

VOLUME 22 NUMBER 4 DECEMBER 2004

PERC REPORTS

PROPERTY AND ENVIRONMENT RESEARCH CENTER



*VALLES CALDERA NATIONAL PRESERVE:
A new paradigm for federal land?*

FROM THE EDITOR

TRUSTS, MYTHS, AND A RETROSPECTIVE

One of PERC's longest-running proposals, which reaches back to 1982, is the idea of managing publicly owned parks and wilderness lands through nonprofit trusts. Originally formulated by PERC's Richard Stroup as a "wilderness endowment board," this approach offers a way to remove managers from direct political pressure and gives them the freedom to use market tools.

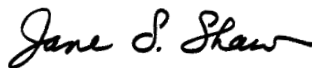
Congress has gingerly created a few trusts to manage public lands, the most recent and the largest of which is the Valles (pronounced Vi-yeh) Caldera National Preserve in New Mexico, formerly the Baca Ranch. Brian Yablonski, an adjunct fellow with PERC, visited it recently and shares his reactions in our cover article. As one would expect, the path for this trust is paved with uncertainty: Will the trust overcome the seductive political attractions (federal financing for fifteen years) and truly become self-sustaining? Yablonski raises the questions, but time will give the answers.

This issue of *PERC Reports* again finds us refuting myths. In "The Fable of Federal Regulation," Jonathan H. Adler, a 2004 Julian Simon Fellow at PERC, undermines the notion that national environmental laws stem from inaction and neglect by the states. Many people still think that wind energy is an environmentally benign alternative to oil and natural gas. Thomas Tanton, who has thirty years of experience in energy-related public policy, corrects the misinformation.

And then there is the story of the Dust Bowl. Why did the drought that extended through the 1930s have such a devastating impact on cropland, yet later droughts, which were just as severe, did not? Daniel Benjamin offers the answer in his "Tangents" column.

Finally, we have a gem—retrospective reviews of Margaret Thatcher's speeches. In her later years as Britain's prime minister, the "Iron Lady" raised some conservative eyebrows with her outspoken commitment to environmental protection. Enough time has passed to reconsider this legacy. We have two commentaries, one by former EPA assistant administrator G. Tracy Mehan and the other by Competitive Enterprise Institute policy analyst Iain Murray.

As usual, you can enjoy rich morsels from Linda Platts' "Greener Pastures" column as well as a letter that reflects on the lessons from our September issue. Enjoy this issue, and please don't forget to send in your check to support PERC.



From left: Yablonski, Adler, Tanton, Mehan, and Murray.



Property and Environment Research Center

2048 Analysis Drive, Suite A
Bozeman, Montana 59718-6829
Ph: (406) 587-9591 Fax: (406) 586-7555
perc@perc.org www.perc.org

PERC REPORTS

VOLUME 22 NO. 4 DECEMBER 2004

ISSN 1095-3779

Copyright © 2004 by PERC.

Editor

Jane S. Shaw

Associate Editor

Linda E. Platts

Production Manager

Dianna L. Rienhart

Art Director

Mandy-Scott Bachelier

Executive Director

Terry L. Anderson

Senior Fellows

Daniel K. Benjamin, David D. Haddock,
P. J. Hill, Donald R. Leal,
Gary D. Libecap, Robert E. McCormick,
Roger E. Meiners, Andrew P. Morriss,
Jane S. Shaw, Randy T. Simmons,
Richard L. Stroup, Walter N. Thurman,
Bruce Yandle

Administrative Director and Treasurer

Monica Lane Guenther

Editorial Associate

Linda E. Platts

Research Fellows

Holly L. Fretwell, Dominic Parker

Conference Coordinator

Colleen Lane

KCI Coordinator

Carol Ferrie

Art Director

Mandy-Scott Bachelier

Computer Operations

Michelle L. L. Johnson, Eric Julian,
Dianna L. Rienhart

Board of Directors

Thomas J. Bray, Chairman, *The Detroit News*
David R. Atkinson, *Atkinson & Co.*
Thomas E. Beach, *Beach Investment Counsel Inc.*
David G. Cameron, *Dana Ranch Co. Inc.*
Tyler Dann, *Wesfair Agency Inc.*
Kimberly O. Dennis, *D & D Foundation*
William A. Dunn, *Dunn Capital Management Inc.*
Joseph N. Ignat, *Blackburn Consultants LLC.*
Paul J. Ingrassia, *Dow Jones Newswires*
Dwight E. Lee, *Upland Associates LLC*
Andrew S. Martzloff, *Bitterroot Capital Advisors LLC*
E. Wayne Nordberg, *Hollow Brook Associates LLC*
George F. Ohrstrom, *The Ohrstrom Foundation Inc.*
Leigh Perkins, *The Orvis Company*
John F. Tomlin, *Conservation Forestry LLC*
Honorary Director
Vernon L. Smith, *ICES, George Mason University*

Cover Photo: Valle Grande, Valles Caldera National Preserve, Don J. Usner, photographer.

VALLES CALDERA NATIONAL PRESERVE

A NEW PARADIGM FOR FEDERAL LANDS?

By Brian Yablonski

Valles Caldera is something altogether different from a national park. It represents not only a fresh alternative to existing federal park and forest management, but a return to the original vision of national parks paying their own way. Whether that vision will be realized depends on how well VCNP responds to the market-based framework created by Congress.

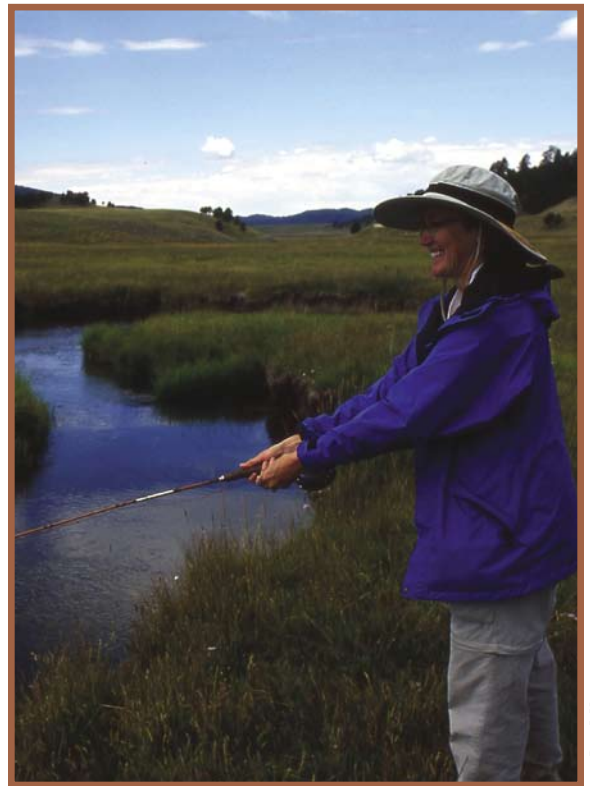
Standing on the slopes of Cerros Del Abrigo scanning the grasslands of the Valle Grande spread out below, you might feel as though you're looking down on the famed Lamar Valley of Yellowstone. Abundant elk herds feed in wide swaths of emerald grasses, and miles of prime trout streams give way to hillsides of ponderosa pine. Park-like forests provide cathedral lighting effects that reveal hot springs and prehistoric shards of glassy obsidian rock.

This dazzling landscape is part of the new Valles Caldera National Preserve (VCNP). After a short climb from the trailhead, my wife and I are perched on an old logging road sharing the view with an environmental studies professor we have just met from a small New England college. We comprise three of the five people scheduled to be on the mountain, an inspiring place that until recently could only be gazed on longingly by travelers, anglers, and hunters driving State Road 4.

Formerly private lands known locally as the Baca Ranch, the preserve consists of 89,000 acres situated high in the Jemez Mountains of New Mexico surrounded by the Santa Fe National Forest and Bandelier National Monument. Today this working cattle ranch is property of the United States. Fans of movie stars Tommy Lee Jones or Cate Blanchett would recognize its sweeping vistas from Ron Howard's 2003 western thriller, *The Missing*, where it served as the main homestead.

The similarities to Yellowstone are no coincidence. Both are scenes of ancient cataclysmic eruptions that created calderas, or collapsed volcanoes. Today, they are called hotspots where molten magma still reaches closest to the earth's surface. Additionally, after elk became extinct in New Mexico, 49 elk from Yellowstone were reintroduced here yielding a herd of approximately 4,500 today.

But the similarities end there. Valles Caldera is something altogether different from a national park. It represents not only a fresh alternative to existing federal park and forest management, but a return to the original vision of national parks paying their own way. Whether that vision will be realized depends on how well VCNP responds to the market-based framework created by Congress.



Don J. Usner

To achieve financial self-sufficiency, the trustees will have to generate revenue from the environmental marketplace. Unlike most other public lands, Valles Caldera will be allowed to keep the revenue it generates.

Fed up with the amount of western land being consumed by the federal government and managed by inefficient bureaucracies, New Mexico senator Pete Domenici worked to ensure that this environmental purchase would not be business as usual. He had good reason for concern. As PERC has reported consistently, national park funding has increased over the years, but even so the National Park Service reports a \$6 to \$9 billion backlog of unfunded maintenance, acquisition, and resource management projects (Fretwell 2004).

With most of their budgets coming from Congress, federal land managers traditionally work to satisfy the interests of politicians. They have little incentive to direct funding to its most appropriate uses, to find new sources of revenue, or to keep costs down to make ends meet.

The VCNP seeks to change the incentives by serving as a market-based experiment in public land management. Modeled after a business entity, the preserve has two features that distinguish it from our national parks and forests.

First, the Valles Caldera is managed by a legal entity called a trust, akin to a board of directors. Similar to the park and wilderness endowment boards first proposed by PERC in the 1980s (Stroup and Baden 1982), the trust in this case is comprised mostly of private citizens with responsibility both to protect the resource and to generate revenue to benefit the property. While trusts are new to federal conservation lands (Anderson and Fretwell 1999), as many as 1,300 local and regional land trusts already protect more than 6.2 million acres of open space in the United States (Land Trust Alliance 2000).

Federal experience in trustee management, however, is limited to the Presidio in San Francisco and the memorial to victims of the Oklahoma City bombings. The Valles Caldera is the largest use of a trust for federal land management and the first with the primary purpose of land conservation.

Congress created the Valles Caldera Trust with a nine-member board of trustees appointed by the president. The law requires trustee expertise in areas important to the trust's mission, such as livestock management, wildlife and fish management, and sustainable forestry. This will ensure that interests in the preserve are balanced and the most appropriate uses for the land considered.

Equal in importance to the management structure is the charge from Congress to make the preserve financially self-sustaining. If successful, the preserve will be funded solely from its own activities and decisions, much like any other business entity.

To achieve financial self-sufficiency, the trustees will have to generate revenue from the environmental marketplace. Costs will have to be contained, trade-offs between resources considered, visitor revenues increased by charging realistic fees and restricting access, and any additional revenues reinvested. Unlike most other public lands, the VCNP will be allowed to keep the revenue it generates. The pressure to become self-sufficient should also encourage entrepreneurship and creativity, while still upholding the preserve's mission of protecting Valles Caldera's distinctive landscape.

User fees and access restrictions will play an important role. In fact, the "sense of

solitude for visitors,” says VCNP communications director Julie Grey,¹ makes the preserve unique. In advance of our own visit to the preserve, my wife and I had to make a reservation to hike the Cerros Del Abrigo Trail. With only a dozen hikers allowed on the trail during our designated time, we gladly paid \$10 each to have the preserve to ourselves. Others pay for privately led photo excursions and fly-fishing clinics. In its first year of operation alone, access fees for elk hunting, trout fishing, and hiking grossed close to half a million dollars.

Congress also approved other revenue-generating uses not traditionally allowed in national parks. The act indicates that the preserve should continue functioning as a working ranch, yielding revenue from grazing fees, and that timber production can be part of the revenue mix. Other sources might include scientific and academic research grants, Hollywood, private fundraising, and lodging opportunities from existing buildings. Revenues from fees and other nonappropriated sources already cover roughly 16 percent of the actual operating expense.

Though not pure free market environmentalism, the trust approach goes a long way toward fostering free market environmentalist values in the public sector. But even at this early stage, opportunities to get the incentives right have been missed.

For one, Congress gave the preserve fifteen years of guaranteed dependence on federal subsidies. This hardly provides the incentive to move fast on revenue or to contain costs (Fairfax, Gwin, and Huntsinger 2004, 469). And if the preserve fails to become self-sustaining in fifteen years, it can request a continuation of federal funding beyond the deadline. After twenty years of federal funding the trust itself may be terminated; if so, management would revert to the Santa Fe National Forest, which just happens to have a seat on the trust.

In 2003, the trust was required to submit a fifteen-year plan outlining how it would decrease its appropriated funds from Congress.² The trust produced a disappointingly short product, conceptual in nature with no true financial plan for meeting its revenue-enhancing or cost-cutting obligations. In fact, the plan focuses mostly on the notion that there will have to be federal increases

in spending to support infrastructure development.

And even at this early stage, the trust appears to be hedging. Describing “federal overhead costs” such as compliance with the National Environmental Policy Act, cultural interaction with local pueblos, and public outreach, the trust concludes that “it may prove reasonable for continuing appropriations to cover these costs” (VCNP 2003).

Lastly, although many environmental and recreational advocates worked hard to include the Valles Caldera among the nation’s publicly protected treasures, few have stepped forward to organize much-needed private financial support. The preserve is now in its fourth year of operation and no 501(c)(3) support organization or friends group has emerged to help raise funds.

Admittedly, it is early, and there is still hope these issues won’t prove fatal. The Valles Caldera National Preserve has established a framework for environmental entrepreneurship. Now only time and resolve will determine if the public land managers can behave like free market environmentalists.

NOTES

1. Julie Grey, VCNP communications director, personal conversation, Sept. 30, 2004.
2. Valles Caldera Preservation Act 2000, Public Law 106-248.

REFERENCES

- Anderson, Terry, and Holly Lippke Fretwell. 1999. A Trust for Grand Staircase-Escalante. *PERC Policy Series*, PS-16. Bozeman, MT: PERC.
- Fairfax, Sally K., Lauren Gwin, and Lynn Huntsinger. Presidio and Valles Caldera: A Preliminary Assessment of Their Meaning for Public Resource Management. *Natural Resources Journal* 44(2): 445–73.
- Fretwell, Holly Lippke. 2004. Public Land Management. In *2004 Index of Leading Environmental Indicators*, 9th ed., by Steven Hayward. San Francisco and Washington, DC: Pacific Research Institute and the American Enterprise Institute, 65–74.
- Land Trust Alliance. 2000. *National Land Trust Census*. Washington, DC.
- Stroup, Richard L., and John Baden. 1982. Endowment Areas: A Clearing in the Policy Wilderness? *Cato Journal* 2(3): 691–708.
- Valles Caldera National Preserve. 2003. Draft Framework and Strategic Guidance for Comprehensive Management. Chapter 5, Stewardship: The Values of the Trust and Our Vision for How We Will Conduct Our Business. Los Alamos, NM.

Brian Yablonski is an adjunct fellow with PERC and a Florida Fish and Wildlife Conservation Commissioner.

THE FABLE OF FEDERAL REGULATION

NO, STATES WEREN'T IGNORING ENVIRONMENTAL PROBLEMS

By Jonathan H. Adler

Throughout the 1950s and 1960s, state and local governments began to recognize the importance of environmental quality and adopted first-generation environmental controls.

I You've heard the story. Industrialization and economic growth laid waste to the American environment through much of the twentieth century. Common law-based environmental protections were ineffective, and state and local governments were unable or unwilling to address environmental concerns. As a result, environmental quality was in continuous decline until comprehensive federal legislation was adopted in the late 1960s and early 1970s. The infamous 1969 Cuyahoga River fire and the massive oil spill off the coast of Santa Barbara focused public attention on the nation's environmental plight and helped spur the passage of needed federal environmental laws.



www.photostogo.com

This is the conventional account of the origins of federal environmental law. It is a story often told to explain how the nation moved from a mix of property-based, common law rules and state and local regulations to a sprawling federal regulatory apparatus. But it is wrong. The conventional narrative of the origins of federal regulation is a fable.

Contrary to common perceptions, many measures of environmental quality were already improving prior to the advent of federal environmental laws. The Environmental Protection Agency's first national water quality inventory, conducted in 1973, found that there had been substantial improvement in water quality in major waterways during the decade before adoption of the federal Clean Water Act, at least for the pollutants of greatest concern at the time, organic waste and bacteria (Freeman 1990, 114).

Throughout the 1950s and 1960s, state and local governments began to recognize the importance of environmental quality and adopted first-generation environmental controls. Some states' efforts were more comprehensive and more successful than others, and different states had different priorities. Environmental protection did not always trump health care, education, or other local concerns. Nonetheless, by 1966, every state had adopted water pollution legislation of some sort.

A similar pattern of state and local action preceded federal regulation in other

areas as well. Federal regulation of wetlands, for example, began after a federal district court interpreted the Clean Water Act to require it in 1975. But state and local regulation had begun much earlier. In 1963, Massachusetts became the first state to regulate wetland development, modeling its initial efforts on preexisting local rules. By 1975, all fourteen states in the continental United States with more than ten percent of their land area in wetlands adopted wetland protection measures (Adler 1999).

The story of air pollution control follows a similar pattern. Cincinnati and Chicago became the first cities to adopt effective smoke control ordinances in 1881, and action by cities increased dramatically after the Second World War. In some cities, such as Pittsburgh, the business community played a leading role in supporting such regulation. State regulations followed in much of the country.

Indeed, the rate of improvement for some pollutants was greater before the adoption of federal controls than after. Robert Crandall (1983, 19) of the Brookings Institution found that pre-federal air pollution control efforts were more successful than is typically assumed, as have Indur Goklany (1999) and Paul Portney (1990, 51) of Resources for the Future.

Why didn't states act even earlier? In the 1950s, let alone the 1910s or 1930s, environmental issues did not yet rank as high as concerns for economic development, technological progress, and other social ills. Many things recognized as environmental problems today were of little concern 30 or 50, let alone 100, years ago. An industrial river was often seen as a sign of progress; the prismatic pools of oil and chemicals on the water's surface were a sign of prosperity, not of waste and abuse.

Policy makers at all levels of government knew little about the health effects of pollution and paid them little heed. While many environmental problems are obvious in hindsight, the nature and extent of these problems were not always readily apparent at the time. Wetlands are appreciated for their tremendous ecological value today, but for much of the nation's history they were deemed nuisances, and the federal government subsidized their destruction. Insofar as environmental protection was an

item on the public agenda before 1969, concern focused on sanitation and drinking water, not recreational or aesthetic values. Once the demand for greater pollution control emerged, action began.

If neither state and local failures nor ever-deteriorating environmental quality caused the adoption of federal regulation, what did? I suggest that four factors played a role.

First, the nation's environmental consciousness increased dramatically during the post-World War II period, particularly in the 1960s. Despite substantial progress, significant environmental problems remained, many of which had gone unrecognized for decades. As America became more affluent, the demand for environmental quality increased dramatically. At the same time, best-selling books such as *Silent Spring* popularized the notion that modern industrial activity posed a mortal environmental threat. This environmental awareness really began in the 1960s, culminating in the first Earth Day in 1970 and the passage of numerous federal environmental statutes.

A second factor is the nationalization of American politics—a phenomenon encouraged by the growth of the national media. The Santa Barbara oil spill, the 1969 Cuyahoga fire, and other environmental events in the 1960s and 1970s became national events because they could be broadcast nationally. Even though earlier river fires caused millions of dollars in damage and killed many people, they were not national events. Stories, and more importantly pictures, of such events were now distributed widely. Even if conditions were improving locally, one could always find a picture in a newsmagazine or on the nightly news to suggest that somewhere else environmental conditions were getting worse.

A third factor was that arguments for federalism and local control fell into disrepute just as there was a call for greater federal regulation. Federalism and "states' rights" were often seen as smokescreens designed to preserve racial segregation—and in many cases this perception was accurate. Although there were legitimate constitutional principles at stake, the association of federalism with racism delegitimized these principles for a generation.

Arguments for federalism and local control fell into disrepute just as there was a call for greater federal regulation. Federalism and “states’ rights” were often seen as smokescreens designed to preserve racial segregation—and in many cases this perception was accurate.

Appeals to state autonomy simply did not have the legitimacy they once had in American politics. If a state couldn’t be trusted to protect its citizens, how could it be trusted to protect its land, air, water, and wildlife?

A fourth, and often overlooked, factor is rent-seeking—the search for favors by special interest groups. Economic and regional interests could gain by shifting environmental policy to the federal level. Perhaps the most prominent example is the adoption of federal vehicle emission standards. Once California started down the road to stringent emission standards for new automobiles sold within the state, the nation’s automakers became concerned that other states could follow suit, resulting in a proliferation of varying state standards. Detroit pushed for federal automobile standards to preempt such state standards (Elliott et al. 1985). This is not an isolated example. In many other areas, ranging from the regulation of coal-fired power plants to standards for evaporative emissions from paint, large national corporations and regional interests have benefited from the imposition of national standards.

The oft-told explanation for federal environmental legislation—that ever-deteriorating environmental quality made federal regulation necessary—does not fit the historical record. Rather, a mix of factors led to the adoption of federal environmental laws, even though environmental quality was already improving in many respects. With a better understanding of the sources of federal regulation, perhaps we can reevaluate the current federal role and explore alternative means of ensuring environmental protection.

REFERENCES

- Adler, Jonathan H. 1999. Wetlands, Waterfowl, and the Menace of Mr. Wilson: Commerce Clause Jurisprudence and the Limits of Federal Wetland Regulation. *Environmental Law* 29: 41–54.
- Crandall, Robert W. 1983. *Controlling Industrial Pollution: The Economics and Politics of Clean Air*. Washington, DC: Brookings Institution.
- Elliott, E. Donald, et al. 1985. Toward a Theory of Statutory Evolution: The Federalization of Environmental Law. *Journal of Law, Economics & Organization* 1: 330–33.
- Freeman, A. Myrick, III. 1990. Water Pollution Policy. In *Public Policies for Environmental Protection*, ed. Paul Portney. Washington, DC: Resources for the Future, 97–149.
- Goklany, Indur. 1999. *Clearing the Air: The Real Story of the War on Air Pollution*. Washington, DC: Cato Institute.
- Portney, Paul R. 1990. Air Pollution Policy. In *Public Policies for Environmental Protection*, ed. Paul Portney. Washington, DC: Resources for the Future, 27–96.

Jonathan H. Adler is associate professor and associate director of the Center for Business Law and Regulation at the Case Western Reserve University School of Law. In 2004 he was a Julian Simon Research Fellow at PERC. This essay is adapted from a longer article forthcoming in the Case Western Reserve Law Review.

A WHIRLWIND OF TROUBLES

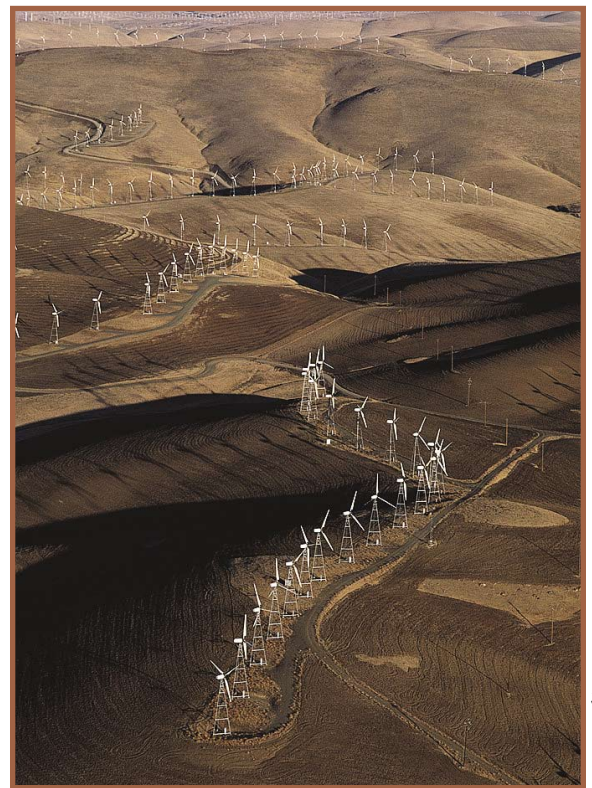
ENVIRONMENTAL, OPERATIONAL, AND FINANCIAL PROBLEMS

By Thomas Tanton

Electricity consumers who want reliable delivery and who are truly concerned about the environment should question wind power's preferential treatment. Wind energy is environmentally harmful and costly to taxpayers. Furthermore, its expansion could adversely affect the nation's electricity transmission system.



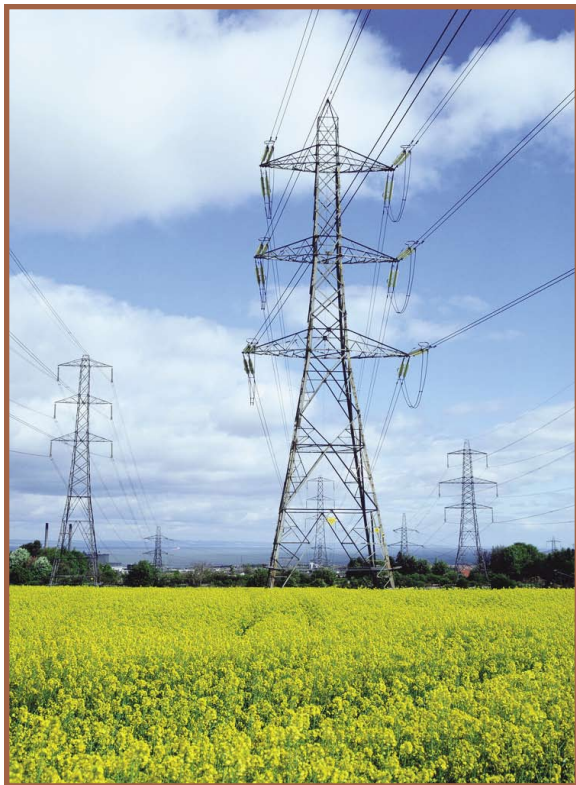
Wind energy is growing rapidly because environmentalists think it has environmental benefits and the government has given it large tax incentives. But electricity consumers who want reliable delivery and who are truly concerned about the environment should question this preferential treatment. Wind energy is environmentally harmful and costly to taxpayers. Furthermore, its expansion could adversely affect the nation's electricity transmission system.



In the United States, the most significant federal incentive for wind energy is the production tax credit (PTC). For each kilowatt-hour of energy produced, this compensates the producer by 1.8 cents. With typical electricity production costs at about 2–4 cents per kilowatt-hour, this is a subsidy of between 50 and almost 100 percent. Although it expired, in October Congress passed a bill extending the credit for one year and expanding it to include a number of additional renewable resources.

Other governmental edicts are even more powerful. Fifteen states have enacted renewable portfolio standards (RPS). These require private utilities to supply a certain percentage of electricity from specified renewable energy technologies. Wind development is the major beneficiary since it typically is the least expensive among renewables, which include solar, biomass, and geothermal. Wind still remains more expensive and less dependable than traditional sources, however.

In spite of subsidies and rapid recent growth, wind power represents a minuscule portion of energy production. At the end of 2003, U.S. wind energy capacity reached 6,374 megawatts (MW), and about 500 MW may be added this year. Projects now under construction or negotiation may add



All in all, expanded development of wind generation is likely to create additional and negative environmental consequences, and also discourage investment. Federal policy should not be encouraging wind power through continuation of the production tax credit.

3,000 MW of wind capacity in the U.S. over the next five years (AWEA 2004a, 2004b).

This amount is dwarfed by the installed electrical capacity for the nation of 953,205 MW (EIA 2004) Thus, wind provides about one and a half per cent of the nation's electricity generation capacity. But because it produces energy only intermittently (when the wind blows within certain speeds), it actually produces only about two-tenths of one percent of the nation's electrical energy.

The U.S. Department of Energy has announced a goal of obtaining 5 percent of U.S. electricity from wind by 2020, but the debate over the long-term future of the production tax credit could keep that from happening.

In spite of its relatively advantageous price, wind power is not likely to become a major source of energy. Its disadvantages include its intermittent output (which it shares with solar energy), the need to build massive transmission lines to convey it, environmental problems, and its impact on the transmission system itself. The nation's wind resources—that is, places that are windy enough on a regular basis—are generally distant from centers of electricity demand. To bring significantly more wind-generated electricity to where it is used, new transmission lines must be built. Most will cover remote areas, many of them environmentally sensitive.

Wind resource areas are often correlated with migratory bird flyways. So not only will giant wind turbines themselves create additional risk for migratory birds, but the impact will be multiplied by the additional transmission lines directly in their paths. The construction of these transmission lines will create a new "sprawl" that encroaches on important habitat as much as urban sprawl does.

Already, siting of transmission lines is very contentious and fraught with local opposition. It can take two to five times as long to site and build transmission lines as it does to site and build new electricity generation capacity—often ten years or more. Siting will likely become even more difficult as transmission lines built to serve wind farms increasingly encroach on environmentally sensitive areas.

Construction of transmission lines requires heavy equipment, new roads, significant materials, as well as construction activities that will conflict with wildlife and ecosystems. The transmission line right-of-way needs to be kept free of tall trees

to avoid fires and power outages. Even one tree growing tall enough to touch power lines can wreak havoc over wide areas. A famous outage affecting the eleven western states in 1996 has been traced to just such an event.

The increased conflict that will occur due to bird interactions with transmission lines is troubling for more than the birds. Birds have been the cause of a widespread electrical outage near Phoenix and damaging range fires near Santa Clarita in California (Tobin 2004; CNN 2004). And for those concerned about property rights, the increase in transmission lines increases the role of eminent domain in taking individually owned property to obtain right-of-way.

Already, the transmission system is unable to keep up with demand for electricity. Among the various parts of the electrical system, transmission has suffered the lowest level of investment. One reason is that transmission capacity is inherently costly. It has to be large enough to carry a lot of electricity at peak times, but most of the time the electricity flowing through is low. It is as if major freeways were built for only a few days of use. (Unfortunately, the traffic is heaviest when consumers need electricity the most, due to high temperatures or other factors.)

In addition, the Federal Energy Regulatory Commission (FERC), the agency that oversees transmission across state borders and regulates investment returns, typically allows firms a regulated return only in the 9 percent range, even though a return in the 15 to 18 percent range is necessary in today's investment climate to stimulate construction of new capacity. Estimates of the investment required to modernize the electric grid in just the eleven western states range upwards of \$30 billion (EPRI 2001).

Wind's low capacity factor (that is, the low percentage of time it actually is working) and poor correlation with load (because of its long distances from population centers and the fact the wind often blows at times when electricity demand is low) further reduce the already low annual average loading of transmission lines. Adding significant amounts of wind will only push the total costs upward due to the spread-out nature of wind de-

velopment, while making any investment less likely due to environmental concerns and operational difficulties.

Meanwhile, the ability of our system to handle the heavy flows that occur only a few times during the year is decreasing. The nation's transmission network is already the primary cause of power outages. Additionally, utility companies maintaining the electrical power grid must meet a new requirement—that the wires to the customer be available for delivering power produced by others who don't maintain the delivery network. In the case of wind (and often solar as well), FERC has placed the costs of those requirements on the transmission owner, not the wind generator. In most other cases, transmission upgrade costs are borne by those who create the need.

All in all, expanded development of wind generation is likely to create additional negative environmental consequences and also discourage investment. Federal policy should not be encouraging wind power through continuation of the production tax credit. It should focus instead on educating the public about the ancillary impacts of various energy sources.

REFERENCES

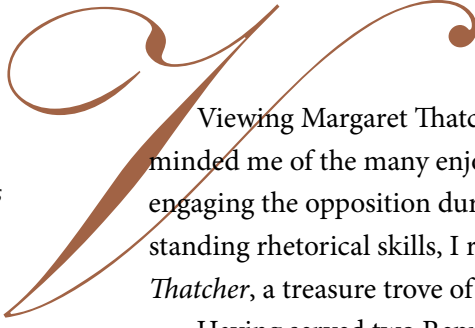
- American Wind Energy Association. 2004a. First Quarter Report: Wind Industry Trade Group Sees Little to No Growth in 2004, Following Near-Record Expansion in 2003. Press release, Washington, DC, May 12. Online: www.awea.org/news/news0405121qt.html.
- . 2004b. Wind Industry Statistics. Online: http://www.awea.org/faq/tutorial/wwt_statistics.html (cited June 2004).
- CNN. 2004. No Letup for Firefighters in California, July 19. Online: www.cnn.com/2004/US/West/07/19/wildfires/index.html (cited November 2004).
- Energy Information Administration. 2004. Electricity Generating Capacity 2002–2003. Online: eia.doe.gov/cneaf/electricity/page/capacity/capacity.html (cited July 2004).
- EPRI. 2001. The Western States Power Crisis: Imperatives and Opportunities. EPRI White Paper. Palo Alto, CA, June.
- Tobin, Mitch. 2004. Power Cut Off to 35,000 in Southern Arizona. *Arizona Daily Star*, June 15.

Thomas Tanton is the principal of T² & Associates, an energy consulting firm, and a senior adjunct fellow with the Institute of Energy Research. He has spent more than thirty years evaluating public policy related to energy, the environment, and the economy.

MARGARET THATCHER: A CONSERVATIVE ENVIRONMENTALIST

Margaret Thatcher, British prime minister from 1979 to 1990 and leader of Britain's Conservative Party, surprised some observers with her outspoken positions on the environment. With the passage of time, her statements and policies can be analyzed more objectively, as two knowledgeable commentators do here.

By G. Tracy Mehan, III



Viewing Margaret Thatcher's poignant eulogy to President Reagan last June reminded me of the many enjoyable hours I spent watching the former prime minister engaging the opposition during "question time" in Parliament. Recalling her outstanding rhetorical skills, I reached for my copy of *The Collected Speeches of Margaret Thatcher*, a treasure trove of her eloquence on political and philosophic issues.

Having served two Republican presidents and an equal number of GOP governors in the area of natural resources and the environment, I was pleased and surprised to see several entries in the index under the heading "environmental concerns." Upon checking the references, I learned that during her later years as prime minister, Margaret Thatcher focused on a variety of global environmental issues—ozone depletion, climate change, land preservation, tropical rainforests, and pollution—while not relenting at all in her critique of socialism and statism. These speeches underscore her commitment to conservation of the natural world, the hallmark of a true conservative. As Robin Harris, a Thatcher advisor and editor of *The Collected Speeches*, notes, "the most enduringly significant passages are those in which she justifies Conservative policies against the (recurring) charges of materialism and selfishness" (334).

Thatcher summed up what she believed to be the Tory philosophy on environmental protection in an October 1988 speech to the Conservative Party Conference in Brighton: "No generation has a freehold on this earth. All we have is a life tenancy—with full repairing lease. This Government intends to meet the terms of that lease in full" (341).

A month before, she gave an address to the Royal Society in which she outlined the government's shift to supporting basic science, leaving commercially oriented research to the private sector. She stated her support for the concept of "sustainable economic development" whereby "[s]table prosperity can be achieved throughout the world provided the environment is nurtured and safeguarded" (332). Citing progress in reducing air and water pollution, she acknowledged the costs, but stated her belief that it was "money well and necessarily spent, because the health of the economy and the health of our environment are totally dependent upon each other" (332). This speech reveals Thatcher to be apprehensive about mankind's impact on the global environment, expressing the concern that "we have unwittingly begun a massive experiment with the system of this planet itself" (331).

More European than American in her environmental sensibilities, Thatcher supports land-use planning with "green belts," the British equivalent of "smart growth." She calls for a global convention on climate change. Yet she also expresses a more traditional conservatism: "There is something deeper in us, an innate sense of belonging, of sharing life in a world that we have not fully understood" (356). Citing the

pictures of barren planets sent back by Voyager 2, she expresses awe at the “solemn reminder that our planet has the unique privilege of life . . . The more we master our environment, the more we must learn to serve it” (356).

In subsequent speeches to the United Nations General Assembly (November 1989), the Conservative Central Council (March 1990) and the Aspen Institute (August 1990), the prime minister proposes ambitious environmental ends but practical, market-based means. In the United Nations speech she speaks of battling to preserve life itself and describes the environmental impacts of humanity as “new in the experience of earth.” She asserts that “the scale of damage” is what is different today (363).

Thatcher, who read chemistry at Oxford, argues for immediate action on climate change despite still evolving science. In her talk to the Aspen Institute, she maintains that “the cost of doing nothing, of a policy of wait and see, would be much higher than those of taking preventive action now to stop the damage getting worse” (411).

But Thatcher does not give in to pessimism or to fashionable opposition to industrialism, technology, or economic growth. Before the Conservative Party Conference in October 1989, she noted “The way we generate energy; the way we use land; the way industry uses natural resources and disposes of waste; the way our popula-

tions multiply—those things, taken together are new in the experience of the earth . . . It is no good proposing that we go back to some simple village life and halve our population by some means which have not been revealed, as if that would solve all our problems” (355–56).

Far from viewing multi-national companies as villains, she sees them as the entities that will find the solutions. Capitalism is “a friend and guardian” of the environment. The prime minister rightly states that “[a]s more people own property, so more people have an incentive to protect it from pollution” (382).

Contemporary American conservatives may disagree with Margaret Thatcher’s specific policy positions, say, on climate change or land use. Her views may have evolved as the science and economic analysis progressed on this or that particular matter. Nevertheless, her underlying principles of stewardship deserve further study by all conservatives be they paleo-, neo- or libertarian.

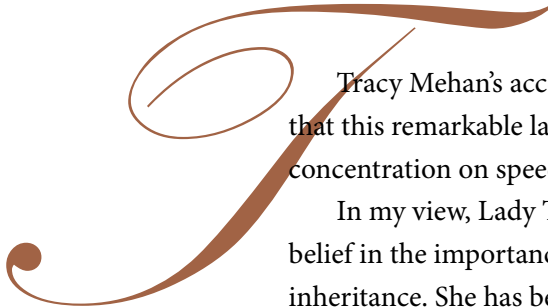
REFERENCE

Thatcher, Margaret. 1997. *The Collected Speeches of Margaret Thatcher*, ed. Robin Harris. London: HarperCollins.

G. Tracy Mehan III was assistant administrator for water at the Environmental Protection Agency. Currently, he is a principal of The Cadmus Group, Inc., an Arlington, Virginia, environmental consulting firm.

MARGARET THATCHER: A FREE MARKET ENVIRONMENTALIST

By Iain Murray



Tracy Mehan’s account of Margaret Thatcher’s approach to the environment reminds us that this remarkable lady was both concerned and informed about the issues. Yet Mehan’s concentration on speeches in 1988–90 means that a wider context is missing.

In my view, Lady Thatcher’s approach to the environment is as deeply connected to her belief in the importance of the free market as it is to her belief in tradition and our shared inheritance. She has been consistent in her belief that when the two come into conflict, we should not be blinded by our love of the latter into sacrificing the former. This became all the more apparent to her as she realized the real motives of some of her initial allies.

As Thatcher explains in her autobiography’s first volume, *The Downing Street Years* (1993), she “always drew a clear distinction” between different sorts of environmental concerns (638–39). Many were primarily local concerns that she believed could be addressed through the privatization of badly run municipal services. She also inherited state-run

programs that she saw through to success, including the cleanup of Britain's rivers (although the hugely successful private cleanup of London's River Wandle shows that those programs could well have been run privately).

Then came concerns about land use and overdevelopment. On this subject she stood close behind one of her chief political allies, her secretary of state for the environment, Nicholas Ridley. As she summed up the issue: "If people were to be able to afford houses there must be sufficient amounts of building land available. Tighter planning meant less development land and fewer opportunities for home ownership" (638). (She also supported Ridley against what she called the "romantics and cranks" of the "environmental lobby" [758].)

Yet Thatcher saw traditional environmental concerns as very different from "the quite separate question of atmospheric pollution." There her background as the only major world leader to be a trained scientist drove her approach. As she said: "There had always to be a sound scientific base on which to build—and of course a clear estimation of the cost in terms of public expenditure and economic growth foregone—if one was not going to be thrust into the kind of 'green socialism' which the Left were eager to promote" (639).

This issue was complicated by the nature of British science funding. Prior to Thatcher's intervention, most government science funding supported industry, which engaged in extensive lobbying. But she thought that industry should pay for research and development, and directed government science funds to universities and scientific institutes.

In her latest book, *Statecraft* (2002, 449–58), Thatcher devotes ten pages to the subject of "Hot Air and Global Warming." Thatcher is quite clear that she feels things have gone in the wrong direction since former British ambassador to the United Nations-turned-global-warming-campaigner Sir Crispin Tickell convinced her to tell the Royal Society, "it is possible . . . we have unwittingly begun a massive experiment with the system of this planet itself." She notes that the doomsters' favorite subject today is climate change, which "provides a marvelous excuse for worldwide, supra-national socialism" (449).

Thatcher's critics might claim that she has—to use a fashionable term—flip-flopped on the issue, but that is not necessarily the case.

First, she stresses that she was initially skeptical of the arguments about global warming, although she thought they deserved to be treated seriously. She points out that there was "rather little scientific advice available to political leaders from those experts who were doubtful of the global warming thesis" (451). However, by 1990, she had begun to recognize that the issue was being used as a Trojan horse by anti-capitalist forces. That is why she took pains in her Royal Society speech in 1990 to state: "Whatever international action we agree upon to deal with environmental problems, we must enable our economies to grow and develop, because without growth you cannot generate the wealth required to pay for the protection of the environment" (452). In fact, Thatcher makes it clear that she regards global warming less as an "environmental" threat and more as a challenge to human ingenuity that should be grouped with challenges such as AIDS, animal health, and genetically modified foods. In her estimation,

All require first-rate research, mature evaluation and then the appropriate response. But no more than these does climate change mean the end of the world; and it must not either mean the end of free-enterprise capitalism. (457)

As Tracy Mehan implies, Thatcher's environmentalism is founded on Edmund Burke's conservative view of our inheritance as being worth defending. Yet that view is tempered by her classical liberal belief that human wealth and progress are crucial. That is why Lady Thatcher can be described as a true free market environmentalist.

REFERENCES

Thatcher, Margaret. 1993. *The Downing Street Years*. London: HarperCollins.
———. 2002. *Statecraft*. London: HarperCollins.

Iain Murray is a senior fellow at the Competitive Enterprise Institute in Washington, D.C., where he specializes in the debate over climate change and the use and abuse of science in the political process.

By Linda E. Platts

COFFEE OF THE HIGHEST STANDARD

If you are sipping a latte somewhere in the vast Starbucks empire, you can rest assured that the corporation is moving steadfastly toward more environmentally friendly practices. Chief Executive Orin Smith says he has launched an aggressive plan to ensure that coffee purchased by Starbucks comes from farms that follow strict rules to reduce deforestation and pesticide use.

In the past, the company has been hard hit by boycotts and bad publicity that have severely dampened business at its more than 8,500 coffee shops. Most recently the company was “tapped as a bad corporate citizen” in England by the charity Oxfam. Since then, it has been working closely with farms in a coffee-growing region of Ethiopia.

The company already pays a premium on the coffee beans that it buys from Latin America and Asia, which it says provides an incentive for plantations to plant shade trees and limit pesticide use. Starbucks has paid an average of \$1.20 a pound for coffee during the last three years, while the New York Board of Trade recently listed coffee at 77.7 cents per pound. These higher prices make Starbucks the company that everyone wants to do business with, which in turn gives it a great deal of leverage in how the coffee is grown.

In consultation with Conservation International, a non-profit environmental group, and Scientific Certification Systems, an independent environmental and food safety evaluation and certification program, Starbucks developed the Coffee and Farmer Equity Practices Program (C.A.F.E.). Using these standards, the groups will be able to audit grower practices.

By 2007, Starbucks expects that 60 percent of the coffee it buys will meet C.A.F.E. standards, and after that Smith says it intends to keep raising that percentage.

—Reuters News Service

BAMBOO SPROUTS IN MEXICO

Pioneer bamboo producers in Mexico are hoping to turn the tables on China and become one of the world’s largest producers of bamboo. Although the fact is not widely known, bamboo is actually a grass, which has long grown wild throughout many parts of Mexico.

Bamboo is a versatile fiber that can be used in paper, clothing, as fuel, and even in the manufacture of musical instruments. People also eat bam-

Linda E. Platts is PERC’s editorial associate and Web site manager (www.perc.org). “Greener Pastures” showcases market approaches to environmental protection and natural resource use.



boo. Preserved bamboo shoots are imported from China in jars and cans.

Bamboo is also widely used in construction. The shoots, or perhaps more accurately timbers, can grow up to 100 feet tall and are considered as strong as steel, yet more flexible. In the Mexican state of Veracruz, bamboo is used to build low-income housing at about one-third the cost of conventional construction.

Considered an environmentally friendly product, bamboo conserves water and prevents erosion. It grows quickly in a wide variety of climates and can be used easily in reforestation efforts.

Currently, China produces half of the bamboo sold on the global market, which experts estimate at \$10 billion annually. That figure is expected to double in the next 10 years.

It takes about three years for a farmer to develop a productive bamboo plantation. To jump-start production, a private group in Veracruz, Bambuver, is promoting the bamboo industry and actively teaching people how to grow it, process it, and profit from it.

Importing bamboo from Mexico would be quicker and cheaper for both the United States and Europe. In fact, fresh bamboo shoots could be sent to market, rather than processed and preserved ones.

Creating a bamboo industry in Mexico will take time and education, but profits are nearly guaranteed according to the Bambuver group. Land that appears useless for other crops could be turned to bamboo production.

One elderly coffee grower has long known the profitable side of bamboo. He has surrounded his organic coffee plot with the type of bamboo used in scaffolding and supplements his income while providing shade for his coffee.

—*Planet Ark*

MINING THE WASTE

By some estimates, mining waste has polluted the headwaters of 40 percent of the West's watersheds. Forest Service Chief Dale Bosworth says that cleaning up as

many as 38,000 abandoned mines on national forests is a high priority, but certainly not one that his agency can tackle on its own.

Ironically, the Superfund law has made cleanup efforts even more difficult by discouraging private entities from attempting any cleanup on their own land. One provision of the law makes anyone who cleans or re-mines a mine waste site liable for all the pollution.

Drainage from old mines is a chronic problem in many western communities. Combined with a drought that is now in its sixth year and a population boom in the Rocky Mountain West, the struggle for clean water sources has only worsened. Acidic run-off from thousands of waste piles continues to drain into nearby streams, carrying with it heavy loads of zinc, lead, cadmium, and sometimes mercury. These heavy metals can end up in fish, making them potentially dangerous for human consumption. Fishing advisories are not uncommon on western streams.

A possible solution to the problem has been devised by the Forest Service, Trout Unlimited, Utah's Snowbird ski resort, and Tiffany & Company. Yet this public-private partnership hinges on a liability waiver from the Environmental Protection Agency.

With that waiver in hand, the four groups will move forward with cleanup of the American Fork Canyon. Most of the pollution originates from a single mine on the Snowbird property. The chairman of Tiffany had heard of the project and was willing to kick in \$100,000 to help Trout Unlimited hire an engineer to speed the cleanup process. Initially begun in 1999 on Forest Service land, the project accomplished little without working at the pollution source located on adjacent land belonging to the private resort.

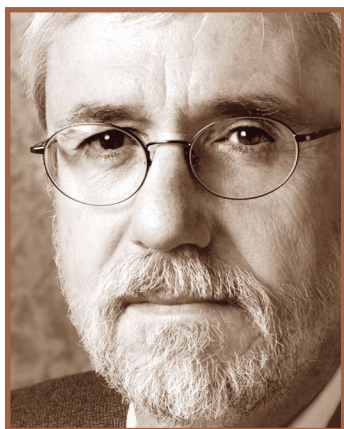
Bosworth is hopeful that similar projects will follow. Because of the patchwork nature of land ownership with private and government lands closely intermingled, such public-private partnerships are the only feasible way to clean up thousands of old mining sites. While these mines flourished from about 1870 to 1920, now their only contribution is acidic waste to mountain streams.

—*Associated Press*

economist, *n.* a scoundrel whose faulty vision sees things as they really are, not as they ought to be.

—after Ambrose Bierce

Daniel K. Benjamin is a PERC senior fellow and professor of economics at Clemson University. This regular column, “Tangents—Where Research and Policy Meet,” investigates policy implications of recent academic research. He can be reached at: wahoo@clemson.edu.



The Dust Bowl of the 1930s was one of the worst environmental crises to strike twentieth century North America. Severe drought and wind erosion ravaged the Great Plains for a decade. Yet there were comparable droughts in the 1950s and 1970s with no comparable degree of erosion. The mystery of the huge contrast between the 1930s and later droughts now appears to be solved (Hansen and Libecap 2004).

The strong winds that accompanied the drought of the 1930s blew away 480 tons of topsoil per acre, removing an average of five inches of topsoil from more than 10 million acres. The dust and sand storms degraded soil productivity, harmed human health, and damaged air quality. As Donald Worster, the leading historian of the Dust Bowl, put it, “In no other instance was there greater or more sustained damage to the American land . . .” (Worster 1979, 24).

The standard explanation for the Dust Bowl is that excessive cultivation of the land in the 1930s exposed dry soil to the wind. But the mystery has been this: Why was cultivation so much more extensive, and the use of erosion control techniques so limited, during the 1930s?

Zeynep K. Hansen and Gary D. Libecap show that small farm size was the answer. Small farms engage in more intensive cultivation and less frequent use of conservation practices than do large farms. This is because on small farms compared to large farms, much more of the soil conservation and erosion control benefits from strip fallowing and windbreaks redound to the benefit of other landowners. Hence small farmers are much less likely to engage in these practices; the result is far more erosion during periods of drought. In principle, the small farmers of the 1930s could have voluntarily banded together to jointly agree on the use of best practices in soil conservation. But this would have required contracts among thousands of landowners spanning hundreds of thousands of acres—a daunting proposition at best.

The inauguration of soil conservation districts in 1937 proved to be the turning point. These districts were local government units created under state laws patterned after a federal model statute. The districts had the legal authority to force farmers to comply with recommended erosion control practices, and they had the resources, in the form of subsidies, to cover the costs of erosion control. Within districts, individual farmers entered into contracts with the federal Soil Conservation Service (SCS) to cooperate in reducing soil erosion. In return the SCS provided the equipment, seeds, fencing, and personnel needed for erosion control.

The standard explanation for the Dust Bowl is that excessive cultivation of the land in the 1930s exposed dry soil to the wind. But the mystery has been this: Why was cultivation so much more extensive, and the use of erosion control techniques so limited, during the 1930s?

The program also made it possible for a majority of farmers in a district to collectively impose erosion control regulations on all farmers in the district. And finally, farmers who participated in soil conservation programs were subsidized by the federal government. Substantial payments from the Agricultural Adjustment Administration (AAA) went to farmers who engaged in approved erosion control practices. Taken together, these programs alleviated erosion during the late 1930s and, when the subsequent droughts of the 1950s and 1970s arrived, they helped ensure that the devastating erosion of earlier years never got started.

Although the federal government played a pivotal role in promoting soil conservation and thus ending the Dust Bowl, certain caveats are in order. First, small farms were the source of the erosion problems of the 1930s. Hansen and Libecap show that if farms had been 1,500 acres in size rather than their actual 500 acres, farmers individually would have adopted the very practices that were subsequently imposed by soil conservation districts. This is important because the preponderance of small farms in the Great Plains was itself largely a legacy of federal policy—the Homestead Act, which limited claims to 160–320 acres when the region was settled between 1880 and 1925.

Also worthy of note is that farm size in the Great Plains has since grown enormously. Between the mid-1930s and the mid-1960s, for example, farms doubled in size and they are even larger today. The greater average size of Great Plains farms, combined with the smaller numbers of Great Plains farmers, imply that the problems for which soil conservation districts were designed have grown less significant. The incentive to undertake appropriate erosion control is much greater on larger farms, and the costs of coordinating the actions of fewer farmers are less. Yet soil conservation districts (renamed “natural resource conservation districts”), with their accompanying subsidies and bureaucracies, persist into the twenty-first century.

There is thus a double-edged lesson to this story. To be sure, the episode illustrates well the collective action problem that can arise when many small actors contribute to a large-scale environmental problem, and that government action may be able to solve that collective action problem. But it also demonstrates that what begins as a productive government policy can be transformed into the pork barrel politics that dominate today.

REFERENCES

- Hansen, Zeynep K., and Gary D. Libecap. 2004. Small Farms, Externalities, and the Dust Bowl of the 1930s. *Journal of Political Economy* 112(3): 665–94.
- Worster, Donald. 1979. *Dust Bowl: The Southern Plains in the 1930s*. New York: Oxford University Press.

LESSONS FOR WATER MARKETS

The September issue of *PERC Reports* contained excellent articles on oil, fisheries management, and water. Taken together, they help us understand why market solutions to water problems are both attractive and elusive.

Water allocation confounds economists. Urban and environmental demand for water has increased, yet the resource remains largely in agriculture. The canonical advice is to let water markets reallocate water to higher-valued uses, but markets' fitful progress begs explanation.

Water is prone to a tragedy of the anticommons (discussed in "A New Fishing Tragedy?" September 2004). Third parties, facing negative pecuniary externalities, threaten or exercise a veto over water sales. By permitting these vetoes, society forces government either to reallocate the resource by fiat or augment it to cope with changes in demand. An alternative deserves consideration.

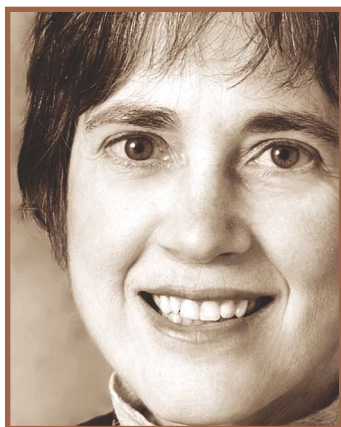
The government should aspire to make water an economic good—secure property, easily transferred and, therefore, available for a price just like land. This would allow incremental reallocation and avoid the rent-seeking and uncertainty that come with periodic government intervention. This will require difficult political work: the definition of the transferable portion of a water right, taking into consideration the correlative nature of water use but discounting the importance of pecuniary externalities; the establishment of a system under which rights disputes can be cheaply, expeditiously, and predictably resolved; and (in contravention of custom and law), the decision not to dictate the uses to which water may be put. While some states have made progress in these areas, most have not.

The result is that the agricultural sector is unable to realize the full value of its assets, and the urban sector builds expensive, environmentally damaging water projects to meet incremental demand growth and cope with periodic drought. A market would allow water to follow the precepts of the functional theory of resources (discussed in "Are We Running Out of Oil?" September 2004). Sales would encourage efficiency in agriculture by increasing the opportunity cost of water use and providing the capital to apply existing irrigation technologies and develop new ones. The quantity and cost of the resulting water production would likely be a pleasant surprise to all concerned.

Ben F. Vaughan, IV

Dept. of Business and Economics, Texas Lutheran University
San Antonio, TX

Jane S. Shaw, a senior fellow of PERC, is editor of *PERC REPORTS*. She believes that vigorous debate about controversial environmental topics furthers understanding and lays the foundation for better policies. Send your letters to her at: *PERC REPORTS*, 2048 Analysis Drive, Suite A, Bozeman, MT 59718 or shaw@perc.org.



PERC REPORTS

What caused the Dust Bowl of the 1930s? Drought, most people say. But droughts were just as severe in the Great Plains in the 1950s and 1970s, yet they did not cause soil erosion comparable to that of the 1930s. On page 17, Daniel K. Benjamin resolves the enigma.



Arthur Rothstein, April 1936, FSA-OWI, Library of Congress

INSIDE THIS ISSUE

- 3 VALLES CALDERA NATIONAL PRESERVE**
A new paradigm for federal lands?
By Brian Yablonski
- 6 THE FABLE OF FEDERAL REGULATION**
No, states didn't ignore environmental problems.
By Jonathan H. Adler
- 9 A WHIRLWIND OF TROUBLES**
Wind energy poses a wide range of difficulties.
By Thomas Tanton
- 12 MARGARET THATCHER**
Her environmental views, in retrospect.
By G. Tracy Mehan III and Iain Murray
- 15 GREENER PASTURES**
Starbucks sets an environmental standard.
By Linda E. Platts
- 17 TANGENTS**
Understanding the 1930s' Dust Bowl.
By Daniel K. Benjamin
- 19 LETTER TO THE EDITOR**
Our September issue teaches lessons about water. By Ben F. Vaughan IV

Non-Profit Organization
U.S. POSTAGE
PAID
Permit No. 433
Bozeman MT
59718

PERC
Property and Environment Research Center
2048 Analysis Drive, Suite A
Bozeman, Montana 59718-6829