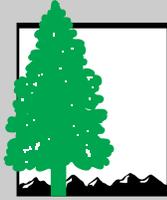


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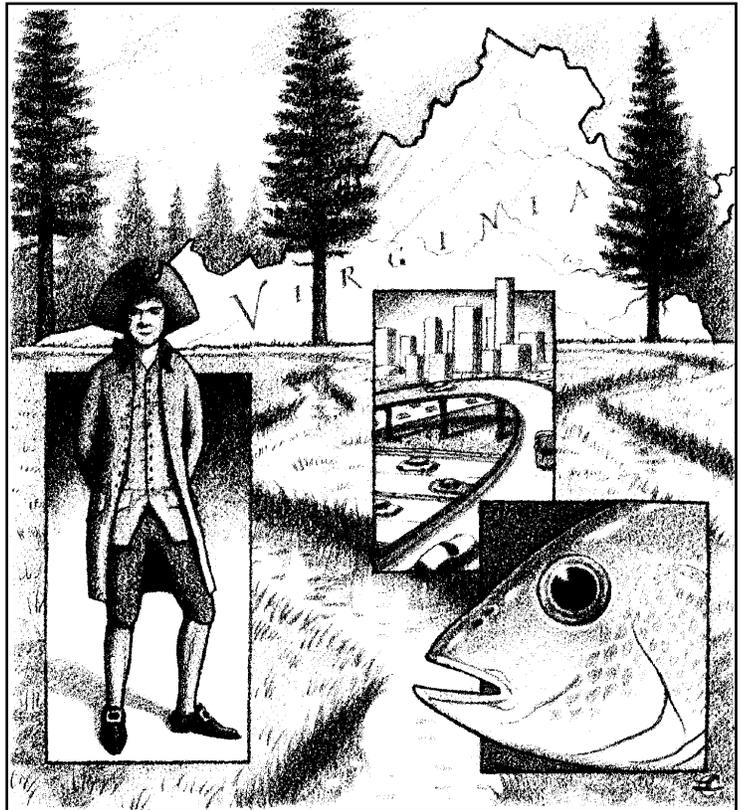
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PERC Reports is more than a news-letter about the Political Economy Research Center. It is a forum for ideas.

PERC's views differ from those of many environmental organizations. In particular, we do not see government as an automatic "way out" of problems such as pollution and species extinction. While regulation is sometimes necessary, we believe that voluntary activities—including markets—often achieve environmental objectives more effectively.

The source of our views is, primarily, economics. Economic principles, we have found, can explain the causes of many environmental problems and offer guidelines for their solution. While most economists endorse the same principles as we do, few have applied them rigorously to environmental issues.

With *PERC Reports*, our goal is to offer discussion of current issues. We include our own views, but also introduce others. We believe that if a variety of viewpoints are aired, the best ideas will prevail, and all will learn from the discussion.

We welcome your comments.

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WHAT WE DID IN VIRGINIA

By *Becky Norton Dunlop*

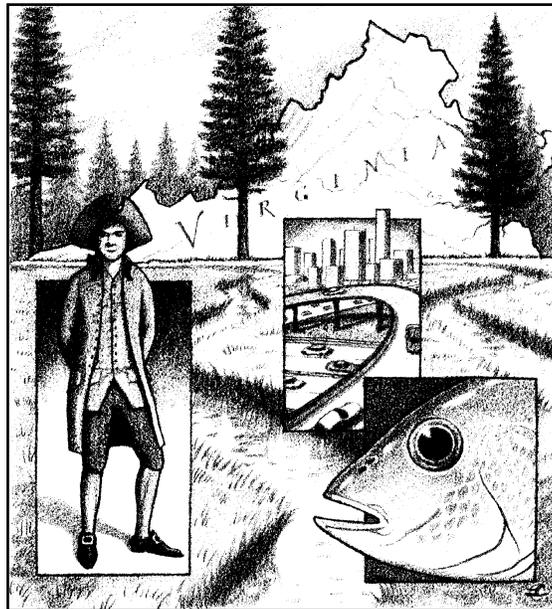
From January 1994 to January 1998, I was Secretary of Natural Resources for the Commonwealth of Virginia in the Republican administration of Governor George Allen. My goal was to change the paradigm that has governed environmental programs from the “fearsome master” approach to the “helpful servant” approach. I intended to do this by decentralizing the agencies that I oversaw and changing the rules under which they operated.

Making this change aroused controversy. Part of the controversy was simply politics. The Virginia legislature was dominated by the Democratic party, which was hostile to our administration. On the national level, many Democrats wanted to stifle Governor Allen’s political future and saw that they might succeed if they could paint him as anti-environmental.

But the controversy also reflected the resistance to change that we encountered as we attempted to move away from “command and control.” My leadership brought me into conflict with the federal government’s Environmental Protection Agency, which ardently advocates central government control, a diminution of individual liberty and private property rights, and extols the view that the end justifies the means.

My actions also brought me into conflict with environmental extremists who are not interested in the

My goal was to change the paradigm that has governed environmental programs from the “fearsome master” approach to the “helpful servant” approach.



empirical evidence demonstrating, by virtually every measure, that we have an improving environment. Instead of celebrating the successes, our collectivist critics have chosen to take the rather unseemly role of trying to frighten our citizenry by promoting fear about the future of our environment and engaging in ad hominem attacks. Their goal is to ensure that the message about this new method for maximizing liberty while improving the environment will never reach the hearts and minds of the citizens.

Although the full list of our accomplishments is long, here are some highlights of our efforts to improve environmental stewardship while lifting regulatory burdens.

1. We streamlined government by decentralizing the Department of Environmental Quality, removing layers of bureaucracy, and putting more authority in the regional offices. Under the federally delegated air, water, and waste laws, we insisted on exercising discretion as a state government, not a “branch office” of Washington, D.C. In the case of Superfund, we declined delegation. We became advocates for our communities in cleaning up hazardous waste sites. Our state programs were faster, more successful, and far more cost-effective than Superfund, and we successfully resisted the listing

WHAT WE DID IN VIRGINIA

of all non-military sites as Superfund sites.

2. We sought compliance, not penalties, in dealing with Virginia businesses. That meant that we approached companies and other polluters with a policy akin to the “three strikes and you’re out” concept. Department of Environmental Quality professionals exercised their flexibility under the law to work with any regulated entity seeking to get into compliance. However, if people insisted on violating laws (“bad actors”), we referred them for enforcement action. The results are visible. While we reduced the number of cases sent to the Virginia Attorney General, we, at the same time, improved compliance and improved air and water quality in Virginia.

3. Air quality is much better. In 1993, Virginia had five non-attainment areas under the Clean Air Act’s national ambient air quality standards. Today, only the northern Virginia region remains in non-attainment for ozone, and even there the number of hours during which the ozone standard is exceeded has dropped. Working with citizens, local governments, and businesses, we cut back on traffic on the summer days when atmospheric ozone rose near levels that the EPA considers dangerous. Weather also played a part, by the way—both in creating the non-attainment areas and in bringing them into attainment. Because they met the federal air quality standard for ozone for three years, Richmond and the Hampton Roads areas were formally redesignated by the EPA as being in attainment in 1997. (This change in status should make these areas more attractive to industry due to reduced regulatory requirements.)

4. Virginia increased water quality monitoring sites to over 1,100 on its streams and rivers. Ninety-five percent of the sites meet federal standards for fishable and swimmable waters. We put these data on the Internet so that citizens and local officials all over Virginia can review the data and find out

if there is a water quality problem in their local waters. If so, citizens can work in their communities on a site- and situation-specific basis to determine how to most efficiently and effectively restore or enhance the quality of their water resources.

5. The Virginia Marine Resources Commission successfully implemented an Individual Transferable Quota program for commercial striped bass. ITQs are a right to a specified portion of an annual fish catch. Watermen who hold these rights can transfer, trade, sell or lease their share.

These ITQs ended wasteful fishing practices since watermen could now be assured of not losing the opportunity to catch their entire quota. It also ended the cumbersome and often arbitrary procedures that the commission had been forced to use in order to decide who got to fish each year, and it helped make the watermen, as “shareholders,” into advocates for sound fishery management. Many people are talking about ITQs, but few governments have implemented them.

6. We leased the George Washington Grist Mill Historic Park to the Mount Vernon Ladies Association of the Union, the private organization that owns and manages Mount Vernon, with provision made for permanent transfer. This organization is one of the few in the country that have the expertise to restore mill machinery to working conditions. Far more visitors will learn about colonial America and our first president as a result, and taxpayers will no longer pay the bills.

7. We helped move our state parks toward self-sufficiency and in doing so helped them to be more responsive to park visitors. We took actions in a variety of areas.

We introduced market-based pricing for entrance fees and camping fees. We closed restaurants and services that were not economical and expanded the popular programs that were. We instituted seasonal pricing. At five parks we introduced per-person admission fees, rather than per-auto fees. Credit cards are now accepted at all parks.

Our ideas were revolutionary when we undertook them in 1994.

Today they are commonplace, and they are sweeping the country in state capital after state capital and even in the federal bureaucracy.

The Reservation Center has been upgraded to better serve customers by marketing park amenities when customers make their reservations. At the same time, the length of the average phone call to the center went down from six minutes to four.

While doing this, we tried to manage the parks in ways that avoided competing unfairly with private campgrounds and other service providers. We reduced subsidies for park services that had private competition. We strove to avoid intense development—golf courses, high-amenity campsites, etc.—that could better be provided privately. And we moved camping and cabin fees toward market levels, while offering a 10% discount to in-state cabin users so that Virginia voters could more readily accept the changes.

Total revenues have climbed. And, in spite of the fee increases, visitor satisfaction is high. For example, 97.4% of those who responded to a survey said they would recommend the park they visited to a friend. And volunteer participation in park activities has increased significantly as we encouraged Virginians to take “ownership” of their parks.

- 8. One of the Allen administration’s greatest accomplishments was to spur the growth of Virginia’s

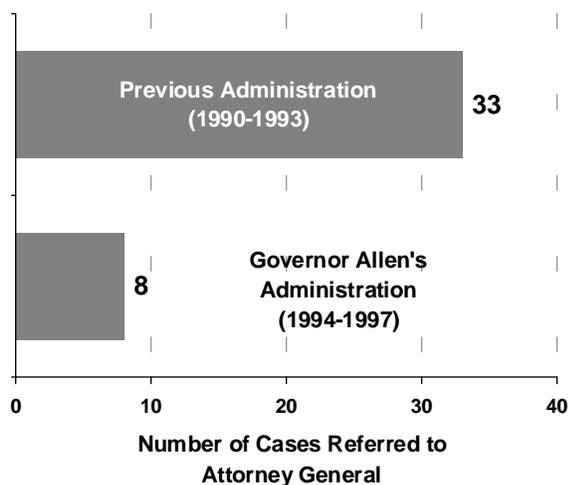
economy, which provided individuals, businesses, localities, and the state government with more resources for improving the environment. After many years of promises from many politicians to “save” the Chesapeake Bay, Governor Allen for the first time set up a water quality improvement fund with \$15 million for fiscal year 1998, and another \$63 million to be used in 1999 and 2000. This money will be used to meet Virginia’s commitment to reduce nutrient flows to the bay by 40% (based on 1985 levels) by the year 2000. The costs are matched by private and municipal partners—on a voluntary basis, unlike the programs of neighboring states and the one pushed by the EPA.

Our ideas were revolutionary when we undertook them in 1994. Today, they are considered commonplace and they are sweeping the country in state capital after state capital and even in the federal bureaucracy in Washington, D.C. I am pleased to have been a part of this movement toward regulatory reform, which simultaneously increases environmental benefits.

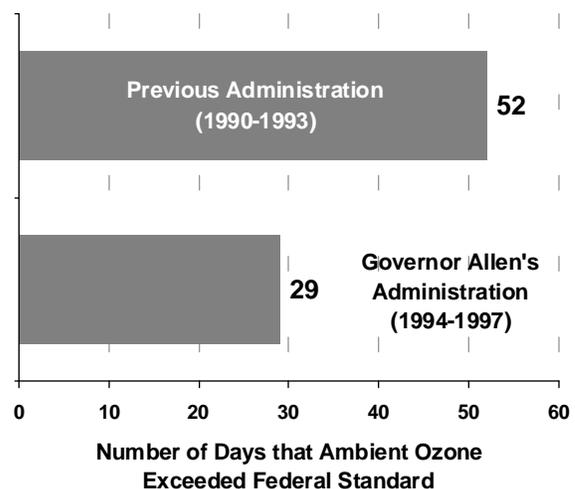
Becky Norton Dunlop, former Secretary of Natural Resources for the Commonwealth of Virginia, is now Vice President for External Relations at the Heritage Foundation.

Changes in Virginia

Enforcement referrals went down . . .



. . .but so did air pollution.



Source: *The New York Times*, January 19, 1997, and Virginia Department of Environmental Quality.

POLITICS— GREEN BUT DIRTY

By Jonathan H. Adler

Businesses routinely lobby to avoid heavy burdens from government regulations. But some businesses lobby in favor of regulations that give them a market edge. Environmental regulations are riddled with provisions that are less about saving the planet than about helping a particular industry or special interest.

The latest example comes from a business group that supports restrictions on energy use in the aftermath of the Kyoto Treaty. The Business Council for Sustainable Energy is calling for ratification of the UN treaty, and it supports deep cuts in greenhouse gas emissions. In 1996, it joined with the Natural Resources Defense Council and other environmental groups to prod the Clinton administration into action.

The council is a coalition of wind, solar, natural gas, and geothermal power producers and related firms—companies such as Enron and Solar Turbines and associations like the Solar Energy Industries Association. These companies have a clear economic stake in global warming policy. They would benefit from restrictions on fossil fuels, whether through a tax on carbon-based energy, controls on the supply of these fuels, or other regulations. The loss to coal and oil companies could well be the council members' gain.

Then there is ethanol.

Under the 1990 Clean Air Act, the Environmental Protection Agency was told to develop a formula for a new gasoline to be sold in the nation's smoggiest cities. Producers of ethanol, a fuel derived from corn, wished to ensure that their product would be added to the mix, even if this meant higher gas prices for consumers and reduced air quality.

They lobbied, and in 1993 the Clinton administra-

tion issued a regulation explicitly guaranteeing that ethanol and ethanol derivatives would receive a 30 percent share of the market for oxygenate additives used in the reformulated gasoline. The Environmental Protection Agency issued the rule even though lower-cost additives existed that were just as clean, if not cleaner. The rule was designed to boost farm income and help corn growers, not help the environment. The cost to consumers was estimated at between \$48 and \$350 million. By the EPA's own admission, the rule might have increased air pollution. As one outraged environmentalist commented, "It's not the role of the Clean Air Act to make mandatory markets for ethanol." Fortunately, a federal court agreed, and the ethanol rule was thrown out.

Another example of special interest intervention to strengthen regulation can be found with fluorescent bulbs. The federal government promotes the use of fluorescent bulbs to reduce energy consumption (through projects such as the EPA's Green Lights program). In many cases, switching to fluorescents saves companies money, but for some companies, the savings are more than offset by environmental regulations.

Unlike incandescent bulbs, fluorescents must be treated as hazardous waste when large companies dispose of them, following detailed and expensive regulations under the Resource Conservation and Recovery Act (RCRA). This greatly increases the cost of lighting disposal and could even expose firms to broad Superfund liability.

Recognizing this problem, the EPA is considering reclassifying fluorescent bulbs so that more companies will use them. But hazardous waste treatment companies are alarmed because they may lose business. The Envi-

*Environmental regulations
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industry or special interest.*

ronmental Technology Council, which represents such firms as Laidlaw Environmental Services and Evergreen, says that its members will suffer “economic and competitive harm” if fluorescent bulbs do not have to be disposed of like toxic chemicals. The ETC fears the loss of a government-created market.

Hazardous waste incinerators, another group within the toxic waste treatment business, have their own market protection program. The Alliance for Responsible Thermal Treatment (ARTT), which represents private hazardous waste incinerators, has sought greater regulation of cement kilns, which can burn toxic waste as fuel in the cement-making process. Burning toxic waste in cement kilns typically costs less than using hazardous waste incinerators. So, ARTT has given money to the American Lung Association’s campaign against the use of cement kilns for the burning of hazardous waste. In 1994 and 1995 ARTT gave the Lung Association \$260,000 to fund “educational campaigns” against cement kilns in several states. One ARTT member company, Rollins Environmental Services, went so far as to give a local activist group \$250,000 to fund a lawsuit against a competing cement kiln.

Companies can also increase profits to restrict imports of competing goods from overseas. Thus, in 1989 the European Community banned the importation of U.S. beef produced with bovine growth hormones. The EC defended the restriction as a health measure, despite the lack of any credible scientific evidence linking hormones in U.S. beef to any health threat. The restriction did, however, protect European ranchers from U.S. competition.

Although European interests have been the worst offenders in the use of environmental regulations to keep out trade, American companies have tried to use regulations that way, as well. For example, the Corporate Average Fuel Economy standards (CAFE) that have been in effect since the 1970s were crafted to penalize high-end foreign manufacturers such as Volvo and Mercedes Benz, which don’t make many small, fuel-efficient cars. (The standards also protect U.S. jobs because they don’t allow domestic companies to meet the standards simply by importing small foreign cars.)

Perhaps the most famous example of business (and labor) using environmental laws to achieve special advantage was the passage of the 1977 Clean Air Act.[†] This act protected eastern coal companies and their unions from competition from cleaner western coal,

while appearing to satisfy environmentalists, who wanted tougher rules restricting sulfur dioxide emissions from power plants.

The act required that power plants add costly sulfur dioxide “scrubbers,” even though switching to low-sulfur coal would have enabled many companies to reduce their emissions by as much as—or more than—the scrubbers would. The new scrubber requirement destroyed the comparative advantage of western low-sulfur coal.

Unsatisfied with this measure alone, eastern coal producers and the eastern-based United Mine Workers, with the support of the Sierra Club and the National Clean Air Coalition, pushed for additional provisions to protect coal-miners’ jobs in the East. Congress passed a provision allowing state and federal officials to order power plants to use regionally available coal, if the use of coal from elsewhere in the United States might put local mine workers out of work.

Ironically, one effect of the 1977 amendments was to *increase* sulfur dioxide emissions in some regions of the country. Since all new coal-fired plants had to have scrubbers, companies extended the life of older coal-fired plants, delaying the environmental gains that would be achieved by a switch to more modern facilities. In addition, the amount of scrubber sludge requiring disposal increased substantially.

Of course, not all environmental rules are the result of special interest pleading. Some are the result of genuine environmental concern; others start out that way, only to be manipulated behind closed doors during the legislative or rule-making process. In some cases, industries have been virtually created by environmental regulations, and their continued existence depends on tough regulations, whether they help the environment or not. In any case, the proliferation of exceedingly complex environmental rules and statutes is an open invitation for companies seeking an advantage over their competitors. This is an invitation that few profit-seeking companies will pass up.

Note

[†] See Bruce Ackerman and William T. Hassler. 1981. *Clean Coal, Dirty Air*. New Haven, CT: Yale University Press.

Jonathan H. Adler, a PERC research fellow in the summer of 1998, is Director of Environmental Studies at the Competitive Enterprise Institute. His article on global warming was the cover story of the August 17, 1998, National Review.

*Business and labor used the
1977 Clean Air Act
to achieve special advantage.*

HOW MARKETS SAVE SALMON

By Orri Vigfússon

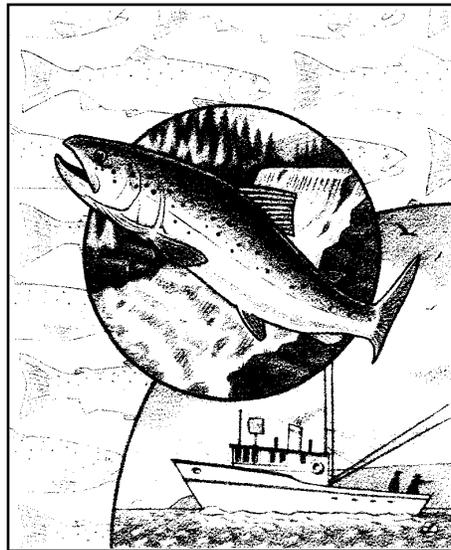
I am a native of Iceland, where the entire economy is based on fishing. I have enjoyed fishing for salmon with a fly rod all my life. As a child, I can remember the rivers of Iceland teeming with fish.

Today, we still have some of the best sport salmon fishing in the world, but our streams are not as productive as they used to be, and fishermen are not enjoying the success of the past. Some ten years ago, I began to think seriously about this problem.

I looked at it this way: Here we have fishermen who come to Iceland and spend \$1,000 on average for every fish they catch. At the same time, out at sea commercial fishermen are netting these fish and selling them for \$10 per fish if they are lucky. In addition, salmon farming has grown to the point where it basically supplies all the salmon the market requires and reduces the price commercial netters can obtain for wild salmon. This seemed to me to be a very wasteful and economically foolish situation. It was like selling a product worth \$1,000 for 1% of its true value.

Because Iceland has fishing quotas, I saw an opportunity for trade.

Twenty or so years ago, Iceland found itself with too many commercial boats chasing an ever decreasing number of fish. The government decided to introduce a system of fishing quotas which, over time, became individual transferable quotas, or ITQs. These quotas gave fishers property rights in a portion of the catch. The quotas can be bought and sold, and an active market de-



On April 24, 1998,
Orri Vigfússon received PERC's
1998 Enviro-Capitalist Award
at a meeting of the
Philadelphia Society for
his work in saving salmon
using the tools of the market.

veloped. The fishing industry reorganized. Weaker, inefficient fishing companies went out of business. The remaining companies became much more efficient; technology thrived; control of the fishing resources became much easier; and more and better jobs were created to support this industry. Fishing quotas in Iceland became attractive investments for insurance companies and pension funds. In short, Iceland had developed an effective process to manage its valuable fish resources.

It occurred to me that the commercial salmon quotas in the North Atlantic were an undervalued environmental and economic resource. They could be much more valuable to the economies of Iceland, the British Isles, Scandinavia, and Canada than they were to the fishermen who owned them. Since commercial fishermen primarily want to make a living, they would fish for other species just as readily as for salmon. Or, if the jobs were there, they would in most cases gladly do other things to earn a living for themselves and their families.

So, I formed the North Atlantic Salmon Fund, and in 1989 we began to negotiate and purchase these quotas and take them out of production. The North Atlantic Salmon Fund has made deals with the people who own the fishing quotas in the Faroe Islands and Greenland. The same concept has been used to some extent in Labrador and Newfoundland.

Since we started purchasing salmon quotas, we

have acquired more than 4,000 metric tons of quotas from the high seas. This represents about 95% of all salmon quotas issued on the high seas during this period and approximately 1.4 million individual salmon. These are native, wild salmon—not stocked or farmed fish. We have spent approximately \$6 million or about \$4.20 per fish. The \$6 million we have spent has resulted in a potential benefit to the economies of the various countries in the North Atlantic region of over \$1 billion.

The acquisition of these quotas had an unexpected side benefit: It virtually eliminated illegal netting. Once the legal netting rights were retired, pirates were the only people left fishing, so their illegal activities were pretty easy to spot!

Our efforts get quite a “bang for the buck.” The problem, of course, is getting the bucks! We have had to fight for every dollar, pound, and krona. Most of the funds we have raised have come from individuals, river owners, fishermen, and conservationists. (By the way, we have recently been approved as a tax-exempt 501(c)(3) organization in the United States. Your contribution is now tax-free.)

We have received some help from governments. The Icelandic government gave us matching funds to acquire the remaining nets in Icelandic waters. From the United States, the National Fish and Wildlife Foundation and the State Department have helped us find alternative jobs for netsmen who voluntarily cease their netting activities.

The North Atlantic Salmon Fund is also actively engaged in salmon conservation generally, not just the purchase of salmon quotas. We spend quite a bit of time lobbying (actually “fighting” would be a better word) European governments who, in my view, generally hate simple solutions to problems.

Furthermore, the option of retiring commercial netting rights is not available everywhere, because in many places there are no private netting rights. The rivers of New England were full of wild salmon 200 years ago. But there are no longer any meaningful populations of salmon there. I have just read (in Ed Baum’s excellent new book: *Maine Atlantic Salmon*) that efforts to restore wild salmon to New England have been going on for 140

years. Indeed, 96 million salmon, as fries, parr, and smolts, have been released into New England rivers. Yet no North Atlantic salmon population has been restored in any river in the United States. It would seem, therefore, that you in the U.S. also should have an interest in what we do—saving the salmon on the high seas.

I have another idea for the North Atlantic. When I look at this huge, crystal-clear, cold, and pristine environment, I see a great economic opportunity. This environment consists of plankton, small fish like the capelin sardine, cod, salmon, seals, and whales. The products of the North Atlantic should, it seems to me, be as highly regarded by consumers as is wine from the Napa Valley, potatoes from Idaho, or Scotch from Scotland.

I am in the process of developing a concept I call North Atlantic Quality or NAQ. The idea would take the form of a quality control label, like the “appellation contrôlée” for the wines of France. Suppliers in the North Atlantic region who meet certain high standards for quality control and environmentally sensitive practices could use a distinctive label of the North Atlantic region. We believe this marketing approach would attract international investment to our fishing industry and encourage consumers to

prefer North Atlantic seafood, thereby securing the long-term growth of fish stocks. As you might have guessed, I would prefer that the salmon we market in this way be farmed salmon, not our few remaining wild fish!

Orri Vigfússon is a businessman in Reykjavík, Iceland, and chairman of the North Atlantic Salmon Fund. Vigfússon is featured in *Enviro-Capitalists*. (See below.)

It occurred to me that the commercial salmon quotas in the North Atlantic were an untapped environmental and economic resource that could be more valuable to the economies of Iceland, the British Isles, Scandinavia, and Canada than they were to the fishermen who owned them.

Read about Orri Vigfússon and other environmental entrepreneurs in *Enviro-Capitalists: Doing Good While Doing Well*, by Terry L. Anderson and Donald R. Leal (Rowman & Littlefield, 1997). It is available in hardback through *Laissez-Faire Books* (800-326-0996) at a special price of \$14.95 plus shipping and handling.

WHERE RESEARCH AND
POLICY MEET

TANGENTS

By Daniel K. Benjamin

economist, n. a scoundrel whose faulty vision sees things as they are, not as they ought to be.
—after Ambrose Bierce

It is widely argued that individuals cannot accurately assess the environmental and workplace risks they face.¹ One typical claim is that people poorly assess the hazards of dying: They wildly overestimate the likelihood that they will die of lightning strikes or food poisoning, while grossly underestimating the chances of dying due to stroke or heart attack. This asserted failing has helped establish and expand various environmental, health, and safety regulatory bodies. Mandatory motorcycle helmet rules, automobile air bags, and Superfund site cleanup rules stem directly from the view that people do not have accurate knowledge of the risks they face.

This pervasive claim, the “biased perception hypothesis,” is itself flawed, however.² My colleague William Dougan and I have reexamined the existing body of evidence in this area and found that it misses the issue most relevant to individual decision makers—namely, relevance itself.

Beginning with surveys first conducted by psychologists 25 years ago, researchers have sought to determine if people can estimate population-wide death rates from various causes. On balance, individuals appear to be rather poor at making such estimates. With this finding we have no quarrel. Yet researchers and policy makers have *interpreted* this finding as implying that people are therefore poor at estimating the chances that they, as individuals, are likely to die of these causes. This interpretation leads to the notion that people must be protected from their misperceptions—presumably by better informed experts in government agencies.

To see the nature of the problem, consider two

potential causes of death, accidental falls and deliberate homicides. People of all ages fall down, yet falling is rarely lethal except among the elderly. The chance of dying due to a fall begins to rise sharply at around age 65, and the average age of death due to falls is approximately 74 years. Toward the other end of the spectrum, deaths due to homicide are relatively infrequent except among the young. The overwhelming majority of murder victims are under the age of 35.

In a world in which information—like all other goods—is scarce, one would expect people to economize on its acquisition. In the present context, this means people should specialize in acquiring information about hazards relevant to *them*, rather than about the hazards faced by some hypothetical or population-wide group. Thus, older people should be acutely aware of the risks of falling down, while younger people should be relatively knowledgeable about the risks of homicide. Moreover, when younger

people are asked to estimate the hazards of falling down, for example, we should expect them to understate these hazards for the population, because the risks to them as individuals are so low.

To test these predictions, Dougan and I revisit the data that have served as the foundation for the biased perception hypothesis. We apply the rational expectations approach developed by economists such as Nobel laureate Robert Lucas. This approach is specifically meant to analyze behavior when people must act in the face of incomplete information.

We find that people are, in fact, knowledgeable

*People are knowledgeable
about the hazards
faced by individuals in
their age group.*

about the hazards faced by individuals in their age group. In addition, they use these data in useful and systematic ways when predicting fatality rates among the population as a whole. Overall, it appears that people are remarkably *unbiased* in judging the hazards of activities that are most relevant to them.

This does not mean that people are perfect in judging hazards. The data imply that people do make mistakes—hardly surprising in a world of costly information. The point is that people do not make *systematic* mistakes, that is, mistakes that might be easily corrected by information readily available to government bureaucrats.

None of this means there is no role for government regulation of environmental, health, or safety risks. But such regulation cannot be justified by claiming that people are systematically erring in their judgments.

Frank Knight, one of the great economists of the 20th century, once observed, “We are so built that what seems reasonable to us is likely to be confirmed by

experience or we could not live in the world at all.” The evidence Dougan and I have found is consistent with Knight’s view. More importantly, the evidence implies that some argument other than biased risk perceptions will have to be invoked by those who would usurp individual responsibility for judging hazards.

Notes

1. See W. Kip Viscusi, “The Value of Risks to Life and Health,” *Journal of Economic Literature*, 31 (December 1993), pp. 1912–46 for an exhaustive review of the literature in this area.

2. Daniel K. Benjamin and William R. Dougan, “Individuals’ Estimates of the Risks of Death: Part I—A Reassessment of the Previous Evidence,” *Journal of Risk and Uncertainty*, vol. 15, November, 1997, pp. 115–33.

Daniel K. Benjamin is a PERC Senior Associate and Professor of Economics at Clemson University. “Tangents” investigates policy implications of recent academic research.

September 1998

Dear Reader:

As PERC wraps up its busiest summer ever, we are again soliciting your financial support. With the growth we have experienced in the past few years, our impact on policy continues to increase. For example, water marketing, which was simply a theory in the 1980s, now provides a practical solution for water quantity and quality problems. User fees on public lands, also proposed by PERC in the early 1980s, have been implemented through the federal fee demonstration program. Senior Associate Richard Stroup’s idea for managing lands through a trust arrangement serves as a model for the Presidio Trust in San Francisco.

If you have been a supporter of PERC, you deserve credit for our successes; if you have not been, now is the best time to get on board. Because we do not seek or accept government funds, private contributions are PERC’s lifeblood. A new donor has pledged matching funds for contributions up to \$15,000. This could allow you to leverage your contribution, so now is the perfect time to grow with PERC. I look forward to receiving your contribution. If you have any questions about PERC’s activities, do not hesitate to call.

Sincerely,



Terry L. Anderson
Executive Director

GREENER PASTURES

PRIVATE INITIATIVES

By Linda E. Platts

FOREST OF TOYOTA

A group of researchers at Japan's largest car manufacturer are concentrating on designer trees rather than fuel efficiency. This odd turn for Toyota is an effort to develop a new tree with a ravenous appetite for the noxious gases produced by gasoline-powered automobile engines.

Since 1991, the company has been working on biology-based methods of cleaning up the environment. As part of that effort it launched the Forest of Toyota project which not only plants trees, but seeks to develop smog-eating plants.

Toyota researchers estimate that it takes 20 "regular" trees to absorb the gases produced by just one car during a year. So far, they have improved that performance by 30 percent. Scientists discovered that doubling the number of chromosomes in experimental trees resulted in wider air inlets on the leaves and stems, thus allowing them to absorb more nitrous oxide and sulfur dioxide. Altered eucalyptus and London plane trees have performed well under laboratory conditions.

The company has also planted an \$800,000 model forest and equipped it with \$80,000 worth of emissions measuring devices. Toyota plans to study how various forestry techniques reduce carbon monoxide levels.

—*Business Week*

BATS IN THE STADIUM

Last spring, thousands of Brazilian free-tail bats found a home at the New York Mets training facility in Port St. Lucie, Fla. About the size of a man's thumb with a wingspread of four inches, these little fellows are harmless, but certainly not tidy.

In the evening, they would pour out of the crevices in the stadium in search of their nightly repast. However,

during the day they deposited prodigious quantities of guano on the bleachers while hanging sleepily from the stadium canopy. Maintenance crews had to pressure-clean the stadium twice a day to make it habitable—or sittable—for the fans.

Although the bats were a nuisance in some respects, they were also a valuable resource because they consumed tons of pesky mosquitos. Without bats (the mammal variety), the Mets would be spending more on insect control and less on guano control.

A solution was found by building a new, wooden bat house in a swampy area behind right field. It is now home to some 15,000 bats. Meanwhile, the bleachers are guano-free and nature's mosquito control program is working efficiently and economically.

—*The Washington Post*

TREETOP WALKWAY

High above West Africa's Upper Guinean rain forest, tourists on gently swaying walkways stroll cautiously through the forest canopy. It is a nature experience still rare even in the realms of eco-tourism.

Kakum National Park, the 140-square-mile preserve where the walkway is located, is home to several endangered species including the forest elephant. It is one of the few intact areas left of what was once a vast rain forest. Already more than 80 percent of the Guinean forests have been lost, and the remaining forests are under threat of destruction from logging, settlement, and agriculture.

The canopy walkway and accompanying visitor center were the brainchild of Conservation International (CI) and built with the support of the Ghana Wildlife Department and the United States Agency for International Development. Ecotourism projects such as this are one of the tools being used by CI to conserve biological diversity and support sustainable development.

When the park was first created in 1992, the num-

ber of visitors ranged from none to few. With the addition of the walkway in 1995 and the visitor center in 1997, the park now hosts 40,000 visitors a year. Last year, it took in revenues of \$75,000 and employed more than 2,000 Ghanians in park-related jobs.

Oliver Hillel, ecotourism program director for CI, says, "For many communities, ecotourism is an effective economic alternative to destroying the rain forest for quick monetary gain."

Kakum National Park is also a standout with the travel industry. In 1998, it won the annual Condé Nast Traveler Magazine Ecotourism Award.

—*Tacoma Tribune News*

GREEN VENTURE CAPITAL

The EcoEnterprises Fund offers a new twist on venture capital by targeting environmentally responsible and conservation-minded businesses. The fund will invest an average of \$100,000 to \$200,000 in small start-up ventures in Latin America and the Caribbean.

The fund, also known as Fondo EcoEmpresas, is a joint effort of the Inter-American Development Bank and the Nature Conservancy. It will identify potential investments, provide start-up funds, on-going technical training, and management services. The fund was created to support small- and medium-sized businesses in the regions, and at the same time to encourage conservation and protection of the environment. "By investing in market-driven enterprises with strong benefits to conservation, we are putting our money where our mouth is..." says Alexander Watson of the Nature Conservancy.

One stipulation for funding is that the businesses must be sponsored by a non-profit organization based in Latin America or the Caribbean and have at least one partner in the private sector. The fund is currently working with 24 prospects. For more information, contact Patricia Leon at the Nature Conservancy: (703)841-4252.

—*Environmental News Network*

LOOKS LIKE WOOD

The picnic table, the park bench and the boardwalk look like wood, but they are actually made from plastic. Impervious to water, salt, oil, chemicals, and insects, the building material comes from chipped and

melted milk jugs and detergent bottles. This new use for high-density polyethylene is making profits for outdoor furniture manufacturers and checking the flow of plastics into our landfills.

The handsome, sturdy outdoor furniture will not rot, crack, splinter or require painting. Consumers find the recycled aspect of the furniture appealing. At a recent garden show, one plastic Adirondack chair was the star attraction because it carried a sign announcing that it had been made from 240 discarded milk jugs.

A growing number of companies are manufacturing an array of products from recycled high-density plastic. Conversion Products Inc. in Portland, Maine, sells a park bench for \$395, an Adirondack chair for \$255, and a flower box for \$55. St. Louis-based ERI Recycling Inc. is making plastic shipping pallets that last up to 10 times longer than the wooden variety. ERI President Art Morey says that in addition to making a profit one of his company's major objectives is to "take plastic out of the waste stream and do something useful with it."

—*Boston Globe*

RAGWEED TO RICHES

As many midwestern farm families struggle to make a living off the land, the Jones family of Afton, Iowa, has found a new source of revenue growing in their pastures. For two summers, the family has been picking the flowers off the ragweed plants that flourish in their fields and corrals.

The flowers are ground up, sifted, and eventually reduced to pure pollen before being sold to pharmaceutical companies as far away as Sweden. The pollen is used in allergy testing products and in shots used to treat allergy sufferers.

By late summer, the ragweed plants in southern Iowa are often 6 feet tall and heavy with pollen. Using ordinary yard clippers, the family makes quick work of filling their five-gallon buckets. Last year, the Jones family made \$2,600 to supplement their annual income.

Pollen collectors are at work in at least a dozen states, harvesting pollen from a variety of trees, grasses, and weeds. The Jones family and others in the area became involved in this unusual enterprise after an official from the local Resource, Conservation and Development District asked the Allegron pharmaceutical company to give a workshop on pollen collection. "We're always looking for alternative means of keeping people on the farm," says Paul Kelley, president of the Afton RCDD.

—*The Associated Press*

what's new

PERC UPDATE

Bruce Yandle, Alumni Professor of Economics and Legal Studies at Clemson University and a PERC Senior Associate, is spending the fall at PERC's offices in Bozeman. Among other tasks, he is supervising a long-term project on land-use preservation and the environmental effects of agricultural policy.

State University at Bozeman, was PERC's journalism intern this summer, providing editing, writing, and research assistance. A native of Florida, he recently completed a master's degree in economics at the American University in Washington, D.C., after receiving a bachelor's degree in 1996 from Florida State University. His research interests include industrial organization, regulation, Social Security privatization, and free market environmentalism.

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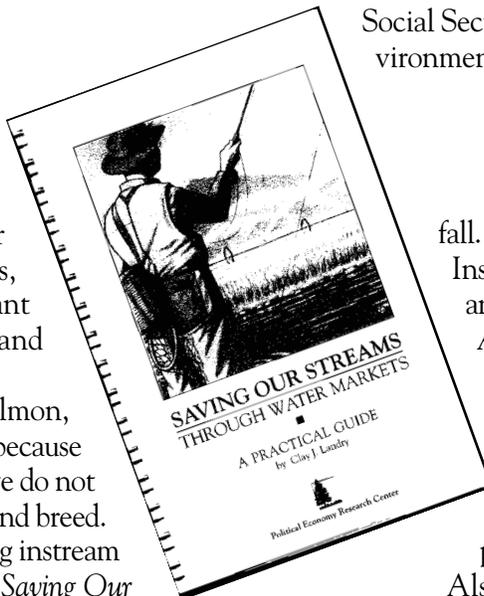
Saving Our Streams through Water Markets is a new handbook by PERC Research Associate **Clay J. Landry**. A unique source of information, it will be a valuable tool for environmentalists, agency officials, ranchers, farmers, and others who want to use water markets to protect fish and other wildlife.

Throughout the West, coho salmon, bull trout and other fish are in danger because the streams and rivers in which they live do not have enough water for them to thrive and breed. Water marketing offers a way of keeping instream flows high through voluntary trades. *Saving Our Streams* provides a comprehensive survey of water market activity, including a list of active market participants. It provides advice on how to find willing sellers, stretch small budgets, and negotiate fair market prices. The handbook is available from PERC for \$5.

Landry's background includes serving as a natural resource economist for the Oregon Water Resources Department, an adviser to the Oregon Water Trust, and a legislative analyst for Montana Trout Unlimited. Landry holds a master's degree in agriculture and resource economics from Oregon State University and a bachelor's degree in economics from the University of Wyoming.

■

Matthew Brown, a statistics graduate student in the department of mathematical sciences at Montana



■

Roger Bate will be a PERC Fellow this fall. He directs the environment unit of the Institute of Economic Affairs in London and writes a regular column for *Economic Affairs*. Bate is completing his Ph.D. in land economy at Cambridge University. While at PERC he will work on a book about the ways that anglers protect the quality of water in England and Wales. **Don Leal** will supervise his research.

Also this fall, **Stacie Thomas**, who has just received a master's degree in economics at Clemson University, will be a PERC Fellow. She will work with visiting scholar **Bruce Yandle** studying how local communities can take responsibility for regulation of water quality.

■

Increasingly, policy makers are looking to PERC scholars for information about natural resource issues. PERC Senior Associate **Don Leal** recently updated members of the Wildlife Division of the Montana Department of Fish, Wildlife and Parks on market incentives that other states are using to encourage landowners to provide wildlife habitat. In an earlier speech at the University of Colorado's law school, Leal spoke about the move in various states toward creating financially self-sustaining parks through user fees.

JOURNAL

NOTES FROM THE EDITORS

By Jane S. Shaw & Linda E. Platts

Montana's long summer days help make up for the brevity of the season. Our many guests enrich the summer, too. These days, PERC's offices burst at the seams as visiting scholars, fellows, and numerous others gather. As each passing year reminds us, Montana is one of the best places to mix work with fishing, swimming, hiking and lounging.

Wally Thurman, who studied at Montana State University and worked at PERC years ago, returned with his family to vacation here and in Utah. While in town, he gave a seminar on his research at North Carolina State. **Jeffrey Michael**, also in the economics department at North Carolina State, presented a paper at PERC on the Endangered Species Act, written with **Dean Lueck**, a former PERC Fellow now at Montana State. **Andrew Morriss**, a law and economics professor at Case Western Reserve, spent a month at a conference in Big Sky, and visited PERC a few times.

For the second year in a row, **David Haddock**, professor of law and economics at Northwestern University took a mini-sabbatical (very mini—a week or so) in Montana before his family joined him for a vacation. He worked at PERC during the day and stayed at Terry and Janet Anderson's rustic vacation cabin in the Bridger Mountains. (They were in Aix-en-Provence, where Terry spoke at a conference on water management). Built at a friendly cabin-raising nearly 30 years ago, the Andersons' simple cabin stands in marked contrast to the many palatial residences going up today around the Gallatin Valley. Electricity hasn't tainted it yet.

PERC's conferences kept us busy, starting with a conference for business executives in May, followed by a journalism conference in mid-June, a student seminar in late June, and, in July, the summer teachers' institute, now in its second year. Two young professors, **Erik Craft** and **John McArthur**, helped guide the student group, as

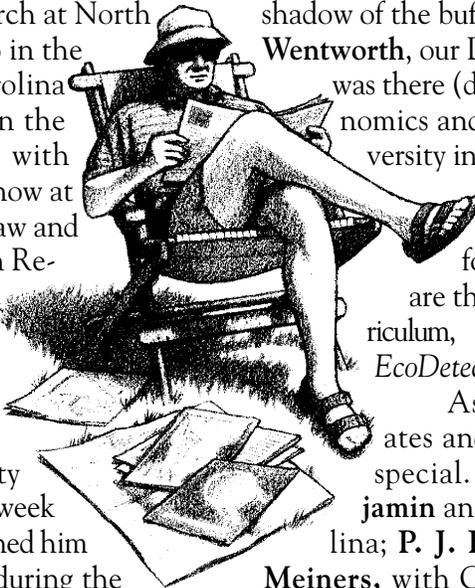
did PERC Fellow **Jon Adler**. **Kameran Bailey** of the Claude Lambe Foundation, sponsor of the June journalism conference, also visited us. So did Stanford law professor **Barton Thompson** and his family.

This year, our visiting teachers got an in-depth view of Yellowstone National Park as well as Moonlight Basin Ranch (an environmentally sensitive venture that was featured in the book *Enviro-Capitalists* by **Terry Anderson** and **Don Leal**). They even heard a lecture on American Indian practices presented by Terry in the shadow of the buffalo jump by the Madison River. **Don Wentworth**, our Director of Environmental Education, was there (during most of the year he teaches economics and education at Pacific Lutheran University in Tacoma), as were returning professors **J. R. Clark** and **Mark Schug**. **John Morton** and his wife Kathy visited for the first time. (Mark, John and Don are the coauthors of PERC's distinctive curriculum, *Economics and the Environment: EcoDetectives*.)

As always, our visiting senior associates and board members make the summer special. This year they included **Dan Benjamin** and his wife Robbie from South Carolina; **P. J. Hill** with Lois from Illinois; **Roger Meiners**, with Cary and their children from Texas; and **Bruce Yandle** with Dottie, from South Carolina. PERC's board chairman, **Kim Dennis**, spent the summer in the area with husband Bill (a Liberty Fund program officer who took part in the Big Sky conference), and children Will and Jesse. Kim and PERC board member **Bill Dunn** proved that life in Montana can be rough; she broke her arm rock climbing and he broke several ribs horseback riding.

We also had international visitors: **Chung-kai Sin**, a legislative councilor from Hong Kong; former MSU professor **Norman Dudley** from the University of New England in Australia; and **Michael Volný** from Liberalni Institut, Czech Republic.

Now, whatever happened to those long, long days?



letters to the editor

REACTIONS

502 S. 19th Avenue, Suite 211
Bozeman, Montana 59718

Two Cheers for Easterbrook

Gregg Easterbrook's proposal for getting around the "takings" problem (a \$1,000 development fee per acre) may not be free market, but it has some advantages (June 1998).

I am facing a hard-core Corps of Engineers and a Fish and Game Department just as tough as nails. They want me to create one acre of wetlands to "mitigate" the one acre of wetlands that I have on my seven acres. They want this even though I am bordered by a freeway to the east, manufacturing to the north and south, and a professional park to the west. The cost to me will be \$200,000. Under Mr. Easterbrook's plan, the cost would be \$7,000. You can see how I feel about it!

*John H. Woolsey, Jr., D.V.M.
Santa Rosa, California*

Government in the Driver's Seat

Mr. Easterbrook's proposal would truly put government in the driver's seat. The federal government already owns nearly a third of the land in the United States. Should we be giving government more land, even for the noblest of purposes? How much more land can citizens cede to the federal government without losing political liberty?

Under Mr. Easterbrook's proposal for development fees for each acre developed, the government would be able to acquire an additional 1.5 million acres a year. Over time, the government would, in theory at least, be able to acquire the entire land mass of the U.S. No one could seriously consider a people free when government

owns all or even a majority of the property within the nation.

So, the most telling criticism of Mr. Easterbrook's proposal is not that it's extortion, and not just that it would be ineffective in solving the endangered species problem (although these are true), but that it gives more control to the federal government over people's lives.

It should be noted that this same problem arises with proposed revisions of the endangered species act that free-marketeers generally support. For instance, we often support, at a minimum, compensation for takings. But just requiring government to pay compensation when it takes control of someone's property doesn't get around the

problem of government coming to control more property and thus extending its power over individuals' lives. Another proposal is that the federal government only have jurisdiction over endangered species whose natural habitat straddles state lines and then that it compensate property owners for limiting the uses to which they can put their properties. This would slow the growth of the federal estate. However, it would not ultimately solve the problem of the threat that government ownership and control of land pose to individual and political liberty.

Compensation for takings is only a second or third best option for species protection. Perhaps what we need is a constitutional amendment that would require the government to give up some property for every piece of property it gains, capping government ownership of property at some fixed percentage.

*H. Sterling Burnett
Environmental Policy Analyst
National Center for Policy Analysis, Dallas*



Coercive Wealth Distribution

What else can one call the forced confiscation of money from developers except a form of takings? This is what I call “stealth free market environmentalism”—taxation disguised as a market solution. It’s old stuff, the typical form of American socialism: coercive wealth redistribution. Instead of confiscating and running the means of production directly, it imposes control through taxation and regulation—usually a combination of both, because each tends to engender more of the other. What you (the developer) buy back today, the seller can impose again on you tomorrow and then demand an even higher buy-back price.

Yes, one effect of Mr. Easterbrook’s proposal would be to permit landowners to “win control” of the land they own—temporarily. But how is this a departure from government extortion? Want to be able to exercise your property “rights”? Then pay us a fee to stop harassing you! It’s no different in principle from the Mafia telling a small businessman, “Fork it over, bud, or we can’t protect you from our thugs!”

I’m sure that Mr. Easterbrook’s intentions are as pure as fresh Cascade Mountain snow. Nevertheless, more eco-thuggery would be the effect of his proposal. The more avenues of power we create, the more abuse we’ll get.

Let me underscore the moral issue, too. The great virtue of free market environmentalism is that it identifies and rejects coercive means. To those of us who believe in human freedom, the means always matter. Instead of trading one form of coercion for another, the thrust of solutions to the takings problem should be to eliminate coercion, gradually substituting creative voluntarism. If we lose that concept, we lose the war.

*E.G. Ross
Editor, The Positive Economist Bulletin
Eugene, OR*

What About Market Failure?

The response by Jane Shaw and Richard Stroup to Gregg Easterbrook’s latest proposal, as well as Fred Smith’s letter (June 1998), show the failure of PERC advocates to grapple with two fundamental issues.

First, these writers fail to acknowledge that free-market mechanisms pose very real obstacles to the

accurate expression of individual preferences in the environmental arena. According to most poll results, tens of millions of Americans place a high value on the protection of endangered wildlife. But these conservation advocates, while numerous, have relatively small individual stakes in the issue and therefore are difficult, time-consuming, and expensive to organize. The barriers to organizing them (as compared, say, to the forest products industry) means that their interests will be relatively under-served in a free-market system.

Equally significant is the free rider problem. Given the large size and disparate character of the constituency for wildlife protection, classical economics suggests that many individuals will be tempted to avoid direct individual effort or expenditure in the hope that their preferences will be achieved through the efforts and expenditures of others. (Why bother to join the Sierra Club, when the organization is already so large and effective and nobody will miss my \$25 anyway?) Firms and individuals pursuing narrow financial goals through collective action do not labor under the same free rider problem, at least not to the same extent.

Modern environmental laws are designed to address these market failures, however imperfectly. PERC advocates simply wish them away, or pretend that they represent a few special cases.

The second fundamental issue is that PERC advocates seek not merely to unleash the free market, but also insist on making a fundamental reassignment of property entitlements before the market is allowed to operate. Consider endangered species conservation. Under the current legal regime, private real property rights are accorded a very real measure of support. At the same time, the Endangered Species Act expresses legally enforceable public use rights (or perhaps more accurately, nonuse rights) in lands and other resources subject to this law. One can certainly quibble about where the law draws the line between public and private rights, but it seems indisputable that there is now a recognition of both public and private rights.

As a first step, PERC would abandon the public rights in wildlife and reassign them to private industry. The market would then be allowed to operate. Individuals and groups supporting wildlife conservation would, in effect, be allowed to buy back that which was so recently surrendered on their behalf. The PERC approach puts wildlife conservation interests in the

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“stealth free market
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—taxation disguised as a
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—E. G. Ross

LETTERS

position of having to expend significant time and resources to make up for lost ground.

This reassignment of rights is not necessary to support constitutional property rights. Extensive recent scholarship confirms that the Takings Clause of the Fifth Amendment as drafted by the founding fathers was never intended to extend to regulations. The Supreme Court has recognized that *some* regulations can effect takings. However, the overwhelming majority of regulatory actions, including requirements enforced under the Endangered Species Act, do not result in takings. Thus, PERC's proposed reallocation of rights in wildlife from the public to private industry cannot be justified on constitutional grounds.

PERC advocates weaken the force of their intellectual efforts by insisting on an initial reallocation of rights rather than attempting to institute market approaches consistent with the current assignment of rights—or, dare I suggest it, a reassignment of rights in favor of the public. For example, suppose that citizens' elected representatives decided how much habitat destruction should be permitted over a particular period of time. Developers, resource industries, and others who wish to tap into this bank of public rights (to destroy habitat) could then bid against each other for the right to do so. Hopefully, the result would be that the opportunity to engage in wildlife-destroying activity is efficiently allocated to those firms willing to pay the most to engage in such activity. While there are some obvious problems with this hypothetical proposal, it illustrates the point that adherence to a market approach does not require a sacrifice of public rights at the outset.

The PERC agenda is consistently stimulating and provocative. It would be more persuasive if its advocates grappled seriously with the limitations of the free-market approach, and if they avoided irrelevant detours advocating unsupportable conceptions of private property rights.

John D. Echeverria
Director, Environmental Policy Project
Georgetown University Law Center

Mr. Echeverria was formerly chief legal counsel for the National Audubon Society.

Jane S. Shaw and Richard L. Stroup respond:

1. Yes, the “free rider” problem makes it difficult to organize people and raise funds. This free rider problem is even more severe among voters, however. Since voters cannot control federal policies such as those to protect endangered species, voters have little incentive to learn whether they succeed or not—or to act upon that knowledge if they have it. A dissatisfied taxpayer cannot hold back taxes and support voluntary conservation efforts instead. The free rider problem among voters gives us wasteful government spending and destructive regulation, just as in theory it reduces the funding of voluntary efforts.

Unlike individual voters, however, supporters of Ducks Unlimited, the Delta Waterfowl Foundation, and other conservation groups have an incentive to monitor and control the programs they support. They can switch their dollars to the program they think is best.

2. PERC has never proposed “reallocation of rights in wildlife from the public to private industry,” as Mr. Echeverria claims. Our proposals for endangered species protection would leave ownership of wildlife with the public, as it always has been in the United States. But owning an animal does not mean it can forage from the land of the owner's neighbors (i.e., private landowners). Nor does the owner have a right to quarter the animal on a neighbor's land without

compensating the neighbor. (Indeed, the U.S. Constitution prohibits the government from demanding that *soldiers* be quartered.) Compensation is appropriate. It also would minimize the habitat destruction going on as landowners seek to avoid future uncompensated demands by the federal government.

3. H. Sterling Burnett is correct to point out that even full compensation reduces liberty and increases the government's reach. But compensated takings have two advantages. They are constitutional, unlike current policy in our view, and they are subject to the discipline of the budget process. Because the Fish and Wildlife Service currently can take what it thinks it needs without compensating owners, it does not do what most Americans do routinely: balance a checkbook. It has little incentive to use resources wisely (its resources are potentially the entire U.S. land mass), or to cooperate with landowners (its power trumps theirs), or to be in-

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—John Echeverria

novative (it can simply tell landowners what to do). In contrast, private conservationists, who don't have that power, have been highly creative.

Private Stewardship Inadequate

Fred Smith (June 1998) asserts that where private ownership is relied upon, as in gardening, "there are no endangered tulips."

If he had thought carefully, he would have realized that this is poppycock. Of the tulip varieties that existed at the time of the great tulip mania in the 18th century, I dare say very few still exist. I have an American orchard manual from 1854, which lists 186 varieties of American apples, 77 varieties of cherries, and 233 varieties of pears. Almost all are extinct or so rare that if we had a list of endangered fruits, they would appear.

Since these varieties of fruit were of human development, their loss does not raise the same ethical questions that wiping out the cheetah does. But the pattern demonstrates that private markets will reliably preserve only varieties and species that serve relatively immediate commercial or other human needs. If there is no market for the Stroat apple formerly found in Kingston, New York, it will, and evidently has, passed away, even if it might have tickled the fancy of my grandchildren in a way that the Granny Smiths, Golden and Red Delicious, and Newtown Pippins I will bequeath them never will.

Similarly, private stewardship is utterly inadequate to protect most of the bird species (one third of all known taxa) currently threatened or endangered. Breaking a single link in a chain of migratory habitat will doom most of them, even if the owners of the remaining links are passionately dedicated to them. (Of course if Bill Gates is passionately committed to a particular species its chances become much better.)

Smith doesn't appear to see a major difference between allowing apple varieties bred by us to vanish and allowing the simplification through extinction of the rest of nature—which we have not created and which, our religious traditions teach us, we are stewards, not owners, of. Libertarians would be well served by addressing how to make the unfettered private ownership they seek consistent with the need for the virtues taught by traditionalist conservative thought: piety and respect for the larger creation.

I don't say these needs cannot be reconciled, only that glib analogies to Persian cats and tulips suggest that such a reconciliation is not high on the priority list. As long as that is true, environmentalists like myself will continue to suspect that for libertarians, as for Wall Street, mankind is the measure of all things, mammon

the chief deity, and material consumption the principal goal of the freedom so eloquently espoused.

*Carl Pope
Executive Director
The Sierra Club*

Fred L. Smith, Jr., replies:

Private conservation is doing more to preserve biodiversity than Pope realizes. True, only a handful of apple species dominate the commercial markets, but the Seed Savers Exchange in Iowa estimates that over 600 varieties remain available in the United States. Applesource (www.applesource.com) offers over 99 varieties for sale.

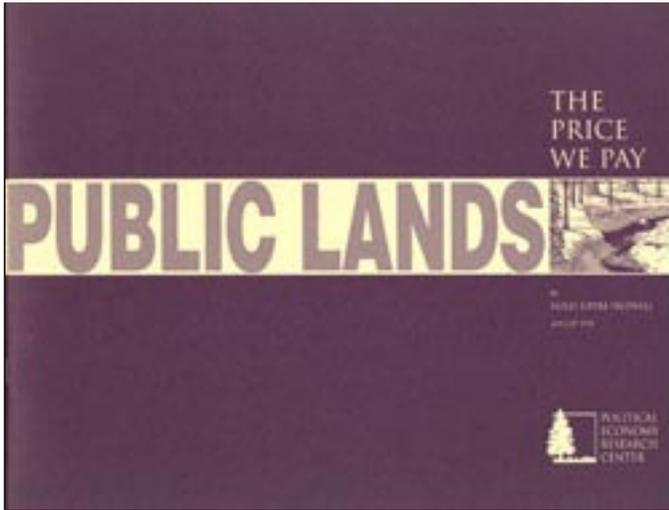
Like many environmentalists, Pope is skeptical of private property. He fears that people acting voluntarily might do the wrong thing, allowing species to go extinct. But, then, people often do the wrong thing in the political sphere also. Political institutions work crudely; millions of citizens must be mobilized before laws or regulations can be enacted and enforced. In contrast, even a handful of people can protect a species they value. And they have done so.

Pope places his hopes in politicians and laws; I place mine in people and property rights. Yes, it is true that if no one cares about a species, that species will disappear. But that will be true in either a private or political arrangement. Where should we place our faith? Someone once told Milton Friedman, "You seem to have a lot of faith in the market!" "No," he responded, "I have a lot of evidence."

However, while I do believe that private property is essential, I agree with Pope that the market is insufficient in and of itself. In my view, private property is critical precisely because it allows a resource to survive even after it loses its commercial rationale.

Still, Pope's criticisms do focus attention on a topic that free marketeers have neglected—the limitations of profit-based conservation. Our challenge is to clarify to the environmental community how private property (and the voluntary exchanges they permit) better allows Americans to protect cherished noneconomic values—our homes, our families, our religions, and, yes, even our apple trees. We have some work to do.

The editors of *PERC Reports* welcome letters, especially those that further the dialogue about free market environmentalism. Published letters will be edited for length and clarity. Please send your messages to Jane Shaw at PERC (e-mail: shaw@perc.org).



In her new study, *Public Lands: The Price We Pay*, PERC Research Associate Holly Lippke Fretwell exposes the wasteful land-management practices of the U.S. government. The federal government currently owns over 450 million acres of land, much of it under the control of the U.S. Forest Service and the Bureau of Land Management (BLM). Instead of a rich source of revenue to benefit the public, these lands are a financial burden for taxpayers and another example of the federal government's lack of fiscal accountability.

Fretwell shows that from 1994 to 1996 the Forest Service and BLM lost an average of \$290 million dollars per year on timber sales, \$66 million per year on grazing rights, and \$355 million per year on recreation. Fretwell compares these losses by federal agencies to the profits earned by state land managers. During the same period, similar lands in 10 western states made money. For every dollar they spent, the states averaged \$5.56 in revenue. In contrast, the BLM earned just 94 cents per dollar spent, and the Forest Service earned only 30 cents.

The states differ from federal agencies in that they must, in most cases, fund their operations out of receipts and are required to earn income from their lands to benefit public schools. As a result of these incentives, state agencies earn money from mining, logging, grazing, and recreation fees and operate at much lower costs.

Federal agencies have no such incentives to earn money. They rely on the taxpayers to cover any red ink. They lack accountability with public funds. Fretwell notes that the General Accounting Office found that the Forest Service could not account for \$215 million of its \$3.4 billion dollar budget. If federal land agencies were required to fund their spending out of revenues, Fretwell argues, government-owned lands could become a resource for taxpayers, not a financial burden.

This report can be found on PERC's Web site (www.perc.org) or can be purchased from PERC for \$5.

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