.

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Anonymous. *Sun River Montana,* ca. 1885. Watercolor, gouache, and pencil on paper. 15.3 x 24.2 cm.
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