Where Markets Meet the Environment

PERC



REPORTS

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TO OUR READERS

We are pleased to publish this extra issue of *PERC Reports*, featuring discussion of "urban sprawl." It is particularly timely because Vice President Al Gore has just proposed a \$10 billion federal program aimed at curbing uncontrolled suburban growth.

PERC Reports, a forum for discussion of free market environmentalism, is normally published in March, June, September, and December. This February issue is an additional one.

We appreciate the support of William Dunn, a PERC trustee and president of Dunn Capital Management, who has provided major funding for PERC Reports. And we thank the many individuals who responded to our request for donations to meet a \$15,000 matching-fund grant.

As always, we welcome your comments.

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ENHANCING THE QUALITY OF LIFE

IN DEFENSE OF URBAN SPRAWL

By Randall G. Holcombe

The term "urban sprawl" has a bad ring to it. The name reinforces the view that metropolitan growth is ugly, inefficient, and the cause of traffic congestion and environmental harm. Before we decide we are against urban sprawl, however, we should be clear about what it is and why we do not like it. Once we look at its specific characteristics, we can recognize their causes and what, if anything, to do about them.

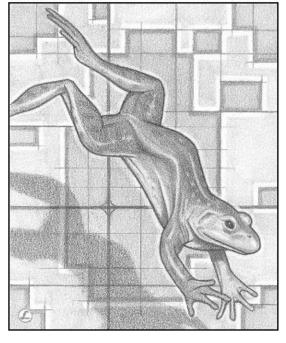
My study of metropolitan growth indicates that three kinds of development are typical of what we call "urban sprawl." They include: leapfrog development, strip or ribbon development, and low-density, single-dimensional development. Let us look at each type in turn.

Leapfrog development occurs when developers build new residences some distance from an existing urban area, bypassing vacant parcels located closer to the city. In other words, developers choose to build on less expensive land farther away from an urban

area rather than on more costly land closer to the city.

Because land prices are lower, housing in these developments is more affordable. Some people decide to accept longer commutes in exchange for more comfortable, lower-priced housing.

What few people realize is that leapfrog development nurtures compact commercial development—retail stores, offices, and businesses. The empty parcels



Leapfrog development nurtures

compact commercial development.

The empty parcels that have been

"leapfrogged" create an ideal location

for stores and offices.

that have been "leapfrogged" create an ideal location for commercial activity. It is a fact of economic life that developers are reluctant to place new commercial buildings on the outskirts of an urban area because these areas lack a large market to draw shoppers from. When new development bypasses vacant land, however, the land in between is suddenly accessible to more people and thus attractive to commercial developers. Thus, leapfrogging is a vital part of development in growing areas.

Leapfrog development does create some extra costs. Infrastructure must be extended farther and the longer distance creates more traffic and longer commutes into the city. For a leapfrog development to be cost-effective, the outlying development must pay the full costs of the infrastructure it requires. It is the responsibility of local governments to see that the costs of water, sewer, roads, and so forth are charged to the development. As long as the

new residents pay their share of the costs, leapfrog development benefits those who choose to live there and encourages commercial development at the edge of the urban area.

Strip or ribbon development, the second category, takes place when extensive commercial development occurs in a linear pattern along both sides of major arterial roadways. Like other aspects of urban sprawl, it is

IN DEFENSE OF URBAN SPRAWL

viewed as ugly and as a cause of traffic congestion, since shoppers and workers are often entering into and exiting from the street.

Yet strip development has its benefits. It brings together businesses that depend on high auto traffic. In fact, strips reduce overall traffic, since fewer cars must travel long distances from store to store or office to office. Strip development also creates natural locations for residential development. Between the commercial arteries, residential streets can have relatively little traffic yet be conveniently located near commerce.

In many situations, strip or ribbon development does cause problems, but the reason is poor planning. Every business fifty feet from another business does not have to have a driveway opening onto a major thoroughfare, creating congestion as people enter and leave. Access lanes can be built to permit the smooth merging of traffic entering and leaving.

Nor does strip development have to be unsightly. If the rightof-way is wide enough, landscaped buffers can separate the road from the businesses. To achieve this separation, though, governments must plan ahead to secure suffi-

cient rights-of-way for major streets before they are built.

The third characteristic of "urban sprawl" is low-density, single-dimensional development. This is typified by large residential subdivisions. Houses are situated on relatively large lots, with only other houses nearby. Residents must drive nearly everywhere they go.

Critics say that low-density developments take up too much space, especially space that ought to be preserved in a pristine state. They say that they lengthen commuting distances, and, in general, that they harm the environment.

Low-density developments do take up space and may increase driving time. However, they have an important argument in their favor: People like them. Low density means more room and a higher standard of living. While every city has apartments available for those who prefer them, many people choose (and more people aspire to have) their own detached homes.

Low density is likely to help the environment. Yards filled with trees and shrubs absorb dust and chemicals, so smaller amounts of pollutants escape into the air

and water. In contrast, in dense urban areas buildings, roads, and parking lots take up a higher percentage of the land, leaving little of the natural environment to absorb pollutants.

As for single-dimensional development (that is, residences only), this is often the result of zoning laws. Some zoning laws flatly prohibit mixed uses of property. Prohibitions against leapfrogging mean that development on the perimeter of a city is mostly residential, since no business wants to put its commercial establishment on the edge of an urban area. Prohibitions against strip or ribbon development also keep commercial establishments

distant from residential areas.

Thus, when the components of urban sprawl are examined, they can be seen as components of a healthy and efficient development process that is sometimes thwarted or distorted by regulations. I do not mean to imply that all instances of these development processes are efficient but that they can be.

Underlying all the complaints is what troubles people most about urban sprawl—transportation problems. Many of these problems arise because the government has not effectively controlled access to its roads. Traffic is

clogged because there are too many access points to highways and because insufficient rights-of-way were planned to handle the traffic load. To avoid these problems, local governments should obtain adequate rights-of-way for roads, limit the number of allowable curb cuts, and require access lanes or separate access roads rather than direct access to thoroughfares.

Specific policies to stop or slow down urban sprawl reflect a more general vision of how metropolitan development takes place. Planners assume that suburban areas spread out from a central urban core. They assume that people work in the central cities, commuting from the suburbs. Growth management policies are designed to keep people living and working in central districts.

But this picture of metropolitan areas is not an accurate portrayal of today's actual commuting patterns. In Los Angeles, for example, only 3 percent of the total workforce works downtown. There are 19 major activity centers in the Los Angeles area, but even these areas account for only 17.5 percent of the area's total employment. Most people both live and work in the suburbs, and the average commute for individuals in the Los

What troubles people most about

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Angeles area is 20 minutes.² While the statistics for each metropolitan area will differ, patterns in many cities are likely to be similar; today's jobs are primarily in the suburbs.³

If left to its own devices, development will occur in a decentralized manner, which will usually lead different types of activities to be conveniently located in relation to one another. Decentralized growth will provide nodes of development. People can live close to the node where they work, allowing a more efficient pattern of two-way traffic as people travel between nodes. Decentralized development keeps commuting distances short but allows the amenities of suburban living for those who want them.

In sum, the invisible hand of the market guides property owners to develop their property in ways that result, over time, in efficient land-use patterns. When government land-use planning is examined, we find that land-use decisions made under the name of growth management will more likely hinder than help the development process.

Notes

- 1. This does not necessarily mean that the percapita infrastructure costs will be higher in the new development than in the older ones because there may be offsetting economies of scale.
- 2. These figures are from Peter Gordon and Harry Richardson, "You Can't Get There from Here," *Reason* (August/September 1989), 34-37.
- 3. See Christopher B. Leinberger, "Metropolitan Trends of the Late 1990s," in *Land Use in America*, Henry L. Diamond and Patrick F. Noonan (Island Press 1996), 209.

Randall G. Holcombe is a Professor of Economics at Florida State University and Chairman of the Research Advisory Council of the James Madison Institute. This article is adapted from his book, Public Policy and the Quality of Life, available from Laissez Faire Books for a special price of \$9.95 plus \$1.50 shipping. Call 800-326-0996 or e-mail orders@laissezfaire.org, and mention PERC.

REINING IN DEVELOPMENT

AMERICANS ARE SAYING NO TO SPRAWL

By Carl Pope

n Election Day 1998, Americans from California to New Jersey voted to slow growth, save forests and farmlands, and rein in development. In an unmistakable signal of rising saliency and political power, growth and land-use measures appeared on more than 200 state and county ballots nationwide.

- In New Jersey, voters approved a 10-year plan to raise \$1 billion to preserve 1 million acres of open space.
- In Ventura County, California, voters overwhelmingly supported an initiative to prevent local planners from rezoning farmland and open space without voter approval.

• In Florida, voters decided to extend the Florida bond authority to protect public land from sprawl.

What do millions of Americans know that Randall Holcombe's defense of sprawl ignores? To begin with, Americans are reacting to the actual impact of sprawl on their lives, not to Holcombe's abstract economic argument that it could be good.

In fact, it turns out not to be good. Sprawl is a ubiquitous problem, and Americans—whether they live in urban Atlanta or rural Washtenaw County, Michigan—are deciding that current planning and development practices come with more costs than benefits. Development plans that may have worked fifty years ago are no longer the answer for today's growth.

SAYING NO TO SPRAWL

There are the obvious environmental costs of sprawl—lost open space and natural habitats, increased air pollution from more traffic, depleted water quality caused by urban runoff. Holcombe's argument that "low densities" help the environment shows an

abysmal shallowness. He seems to assume that if yards were not filled with trees and grass, there would be less vegetation in the metropolitan area. In reality, of course, sprawl neighborhoods typically replace farmland or open space that was 100 percent vegetation and permeable soils and replace them with neighborhoods that are 30 percent or more concrete, asphalt, or structure with unvegetated, impermeable surfaces.

he worst environmental impact of sprawl is the least avoidable. Sprawl, by definition, fragments landscapes—and fragmented landscapes are the biggest threat to America's wildlife heritage. Sprawl is very good for the most adaptable and common creatures—raccoons, deer, sparrows, starlings, sea gulls—all do well—and devastating for wildlife that is more dependent upon privacy, seclusion, and protection from such predators as dogs and cats.

There are obvious qualityof-life problems caused by sprawl—more time caught in traffic caused by auto-dependent lives, abandoned urban communities, remote and isolated suburban neighborhoods.

But sprawl has an economic cost, too. Tax policies

contribute to the public's growing dissatisfaction with sprawl. American taxpayers are actually subsidizing the extent and pace of sprawl through local, state, and federal spending, which increases to fund new development. That means a choice between more taxes or less spending in other deserving areas.

Some advocates of sprawl argue, "Well, then just

get rid of the subsidies." Holcombe blithely opines that "it is the responsibility of local governments to see that the costs of water, sewer, roads, and so forth are charged to development."

I wonder what planet he lives on. When localities try to charge developers even a fraction of the true costs, those developers and other sprawl advocates fight back

fiercely. In California efforts to charge new developments the full costs of new water supplies, which are far greater than those of the more efficient reservoirs built first, have run into tremendous resistance. In Alabama and New York developers are trying to hold on to federally subsidized flood insurance on the ground that it is a "right." The reality is that if we really got rid of the subsidies to sprawl, we would also get rid of sprawl.

The sums involved in the subsidies are huge. In Fairfax County, Virginia, a suburb of Washington, D.C., the 1997 budget of \$1.8 billion ran a deficit of \$146 million. In nearby Prince William County, taxpayers spend \$3,838 to provide services to a single household, but only receive \$2,150. A report released last month by Rutgers University looked at the costs of sprawl to South Florida. Adding up the price tags on new land development, new roads, and new infrastructure, the report found that sprawl in South Florida alone is costing an astounding \$6.15 billion.

H olcombe does not cite a single case in which the kind of low-density sprawl he defends occurred in the absence of massive public subsidies. He

doesn't because he can't. There are no such examples.

It is not accidental that in the last era of metropolitan growth prior to the massive federal and state subsidies for highways, sewers, etc., the development pattern that emerged was of compact suburban developments with mixed use, light and heavy rail transit, and an almost total absence of leapfrog and strip devel-



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opment—America's streetcar suburbs from the 1900–1925 era.

Taken together, these factors are fueling local action and a national debate. Americans are demanding common-sense solutions and smarter growth.

F ortunately, there are at least three options that provide guidance for urban growth planners charged with preparing plans for future growth:

• The first option is purchasing open space and farmland for preservation. Citizens in Peninsula Township in Northwest Michigan recently voted to pay farmers to keep farming rather than sell their land to

developers for subdivision. Voters in Austin, Texas, supported an increase in water rates to raise money to protect thousands of acres of environmentally sensitive land around the city. Such purchase programs, ideally, could be financed from the windfall profits made by landowners who benefit from new publicly financed infrastructure—those around a new freeway off-ramp, for example.

 The second option growth planners should utilize is marking and promoting urban growth boundaries (UGBs). Oregon and Washington states have blazed trails in this area by requiring all commu-

nities to design long-term UGBs. Portland, Oregon, has had an urban growth boundary in place since the 1970s. While Portland is one of the most popular cities in America and has witnessed significant population growth, its urban growth boundary has preserved open space around Portland and helped make Portland one of the world's most livable cities.

The third option planners should pursue is reinvestment in urban areas and revitalization of existing towns and cities. In 1997 Maryland enhanced its existing planning requirements with Smart Growth legislation, which promotes state

funding to priority growth areas such as existing municipalities and enterprise zones.

Taken together, these three options for controlling growth will help alleviate the costs and consequences of new development.

Holcombe argues that "left to its own devices, development will occur in a decentralized manner, which will usually lead different types of activity to be conveniently located in relation to one another." This fascinating argument overlooks hundreds of years of urban history in which development, left to its own devices, prior to the era of either zoning or governmental subsidies, followed anything but a decentralized

pattern.

Indeed, the classic original argument for both regulation and subsidy in urban landscapes was that, left to its own devices, development was too centralized and intense for human welfare. Freeways, zoning laws, and urban renewal were all developed to overcome the "natural" tendency of development to concentrate and cluster.

I f there is any one constant in our history, it is our nation's ability to learn from our mistakes, to change with the times, to try something "new and improved." We have come to a new day in national growth policy. The economic and social benefits of urban renewal far outweigh the national drain accompanying sprawl. Americans everywhere

are promoting a new approach to community planning, and the time has come for the planners to catch up with the public.

Carl Pope is Executive Director of the Sierra Club. Based in San Francisco, he can be reached at Carl.Pope@sierraclub.org. For more comments critical of urban sprawl, you may wish to consult the Sierra Club Web site (www.sierraclub.org) and search for "urban sprawl." For example, an article in the May/June issue of Sierra, "Twelve Gates to the City" by Francesca Lyman, is available on the site. It discusses the "new urbanist" approach to curtailing leapfrog, low-density, and single-dimensional development. The site also has information about the Sierra Club's "Challenge to Sprawl Campaign."

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RESPONSE

LIVE AND LET LIVE

By Randall G. Holcombe

arl Pope raises a number of issues in his critique of urban sprawl, but does not challenge the main point of my essay, which is that the development patterns often characterized as urban sprawl can produce more efficient land-use patterns and enhance people's quality of life. Nobody forces people to live in single-family detached homes. Developers build them because that is where people want to live.

Because he does not disagree with the main point of my essay, I take Pope's criticisms to say that the choices individuals are making to increase their own well-being impose substantial costs on everyone else, and that if we take those costs into account, we should (and do, at the ballot box) oppose urban subsidize urban sprawl.

Pope cites examples from New Jersey, California, and Florida to support his hypothesis that voters oppose sprawl, but in all three cases what voters actually favored was preserving undeveloped or agricultural land, not stopping the development of sub-

divisions and shopping centers that create sprawl. Voters can favor decentralized development and still want to set aside some land for preservation. In Florida, which has state-wide growth management laws similar to those in Oregon, the main reason voters favor growth controls is to control traffic congestion. Ironically, by mandating more compact development and more urban infill, more traffic is placed on already-congested roads, making traffic problems worse. The emotional responses of voters do not always reflect informed opinion, but even if they did, voters are not voting against urban sprawl or decentralized development. They are voting against traffic congestion and in favor of environmental preservation.

Pope writes as if urban sprawl were about to take over the continent unless swift action is taken through government purchase of land, but the fact is that most of the nation is undeveloped, and the government already owns a huge percentage of the nation's land area. Most people understandably overestimate the amount of the nation that is developed because most people live in developed areas, but developed areas in the United States, excluding Alaska, are only 6.2 percent of the nation's total land area (Bureau of the Census 1997, p. 229, table 370), and the federal government is by far the nation's largest landowner.

Pope and I agree

that government should not

subsidize urban sprawl. I would also

question Pope's proposal for

collective reinvestment

in urban areas.

Oregon's urban growth boundaries, but the federal government owns 60 percent of Oregon's land area, effectively placing most of Oregon's land off-limits to developers. In the other states Mr. Pope praised because voters approved land preservation measures, the federal government owns substantial chunks as well. It owns 13.3 percent of New Jersey's total land area, 7.8 percent of the land in Florida, and 46.9 percent of the land in California (Bureau of the Census 1997, p. 228, table 369). Pope suggests purchasing open

Pope speaks favorably about

space for preservation, but how much more land should be kept out of the hands of private owners?

Pope praises the preservation of farmland, but in my state, Florida, farming is viewed as an environmental menace because of fertilizer runoff from fields. Florida environmentalists are trying to shut down sugar farms near the Everglades even as Pope defends the preservation of farmland. Surely in this case Mr. Pope would side against the farmers, but he should give the same thoughtful attention to urban development patterns as he gives to environmental protection. Decentralized development and detached single family homes are not necessarily a threat to the environment, especially when one considers how much undeveloped land there still is, and how much of our land area already is government-owned.

Pope and I agree that government should not subsidize urban sprawl. He argues that were it not for subsidies, there would be no urban sprawl, but I doubt that. Pope notes that hundreds of years of human history show that, left to its own devices, urban development was dense and centralized. But those hundreds of years of history predated the automobile. Only since World War II has suburban living actually been feasible. I am not arguing in favor of urban sprawl, but in favor of market-determined land-use patterns.

For that reason, I would question Pope's proposal for collective reinvestment in urban areas. There are good reasons why urban areas have declined. Partly, the decline is due to people wanting to move to more spacious accommodations in the suburbs and, with the automobile, having the opportunity to do so. Partly, it is because misguided policies of city governments place heavy tax and regulatory burdens on city businesses and residents, causing citizens to flee. I favor revital-

ization efforts focused on reducing government-imposed costs, and I certainly favor private-sector revitalization initiatives. However, I oppose subsidizing urban development for the same reasons that I oppose subsidizing suburban development.

In many ways Pope's response to my essay on urban sprawl mirrors public opinion on the issue. He does not directly address the features of urban sprawl, but rather discusses environmental preservation and growth controls. My hope is that readers will see that environmental protection is not necessarily at odds with market-determined growth patterns, and, furthermore, that regulations that try to alter growth patterns can have significant unintended negative consequences.

Reference

Bureau of the Census. 1997. Statistical Abstract of the United States: 1997, 117th ed. Washington, DC.

Town, City, or Suburb?

By Joseph L. Bast

I lived in a small town for my first eighteen years, in Chicago for sixteen, and in a rather distant suburb of Chicago for the past six years. Reflecting on the benefits and disadvantages of all three locations, I find it impossible to say that one is better than the other. Each, in fact, is best at delivering the quality of life most desired by those who choose it.

My life growing up in a small town could have come straight from a Norman Rockwell painting. In the mornings as I walked to school, I passed a steady stream of men carrying lunch buckets heading for a paper mill whose front gate was just two blocks from my home. Doors went unlocked and kids roamed the neighborhood almost unsupervised. During summer evenings we would play kick-the-can in the street under the branches of majestic elm trees while our parents sat on the front porch and talked with the neighbors.

At the age of 18 I decided work in a paper mill wasn't for me, so I headed for the Big City to attend college, get my first real job, and start a career in the think tank business. It may "take a village to raise a child," but it requires a city to give birth to a school such as the University of Chicago and an organization such as the Heartland Institute.

By the age of 34, I had grown to dislike the noise, crime, and grit of city living. Diane and I left the city to those young enough or old enough to sleep through the nighttime police sirens, car alarms, and mysterious loud noises (gun shots? cars backfiring? fireworks?). In suburbia we found peace, quiet, and access to amenities such as tennis courts and walking paths that we now value more than good restaurants and night clubs.

I am struck by how my lifestyle choices have determined the places I've lived, and how those places, in turn, have served the peculiar needs of each lifestyle. Why, I wonder, would anyone want to deny people the same choices I was able to make?

From "Managing Growth, Destroying Freedom," in Intellectual Ammunition, Sept./Oct. 1998, published by the Heartland Institute.



By Linda E. Platts

GUERILLAS GO ORGANIC

A fter thirty-five years of civil war in Guatemala, peace has led to a surprising growth in organic farming. During the fighting, farmers abandoned their land, allowing native plants to reclaim the cleared fields. As the land lay fallow, the pesticides gradually disappeared from the soil, and wild herbs flourished. When the farmers returned, they discovered that produce untainted by chemicals fit perfectly into the rapidly growing market for organic foods in the United States and Europe.

According to ForesTrade, a Vermont-based company specializing in organic produce, some of the healthiest soil in Latin America can be found in Guatemala. Organic certification for Guatemalan-grown cardamom was obtained in only a few months, while the process can take years in countries where pesticides and herbicides have been heavily used.

Most peasant farmers cannot afford the chemicals and equipment needed to farm large plantations, but ironically the spices and coffee they grow on small jungle plots command premium prices in an eco-sensitive market. As organic produce has become an important source of income, farmers have abandoned slash-and-burn methods that destroyed large tracts of tropical rain forest. Cardamom plants that thrive under tall rain forest canopies fetch the highest prices.

Former guerillas are living better, and they are preserving rain forest habitat in large part because of their access to global markets.

—Wall Street Journal

FOREST-SAVING FASHIONS

Native forests in New Zealand are being munched to death by millions of opossums. Introduced from Australia in the mid-1800s, the furry creatures have no

natural predators in New Zealand. It is estimated that they are now 70 million strong and consume 20,000 tons of foliage every night.

Although hunting and poison have been used to control their numbers, it appears that a market-based solution may be the most effective. Sir Peter Elworthy, a prominent farmer, has started an eco-textile industry using opossum fur.

The fur is woven into a lightweight fabric dubbed Kapua that has the warmth of cashmere and the appearance of merino wool. If Kapua fashions are a hit in American department stores, they could help preserve New Zealand's native forests while also warding off the winter chills.

—Newsweek

TURTLE TOURISM

A long Brazil's Atlantic coast, local people patrol 620 miles of beaches to protect five endangered species of sea turtle. By protecting the turtles, they are also protecting an important source of income based on ecotourism. One local man said, "Turtles have become a big part of my life. If I or any other fisherman sees a turtle sick on the shore, we stop and try to help it."

For the past eighteen years a pioneering project called Tamar has re-educated fishermen, guided a growing tourist industry, and helped release 2.8 million turtle hatchlings into the sea. Begun by a university student who witnessed poachers slaughtering the huge sea turtles on the beach, the project has won international recognition for its conservation.

To help protect the giant creatures, 400 local people are employed to monitor two-mile-long sections of the beach during nesting season. Eggs that are at risk to predators are transferred to a hatchery.

The protected turtle habitat has attracted a growing number of tourists. At Tamar headquarters in Praia

de Forte, more than 300,000 people tour the museum and visitors' center each year. Local people sell an array of handicrafts and turtle paraphernalia that are popular with the tourists and profitable for the craftsmen. Since the Tamar project began, fifteen low-rise, turtle-friendly hotels and numerous restaurants have been built along the coastline providing hundreds of jobs to local people.

Balancing ecotourism with conservation has been a tricky business at times, but so far both the people and the endangered turtles have reaped the benefits.

-Miami Herald

KEEPING IT CLEAN

M arina owners Bill Reiser and Lisa Stowell know that running an environmentally friendly business is not only good for Chesapeake Bay, but good for their pocketbooks, too. With that in mind, they have shelled out some serious money to make sure their customers keep coming back.

To keep the waters near their business clean, they have replaced old underground fuel tanks with two new above-ground tanks. They have also installed state-of-the-art sewage pumping equipment and allow boaters to pump out their inboard tanks for free. Dozens of trash containers dot the piers at Wormley Creek Marina so fewer gum wrappers and paper cups end up floating in the bay.

Reiser and Stowell also believe in recycling when it makes sense. For heat, they burn scrap wood and oil, and Reiser distills used paint solvent so it can be reused.

Tom Griffin, a pollution-prevention specialist with the Virginia Department of Environmental Quality (DEQ) says, "One of the things they're really doing is saving money, but they're also helping the environment. They're very aware of the fact that they are closely tied to the resource and if things are mucking up the water right at the marina, then that's not a very pleasant experience for the customers." A recent newsletter from the DEQ highlighted the marina as a model for small, environmentally friendly businesses.

—Newbort News Daily Press

RECIPE FOR SLUDGE

S ift it, bake it, and put it on the garden. That is basically how contaminated soil or sludge is cleaned and returned to use. The baking process causes the contaminants to vaporize leaving the soil clean enough

for a variety of human uses. Soil Restoration and Recycling (SR2) is a Chattanooga, Tenn., company that is using the process technically known as low-temperature thermal desorption to build a thriving international business.

The company has a reputation for environmentally sound practices. At its high-tech plant in Chattanooga, the power is supplied by methane gas which is piped to the site from the city landfill. The methane generates more energy than the plant can use, and the excess is put on an electrical grid and sold to local utilities. SR2 also collects rainwater on the 60-acre site to use in the treatment process.

Another plant in Knoxville is awaiting regulatory approval and the company is negotiating with ten other communities to build methane-fueled plants. SR2 treats more than sludge. The process can be used to treat PCBs, coal tar, insecticides, herbicides, and oil, but not lead, heavy metals, or nuclear wastes. By linking up with landfills, SR2 is also helping to control methane fumes.

Mobile treatment equipment has been shipped to Mexico and Canada, and the company also sees expanding markets in Europe and Latin America where stricter environmental regulations are in force.

—Associated Press

WILDERNESS BY RESERVATION

Private wilderness playgrounds are the future for quality outdoor recreation. At least that is what William Altenburg, Jr., is betting on. In northern New Hampshire, he leases 24,000 acres of timberland from the International Paper Company and offers hiking, biking, kayaking, and backcountry skiing to paying customers. He is building lodges, yurts, and a 100-mile network of trails on the property. He charges admission, as well as fees for lodging, camping, guiding services, and other amenities.

Altenburg sees his business as meeting the needs of several groups. Timber companies are seeking ways to increase revenues on their vast holdings, and public agencies are hard-pressed to meet the growing demand for outdoor recreation. Meanwhile, lots of people are willing to pay for a quality experience in the great out-of-doors. That is the product Altenburg is selling.

He is negotiating similar lease arrangements in the Bitterroot Mountains of Montana and Idaho, the Cascades in Washington, and western Pennsylvania. By the end of 2000, he expects to have 2 million acres of land available to recreationists who will pay to play.

—Backpacker Magazine

THE DEBATE OVER THE "INVERTED-U"

DOES PROSPERITY PROTECT THE ENVIRONMENT?

By Matthew Brown and Jane S. Shaw

Deforestation, lack of safe drinking water, oppressive air pollution—these environmental ills are found frequently in Third World nations but rarely in developed ones. Even so, economic growth is still often portrayed as the cause of many (if not most) environmental problems.

The economic literature has begun to address the connection between economic growth and

environmental progress, revealing that it is often a positive one. This article brings together key evidence in hope of encouraging more dialogue on the subject.

The research attracting the most attention was conducted by Princeton economists Gene M. Grossman and Alan B. Krueger (1995). They compared income levels with measures of air and water quality, describing the relationship they found as an "inverted-U": As poor economies begin to expand, they at first experience deteriorating environmental quality. But, after a certain point, as wealth increases, environmental quality improves as well.

For example, Grossman and Krueger found that smoke (light particulates) tends to increase in urban air until countries reach a per-person income of about \$9,000 per year (in 1998 dollars). Then, as incomes rise further, smoke declines. Grossman and Krueger (1995, 353) concluded that "economic growth brings an initial phase of deterioration followed by a subsequent phase of improvement."

Although the inverted-U does not hold perfectly for all measures of pollution, Grossman and Krueger (1995, 370) were unambiguous in concluding that "contrary to the alarmist cries of some environmental groups, we find no evidence that economic growth does unavoidable harm to the natural habitat." At the same

Grossman and Krueger

concluded that economic growth

brings an "initial phase of deterioration"

but then environmental quality

improves.

time, they did not conclude that economic growth was a panacea for environmental quality, as some of their critics later implied.¹

The Grossman and Krueger paper was attacked, indirectly but clearly, by a group including Nobel laureate economist Kenneth Arrow in *Science*. Arrow et al. (1995) conceded the validity of the Grossman and Krueger findings, but they sought to narrow

the implications. The inverted-U curve "has been shown to be valid for pollutants involving local short-term costs (for example, sulfur, particulates, and fecal coliforms)," they wrote, "not for the accumulation of stocks of waste or for pollutants involving long-term and more dispersed costs (such as CO₂), which are often increasing functions of income" (Arrow et al. 1995, 520). The critics also expressed doubt that the curve applies to "resource stocks" where "the feedback effects of resource stocks are significant, such as those involving soil and its cover, forests, and other ecosystems" (Grossman and Krueger 1995, 520).

The journal *Ecological Economics*, edited by Robert Costanza (one of the *Science* article authors), dedicated two issues (1995 and 1998) to elaborating on the response that appeared in *Science* and, more generally, on the relationship between economic growth and environmental quality. Many of the contributors thought that Arrow et al. had been too soft. "They should have said clearly that the *general proposition* that economic growth is good for the environment is false and pernicious nonsense," wrote one (Ayres 1995, 97) [italics in original].

The claim of Arrow et al. that the inverted-U does not apply to "resource stocks" is challenged by at least

one paper. John M. Antle and Gregg Heidebrink compared national income levels with two measures of environmental quality, the total area of land protected or preserved within a country and the rate of deforestation. They found that increased wealth alone leads to greater environmental protection of forests, beginning at income levels around \$3,000 per person (in 1998 dollars) (Antle and Heidebrink 1995, 619). Once this income level is reached, countries begin to see afforestation (an increase in forested lands) and an increase in the area of land that is protected by the government.

More broadly, a number of economists have assembled environmental data suggesting that economic growth is friendly to the environment.² William J. Baumol and Wallace E. Oates (1995) may have initiated this research on environmental trends in an essay first published in 1979. Their data included information from the remote past, such as a law against air pollution in London in 1300, but they concentrated primarily on the period between 1940 and 1975. Looking at such measures as pollution of the Great Lakes and air pollution in New York City, they found that "the trends in environmental quality run the gamut from steady deterioration to spectacular improvement" (Baumol and Oates 1995, 444).

Baumol and Oates were surprised by so many favorable findings. They had assumed the opposite. At the very least, their findings undermine the assumption that economic growth must cause environmental deterioration. Their essay is especially interesting because most of their

data precede the decades of heavy investment in pollution cleanup that began around 1970.

University of Chicago economist Don Coursey (1992) took a different tack in his effort to understand the connection between economic growth and environmental quality. He looked at historical trends with the goal of identifying the income elasticity of the demand for environmental quality. If the demand for environmental quality is positive and highly elastic, he reasoned, then environmental quality is a "luxury good." Demand for it will rise faster than income.

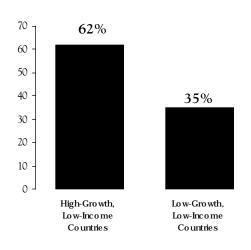
Coursey correlated income levels in the United States with Gallup opinion polls taken in the United States between 1940 and 1990 and with federal environmental legislation. He found that as income levels went up, concern about the environment increased. He concluded that the demand for environmental quality has an income elasticity of 2.5, similar to the demand for new cars and private education.

Economist Seth Norton (1998) of Wheaton Col-

lege has studied the relationship Faster Growth Means Better Sanitation between nations' rates of growth (not their income levels) and environmental quality. Norton defines high-growth countries as those with annual rates of growth of over 4.5 percent and lowgrowth countries as those with growth rates under 1 percent. Norton found that high growth is correlated with environmental benefits. For example, he found that over 84 percent of people in high-growth countries had access to safe drinking water, while only 53 percent in low-growth countries did. Eighty-three percent of the people in high-growth countries had access to proper sanitation while only 40 percent did in low growth countries. Life expectancy was 63 years in high-growth countries but only 50 years in low-growth countries.

> When Norton (1998) again compared high- and low-growth countries but limited his analysis to countries with per capita incomes below \$7,500 (in 1998 dollars), he found similar results. Sixty-eight percent of people in low-income countries that had high rates of growth enjoyed ac-

cess to safe drinking water, while only 48 percent of those in low-growth, low-income countries did. Sixty-two percent in poor high-growth countries had access to sanitation while only 35 percent did in poor low growth countries (see chart). So, while economic growth may increase some types of pollution initially, as Grossman and Krueger found, Norton's analysis suggests that some characteristics of rapid-growth low-income countries help offset the initial decrease in environmental quality.



Percent of population with access to sewage treatment Source: Derived from Norton (1998, 50).

Some characteristics of rapid growth may help offset initial decreases in environmental quality.

PROSPERITY

Norton's analysis also suggests that property rights are an important determinant of environmental quality. Using new indices such as the *Economic Freedom of the World* (Gwartney, Lawson, and Block 1996), Norton found that in countries where property rights are well protected, much higher percentages of the people have access to safe drinking water and sewage treatment. Norton proposes that well-defined and protected property rights lead to increased economic growth, which in turn leads to better environmental quality.

Property rights may have a direct connection to environmental protection. Extensive work by Robert Deacon (1994 and 1995) links deforestation with political instability and poor protection of property rights. The introduction of the role of property rights helps fill a gap in the current literature: the reasons behind the apparent link between increased wealth and environmental quality. Arrow et al. (1995, 521), also recognized that "the lack of well-defined property rights" deters environmental protection, but did not propose ways to define and enforce them.

Property rights and their incentives may explain the connection, but it is also possible that political forces organized by an increasingly wealthy population lead to regulations that improve environmental quality. Perhaps it is some combination of both.

Another source of controversy stems from different views of what environmental quality is. If environmental quality is defined by its effect on the human condition, then life expectancy and sewage treatment are good measures, as is air pollution. In contrast, using the preservation of endangered species or the extent of forests as a leading measure assumes a definition of environmental quality somewhat removed from direct impact on humans. Along the same lines, is environmental change inherently a measure of deterioration? Since the environment has changed naturally over eons, perhaps human-caused change is not a problem, as long as we have the wealth and knowledge to adjust to it. The research mentioned in this paper is a good first step to answering these questions, but many questions remain.

Notes

- 1. The inverted-U is sometimes called the "environmental Kuznets curve" because it resembles the Kuznets curve, which shows the relationship between economic growth and income inequality.
- 2. See, for example, Goklany (1998); Selden and Song (1994).

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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.

The results

of the SO, tradable

emissions program are in—

and the economists

were right.

—after Ambrose Bierce

E conomists have long argued that tradable emissions permits are, in principle, superior to the command-and-control approach in reducing pollution. Traditional regulators have disagreed. The results of a pioneer trading program are now in, and they suggest that the economists are correct—which may not come as a complete surprise to regular readers of this column.

Command-and-control regulation generally requires that different emission sources meet the same pol-

lution standards, whatever the cost. Yet controlling pollution from one smoke-stack may be far more expensive than controlling it from another. Economists contend that by trading the right to emit a specific amount of pollution, industries can conserve resources without harming the environment—because the same amount of pollutants is emitted overall. Proponents of source-specific emissions standards counter that uncertainty and ignorance preclude effective markets in emissions permits.

Paul L. Joskow, Richard Schmalensee, and Elizabeth M. Bailey (1998) stud-

ied the consequences of the Clean Air Act Amendments of 1990, which initiated the first large-scale use of the tradable permit approach. This involved control of sulfur dioxide (SO_2) emissions, which are produced when utilities burn coal and oil to generate electricity. SO_2 is a precursor of acid rain and other acidic depositions, and Title IV was designed to reduce such depositions. It sets an annual limit on the total number of tons of SO_2 emissions from major electric utilities. Each utility must have a so-called "allowance" for each ton of SO_2 it emits each year.

The SO₂ allowances have some characteristics of

property rights; for example, anyone is legally permitted to buy or sell allowances at market-determined prices. Because the allowances are standardized (each represents the right to emit one ton of SO₂) and the major potential traders (electric utilities) are likely to be well-informed, trade should be feasible at very low transaction costs, just as we find in stock and bond markets. Moreover, these same characteristics should yield substantial uniformity in prices across trades: After all, why would the seller of an

allowance accept less (or a buyer pay more) than an alternative available elsewhere in the market?

Still, this approach had never been tried on a large scale, and there was substantial uncertainty about the costs of reducing emissions (and hence the value of the allowances). As reflected in more than 200 pages of congressional testimony opposing the program, many commentators felt that trading costs would be high, and few trades were likely to occur. If so, no significant benefits would result. Such concerns convinced Congress to order the Environmental Protec-

tion Agency to "jump start" the market by offering allowances for sale each year at a nationwide auction.

As it turns out, although the EPA auctions probably helped get the trading process started, the expansion in private trades has been so rapid and extensive that the auctions are now a minor part of the market. Perhaps more importantly, the private market in allowances has proved to be extraordinarily efficient at doing what it was designed to do—move allowances to their highest-valued locations, permit equalization of control costs across sources, and generate a key source of infor-

TANGENTS

mation about the costs of reducing SO₂ emissions.

Joskow et al. have found that after an initial 12–18 month period in which there were few private trades and relatively high prices for the allowances—some \$250–\$300 per ton—the market evolved rapidly. By mid-1994 prices had dropped below \$150 per ton and the volume of private trades exceeded the volume offered in the EPA auction. Since then, prices have fallen to about \$100 per ton, and private trading of allowances for more than 5 million tons per year now dwarfs the EPA auction by a factor of 15 to 1.

This research also has uncovered two other, even more significant, facts. First, the costs of trading allowances are quite low—on the order of about 2 percent of the prevailing price. In addition, it appears that the prices at which trade takes place at any point in time are all quite close to one another. The spread between average bids and lowest winning bids at EPA auctions is only about 1-3 percent, and trading in the private market appears to be similarly concentrated around a single price at any point in time.

Because utilities can freely choose between either abating or emitting each ton of SO₂, they will only pay for an allowance what it will save them in abatement costs. Equivalently, a utility will pay no more for abatement than it would pay for an allowance to emit the SO₂. Thus, the existence of a common price for allowances assures us that the cost per ton of cutting

emissions must be at that same level: The costs of abating SO₂ emissions must be running about \$100 per ton. We can now sensibly ask the question: Is it worth it?

For a variety of reasons, even the tradable emissions approach used with SO₂ has serious drawbacks: Most notably, the annual cap on emissions is set by government fiat, and we have no way of knowing if the height of the cap (soon to be reduced to 9 million tons per year) makes any sense. Still, it seems apparent from the work of Joskow et al. that tradable permits offer every advantage suggested by their proponents. In particular, the findings of this research imply that the total costs of achieving the current SO₂ cap are at a minimum—and surely lower than under command-and-control. Perhaps now some serious consideration will be given to environmental protection systems in which there is even less administrative control by the government.

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



Among recent PERC presentations was **Don Leal's** discussion of forestry management at the Pacific Logging Congress in Las Vegas. **Bruce Yandle** and **Roger Meiners** spoke at a conference for congressional staffers sponsored by the Mercatus Center, a nonprofit organization headed by **Wendy Gramm**. In December, **Terry Anderson** lectured at a seminar for judges sponsored by the Law and Organizational Economics Center of the University of Kansas. Anderson and Leal outlined free market environmentalism at the annual meeting of the American Farm Bureau Federation in Albuquerque.

Randy Simmons spoke at a meeting sponsored by the Utah Lands Foundation. Richard Stroup and Jane Shaw lectured at Francisco Marroquin University in Guatemala City, and Jane Shaw discussed Facts Not Fear at a meeting of the Sutherland Institute in Cedar City, Utah.

Clay Landry's handbook, Saving Our Streams through Water Markets is attracting a lot of attention, and Landry has been busy discussing it with various

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groups. Landry spoke about the need for freeing up water markets at the Western Regional Instream Flow Conference in Breckenridge, Colorado; at a World Bank workshop on water pricing; and before state engineers and water agency directors at the Western States Water Council annual meeting.

Public Lands: The Price We Pay, by Holly L. Fretwell has also attracted interest. See the comments on pages 18 and 19 of this issue. Fretwell recently participated in the

sponsored

"Environmental Summit in the West" by the Western Governors' Association in Phoenix and presented her research at the Rocky Mountain Oil and Gas Association annual meeting.

Former journalism intern **Tim Fitzgerald** has returned to PERC to write about federal land exchange policy. Fitzgerald is adjusting to sitting at a desk rather than in a saddle. He runs a small outfitting business on Colorado's Western Slope, and will return to the business in the spring. (Meanwhile, potential clients can reach him at the office.)

PERC's Web site (www.perc.org) now includes the complete contents of most of our publications, including PERC Reports and recent Policy Series papers, in PDF format. The issue can be read on the screen or downloaded with Adobe Acrobat (software that is available at no charge).

PERC organized a meeting of the Free Market Environmentalism Roundtable (FME Roundtable, for short) in Washington in December. It was chaired by PERC Development Director **Eric Noyes** and held at the Heritage Foundation building. The meeting, where twenty organizations were represented, evoked lively conversation about where free market environmentalism is headed and how it should get there.

Some business executives are quietly taking advantage of the ongoing negotiations over global warming to improve their competitive position, **Bruce Yandle** reports in his *PERC Policy Series* paper, "Bootleggers, Bap-

tists, and Global Warming" (PS-14). The paper is based on Yandle's "bootleggers and Baptists" theory of regulation. The paper, which is being distributed to all members of the House of Representatives, is available on PERC's Web site or can be purchased in booklet form from PERC for \$4.

A new book published by PERC will fill a critical void in the environmental education field. A *Blueprint for Environmental Education*, edited by **Jane S. Shaw**, illustrates the powerful insights that economics can bring to teaching about the environment. In addition to analyz-

ing the problems of environmental education today, and recommending ways to correct them, the book provides readings that apply economic insights to environmental subjects. Contributors to the Blueprint include: Terry L. Ander-

son, Holly Lippke Fretwell, Jo Kwong, Donald R. Leal, Kathryn Ratté, Michael Sanera, Mark C. Schug, Jane S. Shaw, Jack Stauder, Richard L. Stroup, and Donald R. Wentworth. The *Blueprint*, to be published in February, is available from PERC for \$5, with discounts for purchases in quantity.

PERC and the Foundation for Teaching Economics jointly present workshops for teachers from elementary school to secondary school. Held throughout the country, these workshops introduce economics to the teaching of environmental subjects and bring environmental applications to economics. Workshop participation is a prerequisite for attending PERC's annual summer Teacher Institute. Workshops are being held this year in Minneapolis, Denver, Phoenix, Richmond, Tampa, Atlanta, Baltimore, Estes Park, Salt Lake City, and Corpus Christi. For more information contact PERC's Environmental Education Director **Donald Wentworth**.

Graduate and law-school students with an interest in natural resources and the environment are invited to apply for PERC summer research fellowships. PERC provides a stipend for a three-month stay in Bozeman, Montana, where each fellow prepares a publishable paper under the supervision of a PERC Senior Associate. The application deadline for this summer is March 1, 1999. The deadline for a fall fellowship is June 30.

letters to the editor

REACTIONS

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

People Don't Always "Free Ride"

In the exchange with John D. Echeverria on the subject of market failures (September 1998), Richard Stroup and Jane Shaw concede too much. The free rider problem, for example, rests entirely on some classical economic assumptions about people's motivation—for example, that everyone seeks to gain at the lowest cost.

But what if the lowest cost includes coercion or robbery? And what if by acting on such motives one knows that one will discourage the production of certain valued things? The free rider problem presupposes that folks are desperately trying to get things for nothing or as close to it as conceivable. But that is not generally true about people.

I regularly contribute to a local jazz radio station even though I could avoid paying and could just listen anyway. But (a) I want the music to continue and (b) if I continue to contribute nothing and others do, too, the station will fold. It hasn't and probably will not. Indeed, thousands of organizations flourish on the basis of such voluntary contributions to support the production of goods and services they might be able to receive without payment (at least for a while).

The implication of Echeverria's use of the market failure argument need not be accepted. Private wildlife preservation would work fine if the government didn't eclipse that effort by a dubious promise to do it for us.

Tibor R. Machan

Chapman University, Orange, California Tibor R. Machan is author of Generosity: Virtue in Civil Society (Cato Institute), among other books.

Public Lands: The Price We Pay

The following comments are excerpted from letters responding to "Public Lands: The Price We Pay," by Holly L. Fretwell. This paper, published by PERC, compared the

financial performance of the Forest Service and the Bureau of Land Management with state programs and showed severe losses in the federal programs. The report is available from PERC for \$5.

I'm a small businessman and am much concerned about the huge waste of money, time, and resources in the government. Your recommendation for fiscal responsibility is certainly correct, as well as tried and true. How to achieve it is another matter. I noted that there was no mention of the huge costs and delays caused by radical environmentalists and how they affect costs and revenues. Certainly this is a large enough issue to be documented.

Donald Bradley Plainfield, New Hampshire

As a former Assistant to the Director of the Bureau of Land Management (BLM) in Idaho, I would like to point out that a large share of blame for financial losses from sale of harvestable resources from public lands should be placed on Congress in general, and specific western representatives and senators.

For years, BLM range managers have proposed increases in grazing fees on the public domain, and Forest Service managers have done the same. Every request to Congress for those increases, even just to bring them up to equality with fees on private grazing lands, has been rebuffed. The cattlemen's and sheepmen's associations have lobbied hard to keep fees low.

The mining law is very outdated, and efforts to change it have also been unsuccessful. The BLM Land Office can do only so much to prevent rip-offs by large mining companies. After all, Congress selects or approves the BLM Director in Washington, and too frequently that person is a political appointee rather than a resource management professional.

As for timber sales, the Forest Service has too

frequently succumbed to pressure from Congress to "get the sale made and get the cut out." Underwriting the cost of access roads for private timber companies and underestimating the value of timber to be sold have contributed to losses. So have trades of federal timber lands of high value in exchange for privately owned lands of less value. Making the Forest Service land boundaries more manageable may be the goal but this should not be done at a loss to the public value.

You probably considered many of these points, but perhaps you could have been a little easier on the professional managers and a little harder on the Congress for its lack of will power to enact legislation which will assure cost efficiency.

> Austin F. Hamer Redmond, Washington

Mr. Hamer is a retired wildlife biologist.

In the case of recreation, agencies are losing money because they don't charge, not because they are inefficient. Some of my first publications were on why the federal and state government *should* price recreation to improve management and efficiency. Pricing is a powerful tool to manage use and raise revenue.

Nearly any revealed preference method such as the travel cost method shows the benefits or consumer surplus of recreation to be ten times the revenue from recreation. Thus the recreation program does produce net benefits to society, even if the government does not choose to capture it as revenue.

Thus the rub. The feds lose money on recreation, but the program would easily pass the test of being economically efficient. Certainly it would be more efficient if it had lower costs, but unlike the timber program, the benefits do exceed the costs.

John Loomis Dept. of Agricultural and Resource Economics Colorado State University

Your report alludes to the desire for more positive economic incentives in order to better manage the public lands. Unfortunately, it did not point out that state lands are in as good as or better condition than federal lands. Nor did it specifically recommend elevating the feeling of "vested interest" in the public lands by grazing lessees.

Most ranchers holding grazing leases or permits from both state and federal agencies have a greater sense of vesting in the state lands than in the federal lands. This sense of ownership provides an increased incentive to more properly manage and watch over the resources for which they are responsible. Realizing that long-term survival is significantly predicated on proper resource management, state grazing lessees have an incentive to be good stewards.

Another inference in the report is that the federal agencies should raise grazing fees. It is my belief that a significant increase of federal grazing fees would be counterproductive for our natural resources on government-managed lands.

Grazing on federal lands is extremely expensive under current economic conditions, and increasing fees would cause ranchers to drop grazing leases. Because the vast majority of grazing lessees are good resource managers, this would be detrimental to the long-term health of our natural resources. No matter how many people the federal government might attempt to "throw at" the management of natural resources, those people would never manage the resources as well as the people who actually live and spend their lives with them.

David L. True Partner, True Companies Casper, WY

Comparing national forest management expenses to state or county forest expenses is a little like comparing apples to oranges. Most of the state and county forests, unlike national forests, are legally bound to make a profit, and most of them lack the controversial playing field of widely differing national publics; therefore they avoid many of the expenses and time delays that seem to come with the decision-making turf in a national forest.

All this is frustrating to Forest Service employees, especially those who still remember the days when things were quicker, less complex, less controversial, and when Forest Service programs almost always produced receipts that outpaced the expenses. Life is different now in the Forest Service and expenses are probably as you point out, but it isn't because of less professionalism or dedication.

It's just tougher to measure up to all the laws and run a program that must reach public consensus in a society filled with organizations that thrive on litigation. In short, if national forests are going to be managed more cost-effectively, the mission and the rules that govern them will have to change.

Dave Filius Great Falls, Montana

Mr. Filius is a retired Forest Service employee.

PROPERTY RIGHTS and "PROGRESS" By Tom Bethell

Property's eclipse coincided with the reign of the idea of progress. About the time of the French Revolution, something new arose. What might be called the Future Perfect began to replace nostalgia for the past.

Until that time, anyone who suggested that the existing system of property should be changed had to contend with this objection: Alternative rules of ownership, although perhaps desirable, were not feasible because incentives would be undermined. Private property, apparently, was the only arrangement that encouraged people to work hard. Communal living did not seem to work. Communards would start out amicably enough, but within a year or two would end in bitter arguments. Then they would divide up or "privatize" the commune and go their separate ways.

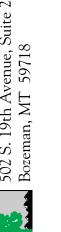
Now there was a hopeful rejoinder: Progress. Man had been selfish in the past, to be sure, and still was (in the Present Imperfect). But the future would be different—the Future Perfect. Human nature could not be changed? Don't be too sure. One day, man's moral evolution would triumph over original sin, and private property would no longer be necessary. The new vision, in which society was to be built anew, bringing forth a New Man, was for intellectuals greatly energizing. A real hope for the future replaced a merely poetic wistfulness about the past. Optimism replaced nostalgia.

But human nature proved to be more intractable, and property less dispensable, than was imagined. This has given rise to a good deal of disappointment. In its more radical manifestations, the environmental movement is an expression of disenchantment with the intractability of human nature. But no one talks seriously about "progress" any more, or believes that a "new man" can be conjured into existence by mere legislation.

Excerpted from The Noblest Triumph: Property and Prosperity through the Ages, by Tom Bethell (St. Martin's Press, 1998).

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