

Progressive Environmentalism: Principles for Regulatory Reform

by

Kent Jeffreys

NCPA Policy Report No. 194

June 1995

ISBN # 1-56808-059-X

National Center for Policy Analysis

12655 N. Central Expwy., Suite 720

Dallas, TX 75243

(214) 386-6272

Executive Summary

The vast majority of environmentalists believe that appreciation of the natural world needs to be integrated with human progress. But a vocal, prolific and energetic minority of reactionaries who do not believe there is anything to progress have achieved an influence in environmental matters far disproportionate to their numbers. For too long, federal government policy toward the environment has been dominated by approaches favored by the reactionaries. With the change in leadership on Capitol Hill, however, there is now an opportunity to reshape environmental regulation in a progressive way.

Most environmental problems stem from the misuse of resources that are owned in common. What is owned in common is owned by no one and, accordingly, has no protectors or defenders. Many regard government as the logical protector of the commons, but government has not only often failed to fill this role but has also abused the very environment it is charged with protecting.

Since government must define and protect property rights, and since government enacts legislation, a role for government is essential. The solution involves requiring government to act in accordance with certain pre-defined rules before enacting environmental legislation or approving any environmental regulations. The rules that should apply are:

- **The Federalism Rule.** Regulatory decisions should be made by the smallest possible government entity.

The Ninth and Tenth amendments to the U. S. Constitution limit the federal government's role to carefully defined and constitutionally legitimate problems, and reserve other powers to the states or to the people. However, the principle of federalism is today more rhetoric than reality. It is time to reestablish the federal government in its proper role.

- **The Cost-Benefit Rule.** Before any regulation is imposed, objective studies should weigh the benefits against the costs.

Almost all business decisions involve some measures of costs versus benefits. Yet many government decisions are taken without adequate consideration of either. Proper cost-benefit analysis of environmental proposals is simply a tool for separating intentions from good ideas. For example, implementing chloroform emissions standards at 48 pulp mills would impose more than \$99 billion in costs for each life-year saved. If this regulation allowed one person to live another 20 years, the implicit "cost" of saving that life would be about \$2 trillion — one-third of the annual gross national product.

- **The Compensation Rule.** Innocent property owners must be compensated for the loss of property rights or non-negligible losses of value.

Private property rights are crucial to the functioning of a market economy and are enshrined in the U.S. Constitution. But the federal government routinely allows environmental regulators to condemn and acquire property without paying for it. Some private property owners have even been sent to prison or threatened with prison for technical violations of environmental regulations on their own land.

This study examines abuses of the three rules cited above in specific federal environmental programs and explores solutions that would bring the programs into compliance with the rules.

Introduction: Progressive Environmentalism

“Environmentalism” is the term used to describe people who have a special appreciation for the natural world, who see nature not merely as a means of gratifying human wants but as a valuable end in itself. So defined, there are millions of environmentalists in countries around the world.

To the vast majority, it is important that appreciation of the natural world be integrated with respect for the unique role of human beings on the planet, respect for science and appreciation of the benefits of technology and economic growth. These people are “progressive” in the sense that they believe in human progress and in the achievement of environmental goals as one measure of progress.

A small minority of environmentalists, however, do not believe in human progress, asserting that there is nothing to progress to. Often idealizing American Indian or medieval European lifestyles, they believe that the best of all possible worlds lies not in the future but in the past. These people are “reactionaries” in the truest sense of the word. They oppose science, technology, industrialization and economic growth. At times they imply that humans are an unfortunate accident of evolution and have no natural place on our planet.¹

“Reactionary environmentalists have achieved a disproportionate degree of influence.”

If the sway of the environmental debate were determined by a head count, the reactionary environmentalists would be unimportant and could be safely dismissed. Unfortunately, this is not the case. Because they are very vocal, prolix and committed, they have achieved a disproportionate degree of influence. They control some of the largest and best-funded environmental organizations. And they have apologists among the leadership of mainstream environmental groups.²

For too long, federal government policy toward the environment has been dominated by the approaches these reactionaries favor. With the change in leadership on Capitol Hill, however, an opportunity exists to reshape environmental regulation in a progressive way. Consistent with the goal, this study examines the nature of the public policy problem we face and proposes solutions.

The Tragedy of the Environmental Commons

In a classic article published in 1968, Garrett Hardin argued that most environmental problems stem from a single cause: the misuse of resources that are *owned in common*.³ Since the air, the water, most species of mammals and fish and public lands have no private owners, they have no protectors or defenders. The use of these resources creates private benefits, but their misuse results in costs that are borne collectively. Thus, people who misuse the “commons” bear only a small portion of the social costs of their actions.

“Since air and water are commonly owned resources to which we have free access, we find it in our self-interest to use them as dumping grounds for all manner of waste.”

The problem is not new. It has been around for as long as human beings have occupied the planet. Take the case of commonly owned grazing land. If a single cattle herder conserves some grass for the coming year, the odds are small that he will derive any benefit from that action — since the grass is then available for consumption by the cattle of all other herders. With commonly owned grazing land, no single herder reaps the full benefits of “good” behavior or bears the full costs of “bad” behavior. All herders may find it in their *self-interest* to overgraze the land, even though in the long run all are worse off as a result.

Hardin’s analysis can easily be extended to other environmental problems. Most of us would not consider dumping trash in our neighbor’s backyard. But since air and water are commonly owned resources to which we have free access, we find it in our self-interest to use them as dumping grounds for all manner of waste. Private timber companies are often exemplary environmental stewards of their own land. Indeed, much of what we know about forest management comes from their pioneering discoveries.⁴ Yet some of the same companies have caused environmental harm in the federally owned commons of the U.S. forests. The lessons can also be applied to endangered species:

- One hundred years ago, the nation had three billion passenger pigeons and very few chickens. But because chickens were privately owned and pigeons were common property, today there are three billion chickens and the passenger pigeon is extinct.⁵
- Two hundred years ago, bison greatly outnumbered cattle in America. Today, privately owned cattle flourish, while the bison is almost extinct.⁶
- In some African countries where elephants are owned in common, their numbers are dwindling rapidly — the victims of poachers in search of ivory. But in India, where elephants are owned by villagers, they are almost never killed for their tusks.⁷

The Tragedy of the Political Commons

What can be done about the tragedy of the environmental commons? Many people believe that the answer is government. Since individuals pursuing their own self-interest will deplete the commons, they reason, we need government to protect it for society as a whole. The record of government, however, is a record of failure. Most environmentalists, regardless of other differences, agree on one thing: U.S. government agencies charged with protecting the environment have done a poor job.

For example, in an internal study at the Environmental Protection Agency (EPA), staffers were asked to rank EPA programs in order of their

TABLE I

How the Public and EPA Rate Health Risks Associated With Environmental Problems

Public (in order of importance)	<u>EPA Experts' Rating</u>
1. Hazardous waste sites	Medium to Low
2. Exposure to worksite chemicals	High
3. Industrial pollution of waterways	Low
4. Nuclear accident regulation	Not ranked
5. Radioactive waste	Not ranked
6. Chemical leaks from underground storage tanks	Medium to Low
7. Pesticides	High
8. Pollution from industrial accidents	Medium to Low
9. Water pollution from farm run-off	Medium
10. Tap water contamination	High
11. Industrial air pollution	High
12. Ozone layer destruction	High
13. Coastal water contamination	Low
14. Sewage-plant water pollution	Medium to Low
15. Vehicle exhaust	High
16. Oil spills	Medium to Low
17. Acid rain	High
18. Water pollution from urban run-off	Medium
19. Damaged wetlands	Low
20. Genetic alteration	Low
21. Nonhazardous waste sites	Medium to Low
22. Greenhouse effect	Low
23. Indoor air pollution	High
24. X-ray radiation	Not ranked
25. Indoor radon	High
26. Microwave oven radiation	Not ranked

Source: Frederick Allen, U.S. Environmental Protection Agency, based on EPA report "Unfinished Business: A Comparative Assessment of Environmental Problems" (1987) and national public opinion polls by the Roper Organization in December 1987 and January 1988.

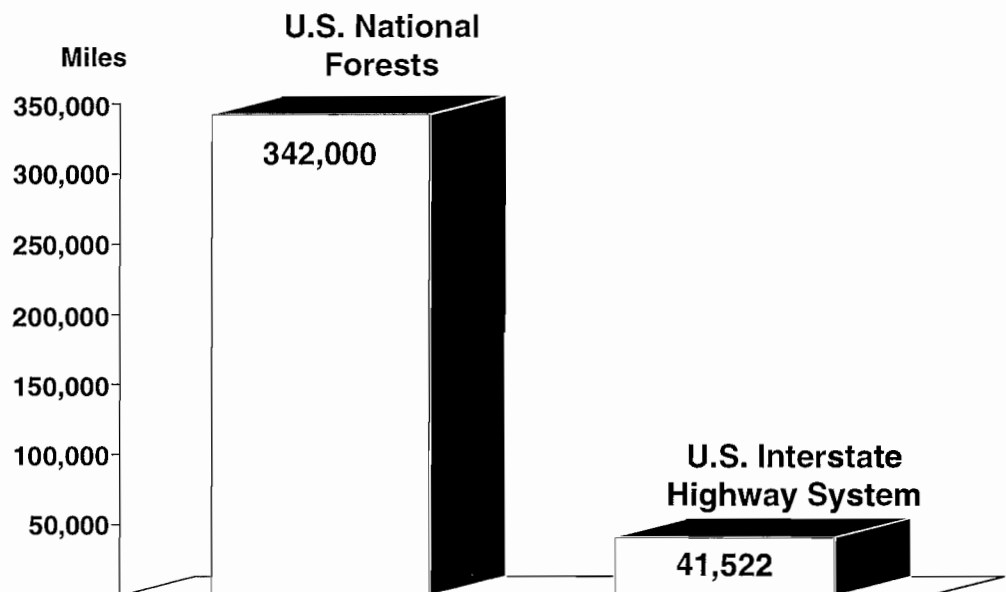
environmental importance. As Table I shows, when this ranking was compared to a ranking of programs based on public fears and perceptions, the findings were almost the reverse of each other. The EPA spends the most on those programs that are politically popular and much less on those that might advance the environmental objectives identified by the experts.⁸ The finding was echoed in an outside review of the EPA by scholars at Harvard University.⁹

Studies also have revealed poor environmental records at other government agencies.¹⁰ These include the U.S. Park Service, the U.S. Forest Service, the Bureau of Land Management, the Army Corps of Engineers, the Atomic Energy Commission and its successor the Department of Energy, the Federal Highway Administration and the World Bank. Consider, for example, the record of the U.S. Forest Service:

- About 342,000 miles of roads have been built in our national forests — more than eight times the total mileage of the U.S. Interstate Highway System.¹¹ [See Figure I.]
- These roads, primarily designed to facilitate logging, extend into the ecologically fragile backcountry of the Rocky Mountains and Alaska, where they are causing massive soil erosion, damaging trout and salmon fisheries and causing other environmental harm.¹²

FIGURE I

Miles of Roads



"The mileage of roads built in our national forests is more than eight times that of the U.S. Interstate Highway System."

Source: Peter Kirby and William Arthur, *Our National Forests: Land in Peril* (Washington, DC: The Wilderness Society and the Sierra Club, 1985).

“The Bureau of Land Management has caused more than three million acres of wildlife habitat to be replaced with grass for domestic livestock.”

- In many cases, the costs of these logging activities far exceed any commercial benefit from the timber acquired; this environmental destruction would not have occurred without government subsidies.¹³

Taxpayers also have been subsidizing environmental destruction by other federal agencies responsible for environmental stewardship:

- Office of Reclamation projects have eliminated one national wildlife refuge and are threatening others through water shortage and contamination.¹⁴
- Because of the Bureau of Land Management, more than three million acres of wildlife habitat were cleared with huge chains (600-foot anchor chains weighing 100 pounds to the link drawn across the landscape by 200,000-pound D-8 crawler tractors) and replaced with fields of crested wheatgrass for domestic livestock.¹⁵

Space does not permit a full discussion of all of the ways in which federal bureaucracies cause environmental harm. However, a host of other rules, regulations and policies buried within the Washington labyrinth encourage environmental destruction in sometimes subtle, sometimes blatant, ways. For example:¹⁶

- Special provisions in the tax code, in addition to low-interest Small Business Administration (SBA) loans, subsidize uneconomical development on the periphery of ecologically fragile areas, including Yellowstone National Park.
- Conservation measures intended to reduce soil erosion very often foster farming practices that cause increased erosion.
- Agricultural price supports encourage uneconomical farm development and have led to the draining of marshes that formerly were waterfowl habitats.
- Federal subsidies for flood and hurricane insurance, grants from public utility and highway funds and projects sponsored by the Army Corps of Engineers all have contributed to destruction in the Barrier Islands along the Atlantic and Gulf coasts.

The problems of government mismanagement of environmental resources do not arise because government has too little power. Even worse problems exist in the former Soviet Union, where government power long was enormous. In 1921, Lenin signed a decree prohibiting any development of natural resources in Soviet national parks. Yet under the pressure of five-year plans, bureaucrats increasingly saw protected resources as raw material for economic growth. Only Lenin's personal interest prevented complete surrender to the development-at-any-cost mentality. Once the Stalinists came to power, Lenin's concerns were totally ignored.¹⁷

The principal reason why government solutions usually don't work is that the political process is itself a "commons."¹⁸ People who support bad policies bear only a small part of the costs of those policies. Most of the costs are borne by others. On the other hand, people who support good policies reap only a small portion of the benefits. As a result, the pursuit of political self-interest all too often results in environmental harm.

Progressive environmentalists know that we cannot successfully reach environmental goals by substituting a "political commons" for an "economic commons." Trying to achieve environmental goals by turning the problem over to government often exacerbates environmental destruction.

Ending the Tragedy of the Commons

The tragedy of the environmental commons arises because of the lack of clearly defined property rights. Since government defines and protects these rights, it would appear that a role for government is essential. But because the political process itself is a commons, it is difficult for government to enact socially desirable legislation.

Is there a way out of this dilemma? We believe there is. The solution involves requiring government to act in accordance with certain predefined rules. These rules would perform the role in the political commons that property rights perform in the private sector. They would erect barriers to those who seek to obtain private benefits at others' expense.

Accordingly, we propose that before any new environmental regulation is approved or any existing regulatory function is reauthorized, the following rules apply:

The Federalism Rule. Regulatory decisions should be made by the smallest possible government entity.¹⁹

The Cost-Benefit Rule. Before any regulation is imposed, objective studies should weigh the benefits against the costs.

The Compensation Rule. Innocent property owners must be compensated for the loss of property rights or nonnegligible losses of value.

In what follows, we expand on these rules and show how they can be used to bring about major improvements in the way government regulates the environment.

"The federalism, cost-benefit and compensation rules should apply to any regulation being considered."

Guide to Regulatory Reform: The Federalism Rule

The U.S. Constitution established a unique federal system of government to replace the original Articles of Confederation. A national legislature and president were to address national concerns while state legislatures and governors would remain responsible for *local* concerns. Federal power would displace state authority only within specifically delineated areas. Certain areas — chief among them public health and safety — would be the exclusive province of the states.

“While national defense requires coordination by the central government, drainage ditches do not.”

The reasoning behind this design was that government is likely to work best when it is closest to the governed. Thus while national defense requires coordination by the central government, drainage ditches do not.

This principle of federalism can be expressed quite simply: The federal government’s proper role is limited to carefully defined and constitutionally legitimate problems beyond the reach of the individual states.

The Constitutional Basis for Federalism. Federalism should not be confused with “states’ rights.” States do not have rights, they have *powers*. The Ninth and Tenth amendments in particular demonstrate that the Founding Fathers were not confused over the distinction between rights and powers.

Amendment IX: “The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.”

Amendment X: “The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.”

However, the principle of federalism is today more rhetoric than reality in our nation’s capital. For example, in October 1987, President Reagan issued Executive Order 12612, setting out federalist principles for every member of the bureaucracy to adhere to. Yet Timothy Conlan and David Beam, writing in *Intergovernmental Perspective* magazine, found that “some agencies routinely fail to implement the Executive Order’s certification and assessment procedures in even the most superficial way.”

Federalism in Practice. Applying the principle of federalism consistently has become a problem as America has grown in social and commercial complexity. In the name of environmental protection, federal power to regulate local behavior has grown enormously in the past three decades. Many federal environmental laws go far beyond anything that can be justified under federalism. For example:

- The Superfund law assumes that thousands of local sites — from industrial zones to abandoned waste dumps — pose a serious threat to human health unless the federal government acts.²⁰
- The Safe Drinking Water Act assumes that the federal Environmental Protection Agency (EPA) is more interested in protecting human health than are local officials.²¹
- The wetlands provisions of the Clean Water Act assume that even isolated plots of occasionally soggy ground should be regulated by federal bureaucrats rather than local officials.²²

Each of these assumptions is untrue and is a clear violation of the principle of federalism. The federal government's proper role in environmental protection is limited to those areas that exceed the jurisdiction of a single state or that cannot be resolved by several states working in concert.

Unfunded Mandates. Federal laws that leave little room for local decision making often take the form of unfunded mandates. This is certainly true of laws dealing with the environment.

- Federal environmental regulations cost the U.S. economy as much as \$150 billion annually.²³
- In Columbus, Ohio, the growing costs of compliance with environmental regulations may consume 23 percent of the city's budget in the year 2000.²⁴

These examples are just the tip of the iceberg. The Advisory Commission on Intergovernmental Relations studied the growth of mandates from 1981 to 1991. It found that Congress passed 27 laws that included at least one mandate on the states or their political subdivisions. The National Conference of State Legislatures reported that 185 federal mandates currently impact state and local governments.²⁵

To localities, unfunded mandates come from both state and federal officials seeking to shift the costs and keep the political benefits of environmental laws. But local governments are political subdivisions of the state, not the federal government, and state officials are obligated to represent the interests of the local communities that elect them. Much of the problem of federal unfunded mandates has arisen because, until recently, state officials had not made an effective case against them.

Subsidies as Sources of Mandates. Violations of federalism are not limited to unfunded mandates imposed on the states by federal authorities. Many times, federally collected dollars are used to subsidize local activities or programs such as disaster relief, Superfund site cleanup or public education. Of course, much of this federal largesse comes with strings attached, thus entangling state and federal officials in a Gordian knot of unfunded mandates and unjustifiable subsidies.

"In Columbus, Ohio, compliance with environmental regulations may consume 23 percent of the city's budget in the year 2000."

Backlash Among the States. The backlash against federal overreaching and interference in local affairs is growing.²⁶

- Eight states (Arizona, California, Colorado, Hawaii, Illinois, Missouri, Oklahoma and Pennsylvania) passed resolutions in 1994 that asserted state sovereignty under the Tenth Amendment and called on the federal government to “cease and desist” from actions that exceed the constitutional delegation of powers from the states.
- Seven states (Alabama, Arizona, California, Delaware, Michigan, Pennsylvania and South Dakota) have passed legislation requesting that the state’s federal delegation appear before the state legislature to discuss unfunded mandates and other federally imposed requirements.
- Four states (Arizona, California, Florida and Texas) have filed suit against the federal government to recoup costs incurred due to the presence of illegal immigrants. The federal government has a constitutional duty to control the nation’s borders, so these states reason that its failure to do so should not burden state taxpayers.

Policy Implications. The recent renewal of interest in the Ninth and Tenth Amendments may encourage a reexamination of the full range of federal regulations and laws. In fact, both the Constitution and common sense require that the federal role in regulatory affairs be carefully defined. Together, the two amendments require the federal government to fully justify its every action. Furthermore, the federal government is not empowered to “deny or disparage” any rights of individuals without an express grant of authority in the Constitution. It is a government, in other words, of specific and limited powers over its citizens. The states as political entities or through their respective citizens retain all other governmental powers.

Traditionally, the states were laboratories of democracy, developing policies appropriate to local conditions. Today, the federal government asserts authority over a wide range of issues, imposing a “one size fits all” policy. It is time to reestablish the federal government in its proper role so that future power grabs become more difficult and less likely.

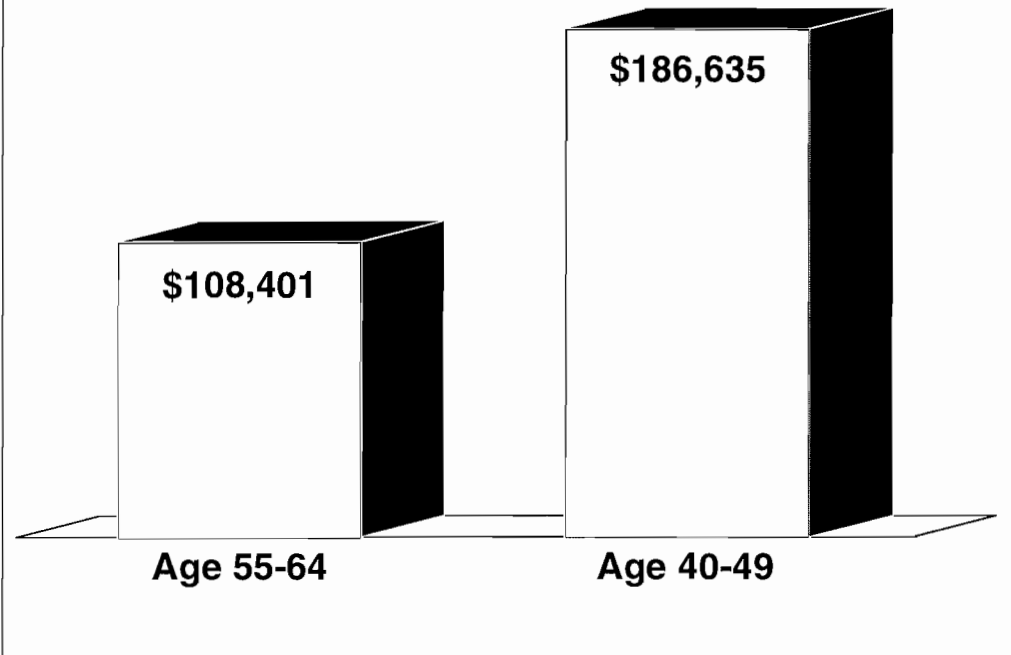
“It is time to reestablish the federal government in its proper role.”

Guide to Regulatory Reform: The Cost-Benefit Rule

Cost-benefit analysis is a comparison of the estimated costs of an action with the estimated benefits it is likely or intended to produce.²⁷ Almost all business decisions involve some measures of costs vs. benefits. Yet many government decisions are taken without adequate consideration of either. That is one reason why the private sector is more efficient and productive than government.

FIGURE II

Annual Mammograms: Cost Per Life-Year Saved



The Republican Contract With America calls for the application of cost-benefit analysis to new rules and regulations. The intent is to force Congress and regulatory agencies to assess the costs and benefits of regulations before enacting them — just as they would assess the regulation's impact on the budget deficit.

A weak cost-benefit rule would simply require that costs and benefits be assessed. A strong rule would require that the benefits exceed the costs.

What Is Cost-Benefit Analysis? When applied to health and safety regulations — and environmental regulations whose intent is to promote health and safety — cost-benefit analysis requires calculating the cost of saving human life. Many critics argue that one cannot place a dollar value on a human life. But that is not the intent of cost-benefit analysis. Rather, such analysis permits comparison of various options, all of which may be beneficial in some way but not all of which can be simultaneously undertaken.

Measuring Benefits in Terms of Years of Life Saved. Eventually we all will die. Thus, researchers who study risks refer to “life-years saved” rather than “deaths prevented.” Avoiding a particular risk of death today means that you are more likely to live the statistically average life span in America. The difference between this average life span and a premature death is the number of life-years saved.²⁸

“Cost-benefit analysis requires calculating the cost of saving human life.”

Currently, scholars discount future years of life saved at a 5 percent rate of interest. Thus, if a regulation allows a person to live 10 more years rather than die today, the “present value” of the number of life-years saved is 7.7 years. Future costs also are discounted at a 5 percent rate.²⁹

Of course, in most cases we are not sure that a particular regulation has saved a particular life. That’s why most calculations of life-years saved are based on statistical probabilities.

Measuring the Costs Per Year of Life Saved. Consider the case of mammograms. If we gave every woman in America an annual mammogram, we would detect some breast cancers in their early stages and prevent some women from dying prematurely. However, since the number of women whose lives would be saved would be relatively small, the cost per life saved would be high.

In making the calculations shown in the Figure II, researchers assumed that in the absence of a mammogram women would get an annual physical breast exam. So the figure shows the net additional cost and net additional benefit of adding a mammogram to a regular physical exam. As Figure II shows, for women in their 40s, the cost per year of life saved would be \$186,635. For women in their 50s, it would be \$108,401.³⁰

When Hillary Rodham Clinton devised the Clinton health care plan, she and her advisors decided not to cover a cost much higher than \$100,000 to save a year of life. That’s why the plan provided regular mammograms for women in their 50s but not for younger women and why it provided for Pap smears only once every three years.³¹

Is \$100,000 the right standard? That can be debated. But if we accept that standard and apply it to the health and safety regulations of major government agencies, then most of what government does in these areas fails the test.

The Most Expensive Regulations. Some regulations impose astronomical costs relative to the benefits they produce. Table II shows five of the worst examples. Bear in mind that the dollar figures shown are the estimated costs *for each year of life added* to an exposed individual’s life span.³²

- The standard set for chloroform emissions at 48 pulp mills imposes over \$99 billion in costs for each life-year saved.
- If this regulation allowed one person to live another 20 years, the implicit “cost” of saving that life would be *about \$2 trillion — about one-third the size of the U.S. annual GNP.*

One reason why the cost estimates appear so outrageous in such cases is that the risks the regulations are trying to eliminate are so tiny. Cost-benefit analysis alerts us to the fact that the regulation of trivial risks can be very expensive.

“Some regulations impose astronomical costs relative to the benefits they produce.”

Sound Science. Examples like those above highlight the need for sound science as a foundation for cost-benefit analysis. When bureaucrats ignore the best available research data in favor of the most advantageous political outcome, they distort and abuse cost-benefit analysis. Unfortunately, this is a frequent practice, as when the EPA utilized unsupportable assumptions and methods in its analysis of secondhand tobacco smoke.³³ The best response to such misuse of economic analysis is to demand better execution of the procedures and techniques.

Placing a Value on Human Life. Is there a way of determining how much a human life is worth? One technique economists use is to measure the implicit amount people are willing to pay to avoid risk; or, conversely, to measure the amount the market pays people to assume risk. Coal miners, crop dusters, test pilots and others who perform risky jobs generally demand a wage premium for assuming extra risk. And based on studies, health economists have estimated the value of an average life-year to be somewhere between \$10,000 and \$500,000. This 50-fold range reflects differences in willingness to incur risk as well as genuine uncertainty about how much people care about life expectancy.³⁴

Wealthier Is Healthier. Some question whether we should try to put a value on human life. But researchers have found that needlessly wasting economic resources may have a deadly effect on human populations.³⁵ In other words, the wealthier a society is, the healthier its citizens are likely to be. Some have estimated that for every reduction in national wealth of \$3 million to \$8 million, one additional premature death will occur.³⁶ This is due to the fact that spending money on one activity, even if it reduces a particular risk, makes those dollars unavailable for other risk-reducing expenditures that

"It has been estimated that for every reduction in national wealth of \$3 million to \$8 million, one additional premature death will occur."

TABLE II

Five High-Cost, Low-Benefit Regulations

<u>Regulation</u>	<u>Cost Per Life-Year</u>
Radionuclide emission control at coal-fired utility boilers	\$ 2,395,161,000
Benzene emission control at rubber tire manufacturing plants	\$19,865,323,000
Radionuclide emission control at uranium fuel cycle facilities	\$33,750,000,000
Sickle cell screening for non-black low-risk newborns	\$34,239,773,000
Chloroform private well emission standard at 48 pulp mills	\$99,351,684,000

Source: Tammy O. Tengs et al., "Five Hundred Life-Saving Interventions and Their Cost-Effectiveness," *Risk Analysis* (in press), 1994.

might have produced even greater gains in public safety. In the real world, all individuals, industries and local governments must operate within limited budgets. This creates a zero-sum game whereby spending for one priority reduces the amount of money available for all others. Even if the goal is as important as protecting human health, there comes a point at which the marginal benefit derived from spending one more dollar is too small to justify in light of other possible uses for the money.

Placing a Value on Other Environmental Benefits. What about cases where the benefit is not saving human lives, but achieving some other environmental goal? One method is to try to infer from human behavior how much people are willing to pay. Why not simply ask people what value they place on various environmental amenities? Because when people are asked to place a theoretical value on various benefits, their answers are not believable.

For example, after the Exxon Valdez oil spill in Alaska, individuals were asked how much they would be “willing to pay” to protect the shoreline from future oil spills. Their answers, when extrapolated to the entire U.S. population, were astronomically large, yet they were presented as estimates of the “value” of pristine wilderness — a technique sometimes called “contingent valuation.” However, contingent valuation methodologies often confuse what one is willing to say and what one is willing to pay. Cost-benefit calculations require a firmer footing.³⁷

Comparing Regulatory Agencies. There is justifiable debate among experts about what the “right” cost-benefit standard is. However, few believe that federal health and safety regulators should apply widely different standards in different areas. Yet that is precisely the effect of many regulations, as Table III shows.

- The median regulation imposed by the EPA implies a cost per life-years saved standard that is almost 100 times as high as the median regulation adopted for highway safety.
- The median EPA regulation implies a standard that is 332 times the standard used to regulate airline safety.

Policy Implications. Proper cost-benefit analysis provides an objective listing of independently estimated costs and benefits of a given regulation, which public officials (or the voting public) may ignore or embrace. Thus cost-benefit analysis is simply a tool for separating good intentions from good ideas. It does not curtail or eliminate the decision-making authority of elected officials, but it does generate the critical information all public servants require.

“Contingent valuation methodologies often confuse what one is willing to say and what one is willing to pay.”

"The median EPA regulation implies a standard that is about 100 times as high as for highway safety and 332 times as high as for airline safety."

TABLE III

Cost-benefit Performance of Federal Agencies

<u>Regulator</u>	<u>Median Cost Per Life-year Saved</u>
FAA	\$23,000
Consumer Pro. Safety	\$68,000
Nat'l Highway Traffic Safety	\$78,000
OSHA	\$88,000
EPA	\$7,629,000

Source: Tammy O. Tengs et al., "Five Hundred Life-Saving Interventions and Their Cost-Effectiveness," *Risk Analysis* (in press), 1994.

Guide to Regulatory Reform: The Compensation-for-Takings Rule

Private property rights are crucial to the functioning of a market economy and are enshrined in the U.S. Constitution. The "takings clause" of the Fifth Amendment is unequivocal: "...nor shall private property be taken for public use without just compensation." Unfortunately, our government routinely ignores this component of our Bill of Rights — especially by allowing environmental regulators to condemn and acquire private property without paying for it.

The Supreme Court has stated that the primary purpose of the takings clause is "to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole." This sound principle underlies any legitimate government action. Because the federal courts have not diligently protected people's rights under the takings clause, the Republicans' Contract With America seeks to restore these rights to citizens through legislative action.

Takings and Compensation. Consider a few examples of regulatory decisions under the Endangered Species Act, wetlands rules and other environmental laws.³⁸

- Brandt Child of Moab, Utah, hoped to develop campgrounds and a golf course on his property; the federal government used the Endangered Species Act to block his plans because the rare Kanab ambersnail resided in the springs on his land.
- A Baptist congregation in Florida wanted to build a new church and adjacent parking lot; federal officials determined that the site was more important as a wetland.

- Retiree Margaret Rector of Austin, Texas, sought to sell 15 acres of land; the government blocked the sale because the land was potential habitat for the black-capped vireo and the golden-cheeked warbler.

The government offered these people no compensation. It simply ordered them to leave their property in its original condition and thereby provide ecological benefits to the rest of us.

No matter how vital or important the activity, it is improper to impose the costs of providing a public amenity or “service” on a single individual. Although everyone must eat, the government must pay for the food that it distributes to the poor. The same is true of military weapons. The Department of Defense must pay for every bullet and bombshell private defense contractors produce.

Criminalizing Federal Regulations. Some private property owners have had more than their land rights taken away. They have been sent to prison or threatened with prison for technical violations of environmental regulations, particularly federal rules dealing with wetlands. For example:

- Bill Ellen spent six months in jail for minor violations of wetlands permit requirements; although he had secured 38 separate permits to construct waterfowl habitat on his employer’s land, the bureaucrats considered him a “willful” violator of the law.³⁹
- A Missouri family farmer was tried, but not convicted, for repairing a broken levee on his farm; in the process of moving dirt to rebuild the levee, he was accused of destroying wetlands.⁴⁰
- Twelve oil companies recently filed suit seeking the return of \$570 million paid for offshore oil leases. After granting the leases, the federal government imposed a ban on drilling — and kept the money.⁴¹

“After granting offshore oil leases to 12 companies, the federal government imposed a ban on drilling — and kept the money.”

Recent Court Decisions. Indications are that the tide is turning in this struggle to enforce the Constitution.⁴²

In the 1987 case *First English Evangelical Lutheran Church v. County of Los Angeles*, the Supreme Court established that takings may be temporary as well as permanent. Often, regulators will deny a construction permit to a property owner who must then go to court. At the last minute, the regulators will change their minds, hoping to avoid embarrassment in court. This temporary denial of a property right is properly seen as a temporary taking and the government must compensate the property owner, just as would a private lessee who occupied the site temporarily.

In another 1987 case, *Nollan v. California Coastal Commission*, and the more recent 1994 case, *Dolan v. City of Tigard*, the Supreme Court held

that applications for building permits cannot be held ransom to other state goals. In these cases, property owners were being coerced to give land to the government for public pathways before they could build elsewhere on their land.

Chief Justice Rehnquist declared in his majority opinion in *Dolan*, “We see no reason why the Takings Clause of the Fifth Amendment, as much a part of the Bill of Rights as the First Amendment...should be relegated to the status of a poor relation...”

In a 1992 Supreme Court case, *Lucas v. South Carolina Coastal Council*, a developer who owned two expensive beachfront lots was awarded compensation when the state prevented him from building on the site. The case was significant because the state had relied on a host of safety and environmental justifications to support its position that compensation was not required. The court saw through this smokescreen.

Most of these cases involved a relatively small amount of compensation, at least by federal standards. Yet takings claims are not always for small dollar amounts.

- In one case, the U.S. Court of Claims awarded \$60 million plus interest to a private firm that had been prevented from developing its mining lands.⁴³
- The spotted owl regulatory decisions have blocked the sale of millions of dollars worth of timber in the Pacific Northwest — for which there has been no takings award.⁴⁴

Executive and Legislative Reforms. In response to the spate of takings claims being filed in federal courts in the early 1980s, President Reagan issued Executive Order 12630. This proclamation directed all federal agencies to conduct a “takings impact analysis,” just as they are required to perform an “environmental impact analysis.” The purpose was to anticipate any likely violations of private property rights and carefully consider alternatives. Congress failed to join Reagan in this effort, and takings under Presidents Bush and Clinton have steadily increased. Congress is considering legislation contained in the Contract With America that would require compensation whenever a federal action “results in a reduction in the value of the property equal to 10 percent or more.” Most important, the legislation would require the offending agency to pay the compensation from its own budget — increasing an internal incentive to obey the Constitution or pay the consequences.

“Takings under Presidents Bush and Clinton have steadily increased.”

Applying the Principles

Consistent application of the three principles of regulatory reform by public officials will help to ensure that federal policies are selected and devel-

oped properly over time. In addition, these three principles can assist Congress and other watchdog organizations in measuring the appropriate scope of any proposed federal program. To summarize the proper process, three questions must be asked of those who propose any environmental regulation:

- Is there a proper role for the federal government, or is the object of regulation a state or local problem?
- Do the costs of the proposed regulation reasonably reflect its benefits?
- If property rights are taken or diminished by the regulation, are the owners compensated for their losses?

If legislators cannot answer all three questions in the affirmative, they should reject the proposed regulation. The following case studies examine specific federal environmental programs in light of the three questions.

Case Study: Superfund

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) was passed during a lame-duck session of Congress and signed by President Jimmy Carter as one of his last acts in office. The law created the original five-year, \$1.6-billion trust fund called Superfund. Superfund was largely a response to the infamous discovery of an abandoned chemical dump beneath the residential community of Love Canal, N.Y.⁴⁵ Across the country, fearful citizens demanded federal action to avert what was perceived to be a nationwide crisis: the existence of hundreds of sites at which chemical “time bombs” threatened to cause disease and death. Fortunately, the passage of time has refuted the notion that serious risks exist at most such sites.⁴⁶ But the legacy of Love Canal lingers through this federal program.

The stated intent of Superfund was to provide federal funding for the cleanup of chemical waste if responsible parties could not be found or were unable to pay. The original law required that at least 400 “National Priority List” (NPL) sites be identified and placed under the program. This was an arbitrary number apparently matching the number of congressional districts more closely than the number of places that posed objective environmental risks.

The revenues for this huge environmental program are collected through a series of excise taxes, especially on crude oil and petrochemicals, and a general environmental income tax on corporate profits. However, there is no direct relationship between a company’s creation of waste sites and the taxes it must pay under Superfund. Total Superfund expenditures have now reached \$15.2 billion.

“There is no direct relationship between a company’s creation of waste sites and the taxes it must pay under Superfund.”

“Total Superfund expenditures have reached \$15.2 billion plus several billion dollars spent directly by the private sector.”

In addition, funds spent directly by the private sector at Superfund waste sites amount to several billion dollars.⁴⁷

The Superfund law was intended as a temporary, emergency program. Thus, the law contained a provision requiring Congress to revisit the issue every five years with the expectation that the cleanup program would be rapidly completed. However, the complex and controversial nature of Superfund delayed the first such reauthorization until 1986. The Superfund Amendments and Reauthorization Act (SARA) extended the trust fund for another five years and increased its dedicated, special tax revenue funding to \$8.5 billion. More recently, the Omnibus Budget Reconciliation Act of 1990 stretched Superfund into 1994 and added another \$5.1 billion in authorized tax collections. The special taxing authority of Superfund expires at the end of 1995. If this Congress fails to reauthorize the program and the taxes, Superfund must be phased out as the existing revenues are depleted.

Imposing Unfair Liabilities on the Private Sector. Superfund is a classic example of the tragedy of the political commons that results when the people who derive the benefits of government action are different from those who bear the costs. In theory, Superfund is supposed to enforce a “polluter pays” policy. That is, if culpable parties can be linked to a polluted site, these “potentially responsible parties,” or PRPs, must pay. However, Superfund’s liability structure goes far beyond the state policy. Because of the excessively high costs, polluter and nonpolluter alike *overpay*. One reason is that Superfund liability is based on an incredibly tough combination of common law remedies known as strict, retroactive and joint-and-several liability.⁴⁸ These liability standards serve more to supply lawyers with employment than to provide the nation with environmental quality.

Superfund imposes strict liability on people who are only remotely connected to hazardous chemicals. Past and present owners or operators of a site, the company that created the chemicals and even companies that used or transported the chemicals are potentially responsible.⁴⁹ The government does not need to show any negligent behavior on the part of PRPs in order to make them liable at a site.

In addition, Superfund liability is applied retroactively. Actions that were legal (perhaps even mandated by state law) when undertaken may later trigger Superfund liability. The U.S. Constitution prohibits *ex post facto* or “after the fact” application of criminal laws, yet Superfund embraces this concept for civil liability.

Finally, courts have imposed joint-and-several liability under Superfund. A party even peripherally responsible for any portion of the material at a Superfund site can be held financially responsible for the entire cleanup. This includes banks that made loans on the property, insurers of the property owners or operators and even municipal governments that operated or disposed of wastes on what is now a Superfund site. Under joint-and-several

liability, firms often sue one another. The EPA itself rarely targets small businesses or minor polluters, preferring to target wealthy firms and allow them to sue others under the joint liability doctrine. The end result is the same: hundreds of innocent parties are dragged into Superfund litigation.⁵⁰

Creating Waste Instead of Cleanup. Many embarrassing examples of waste and fraud have been uncovered in recent years. Superfund contractors have used Superfund money to pay for Christmas parties, office plants, sports tickets, even calls to pornographic 900 numbers.⁵¹ These are extreme examples of lack of oversight by the Superfund bureaucracy.

Yet even if every expenditure had been necessary, the bigger problem is that cleanup at Superfund sites has proceeded at a snail-like pace. Fewer than 20 percent of NPL sites have been declared “clean” since Superfund began. Through March 1994, cleanup activity had yet to begin at almost half of the NPL sites.⁵² Yet economic development on or near a site can be paralyzed from the moment it is listed, at considerable cost to the private sector.

Depressing Local Economies. Superfund creates major problems for local economies. A Superfund site designation often dries up business loans in already depressed neighborhoods and discourages redevelopment of abandoned industrial areas. Since a purchaser of such a property potentially is buying Superfund liability as well, this has created the so-called “brownfields” syndrome. Rather than redevelop an older industrial site, with the potential for unlimited Superfund liability, private investors seek out properties that have never been used for commercial activities. Inner cities and declining industrial areas thus are disadvantaged in the competition for jobs and tax revenues. As Doug Sarno of the nonprofit organization Clean Sites has noted, “The easiest thing to do is to walk away from a brownfield and find some nice greenfield where you can avoid the whole predicament.”⁵³

Imposing Unreasonable Cleanup Standards. The average cost of a Superfund cleanup has been estimated at \$30 million, including lawyers’ fees and bureaucratic overhead.⁵⁴ The major reason for the high cleanup costs is that Superfund standards are irrationally strict. Some have compared these standards to requiring every kitchen in America to be as sterile as a hospital operating room. It makes little sense to clean up chemically contaminated groundwater to drinking water standards if no one will ever drink from that source. Yet in many cases, that is the standard Superfund imposes.⁵⁵ Unreasonably stringent cleanup standards also lead to high litigation costs. The reason corporations (and municipalities) fight so hard in court is because the stakes are so high.

Even a cosponsor of the original Superfund bill, James Florio of New Jersey, discovered after becoming governor of the state that Superfund imposes absurdly tough standards. Florio complained, “It doesn’t make sense to clean up a rail yard in downtown Newark so it can be a drinking water reservoir.”⁵⁶

“Some have compared standards for Superfund waste sites to requiring every kitchen in America to be as sterile as a hospital operating room.”

“One of the major problems for Superfund’s supporters has been an inability to demonstrate any negative impact on human health.”

Superfund and the Federalism Rule. If analyzed according to the principles of regulatory reform, Superfund flunks the tests. The primary health concern at Superfund sites is groundwater contamination. Theoretically, this contamination could cross state lines and justify federal involvement. Yet a 1984 General Accounting Office survey of 15 states failed to find any “inter-state aquifer problems.”⁵⁷ Since even the worst Superfund sites do not have national environmental impacts, Superfund imposes federal control on what are essentially state and local problems. Moreover, Superfund tends to impose “one size fits all” environmental standards. Even J. Winston Porter, who headed the Superfund program from 1985 to 1989, admits, “The major problem with Superfund is ... that the federal government is ill-equipped to make local, one-of-a-kind site cleanup decisions.”⁵⁸

Superfund and Cost-Benefit Analysis. As noted above, the cost of cleaning up Superfund sites is huge, averaging about \$30 million per site.⁵⁹ The benefits are largely hypothetical, however. When risks are as small as those claimed to exist at most Superfund sites, it is impossible to prove that any human has been harmed in any given case. One of the major problems for Superfund’s supporters has been an inability to demonstrate any negative impact on human health from exposure to Superfund site contaminants — that is, a disease or death that would not have occurred if the site had not existed.

Yet by assuming that extremely unlikely —sometimes physically impossible — events will occur in the future, EPA creates the impression of risk where no actual harm will occur. These exaggerated risks, when accepted by the general public or policymakers, generate political pressure in favor of the EPA program. In general, the EPA approach under Superfund relies on excessively pessimistic assumptions, including the assumption that the highest theoretically possible exposure to a chemical will occur at a site.⁶⁰ For example, EPA consistently assumes that future site uses will include children, who will live there for 70 years, ingesting slightly less than a teaspoon of local dirt every day and relying exclusively on contaminated local groundwater for bathing and drinking.

The EPA also estimates each chemical risk to human health at a site based on the worst-case results from tests on the most sensitive laboratory animals. Every factor in the overall risk equation is slightly — sometimes significantly — exaggerated. For example, the assumed amount of soil contamination is based on the worst samples and the amount of soil assumed to be ingested by a human being is based on worst-case dirt-eating scenarios. When one inflated risk assumption is multiplied by the next, the total exaggeration grows enormously. The EPA defends its process as erring on the side of caution, but even cautious policies must have limits.

To understand how absurd some EPA risk assumptions are, imagine that similar risk assumptions were applied to highway safety. The EPA might

"Superfund has been called 'the environmental equivalent of the Defense Department's \$600 toilet seat'."

assume that all vehicles are driven at 90 miles per hour for 70 years with at least three babies in the back seat, the brakes are worn out and the driver is drunk. Based on this scenario, the EPA would calculate terrifying probabilities of injury or death and require that all cars be built like Sherman tanks.

The result of the EPA's Superfund approach is that the unrealistic assumptions result in unnecessarily stringent cleanup standards that produce no additional human health benefits, yet add millions to the cost of each site cleanup.

Superfund exemplifies all that is wrong with American environmental policy: It is an expensive assault on minor risks resulting in an enormous waste of scarce economic resources. The head of California's environmental protection agency calls Superfund "the environmental equivalent of the Defense Department's \$600 toilet seat."⁶¹

A Solution. Even if Superfund worked as intended, it would provide insignificant benefits to human health and the environment. Superfund's design defies sound science and sound economics and fails to assign costs to the appropriate parties. As currently administered, the program causes more fiscal harm than environmental good. Thus, Superfund should be ended as a federal program. As an interim step, the federal government's role should be limited to capitalization of a State Revolving Loan Fund, from which states could borrow funds for site cleanup or containment. This would be similar to the State Revolving Fund set up under the Clean Water Act's sewage treatment facility program. Because almost \$2.7 billion of uncommitted revenues remains in the Superfund pipeline, there would be little need to raise additional taxes. Such an approach would be consistent with the principle of federalism and would finally cap the federal government's involvement in what is properly a local issue.

Case Study: The Delaney Clause

It is not much of an exaggeration to say that pesticides created the modern environmental movement. Concern over pesticides grew along with the increased application of man-made chemicals on our crops. With the 1962 publication of Rachel Carson's bestseller, *Silent Spring*, concern over pesticide use blossomed into a national movement.⁶² *Silent Spring* struck a responsive chord with its presentation of the risks of pesticides, especially DDT, which was later banned. Carson also was the first popular author to focus on cancer and the bioaccumulation of pesticides in humans, plants and animals.

A "pesticide" is any chemical that can kill a "pest" such as an insect, rodent or weed. Thus, the generic term encompasses fungicides, rodenticides, insecticides and herbicides.⁶³ Pesticides are generally toxic to the target species, although some work less directly, by disrupting the reproductive

cycle, for example. While some pesticides are pest-specific, most are at least potentially toxic to many other species. Thus, any application of any pesticide should be carefully conducted to avoid unintentional exposures. Before looking at the downside of pesticides, however, let's first consider what's good about them.

Economic Benefits of Pesticides. From a purely commercial point of view, pesticides are a bargain:⁶⁴

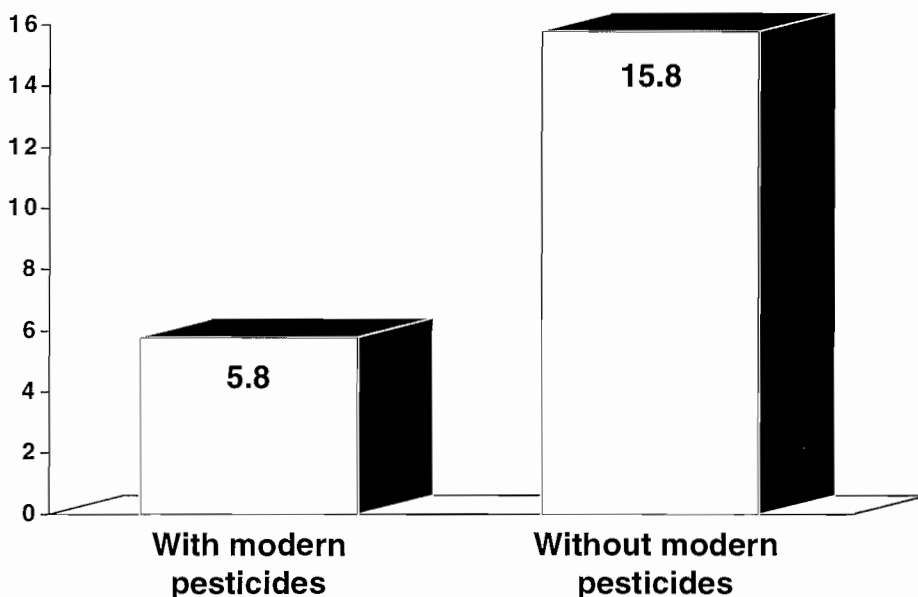
- The U.S. Department of Agriculture estimates that approximately \$4 billion a year is spent on pesticide use.
- Pesticide use prevents the loss of about \$16 billion in food products — four times its cost.

A significant share of the world's food supply never makes it to market. Even with pesticide use, insects eat high percentages of many crops and other crops spoil before reaching consumers. Without pesticides, the loss would be much greater. For example, a recent Department of Agriculture study estimated that if herbicides were banned in the state of Indiana, over 50 percent of the corn crop would be lost.⁶⁵ In addition, pesticides provide people with much more than mere profits. By limiting crop losses, modern pesticides have contributed immeasurably to improvements in human welfare — producing both environmental and health benefits.

FIGURE III

Land Needed to Feed the World

Millions of
Square Miles



Note: One square mile equals 640 acres.

"If the world still depended on 1950s technology, it would take almost three times as much land to feed the world's population."

Environmental Benefits of Pesticides. Modern agricultural techniques, including judicious applications of pesticides, are far more productive per acre than older methods. Thus, we would need far more land to produce the current amount of farm output in the absence of pesticides and fertilizers.⁶⁶ As Figure III shows:

- If the world were still dependent on the technologies available in 1950, approximately 10 million square miles of new farmland would have to be developed in order to produce enough to feed the world's growing population.⁶⁷
- Since agriculture of all types currently occupies about 5.8 million square miles, in a very direct sense pesticides help preserve wilderness, especially in developing countries.

Health Benefits of Pesticides. Even more important than the financial and ecological benefits are the improvements in human health that result from low-cost fruits and vegetables on the dinner table. Americans enjoy more varied, higher-quality foods than they did before these chemicals were widely used.⁶⁸ In recent years, researchers have confirmed that eating fresh fruits and vegetables has a powerful suppressing effect on cancer.⁶⁹ For example, Dr. Sanford Miller points out, "Increased consumption of fruits and vegetables is associated with lower cancer rates in all sorts of societies and countries."⁷⁰

Thus, by increasing the supply of fruits and vegetables, pesticides reduce the overall cancer rates — the exact opposite of the conclusion drawn by many pesticide opponents.

Pesticides and Cancer. The widespread fear of cancer is easily tapped by those who condemn pesticides. Until recent years, most cancers were fatal. Thus, linking a product with cancer was intuitively understood to be linking it with death. This is a primary reason why EPA research on pesticides initially concentrated on whether they can cause cancer. The major focus continues to be on cancer, although the EPA has shifted research to "noncancer endpoints," or diseases other than cancer, as well.

Researchers use laboratory animals (normally mice or rats) rather than experiment on human beings. However, since rodents live only a few years, cancer has little time to develop. Therefore, researchers use extremely high doses of each chemical being tested for carcinogenicity in an effort to magnify and accelerate any effects. As a standard procedure in such laboratory tests, a "control" substance, one assumed to be nonharmful, is simultaneously administered to a similar number of lab animals in the same large doses. This enables the researcher to compare two populations of rodents at the end of the experiment: one exposed to the suspected chemical and the other exposed to a harmless substance, generally natural in origin. Yet something disturbing has happened in many of these experiments. As expected, many of the rodents

"By increasing the supply of fruits and vegetables, pesticides reduce the overall cancer rates."

"In most of the test results, cancer was caused not by the properties of the chemicals but by the extremely high doses administered."

exposed to pesticides developed cancer. However, many "control" groups displayed the same number of cancerous tumors.

After years of similar results around the world, it has become clear that most man-made chemicals are no more likely to be carcinogenic than are chemicals naturally present in the plants we eat.⁷¹ In most of the test results, cancer was caused not by the properties of the chemicals but by the extremely high doses administered.

Nevertheless, the EPA continues to rely on tests with laboratory animals to determine which man-made chemicals in pesticides are carcinogenic. This creates a host of uncertainties. Rats (or other species) do not respond to chemicals in exactly the same way humans do; different species metabolize chemicals in different ways.⁷² Even if all responded in exactly the same way, extrapolating from rodents to humans is hard: Should one rely on body weight, surface area or some other factor?

There is another reason to doubt the scientific validity of high-dose rat tests. Constant injection or ingestion of high doses of a substance is likely to kill or injure the cells that are directly overdosed. The body's normal repair mechanism responds by having surrounding cells divide and grow to replace the dead cells. Because cancer is the result of a single cell mutation, the greater the number of cells dividing, the greater the probability that one will become cancerous.⁷³ *Under such constant high-dose conditions, up to half of all tested chemicals, natural and man-made, can cause cancer in rodents.*

Rodent tests for the possibility of carcinogenicity in humans is inexact, to say the least.⁷⁴ Indeed, noted food safety expert Dr. Elizabeth M. Whelan has declared, "Mouse to man extrapolation has become an essential weapon in the arsenal of those who seek to terrify us about food additives, pesticides and other synthetic chemicals."⁷⁵

Pesticide Regulations. The major federal law dealing with pesticides and the food supply is the Food, Drug and Cosmetic Act (FDCA).⁷⁶ One important function of the FDCA is the setting of "tolerances" for pesticide residues on foods. Tolerance levels are intended to provide a wide margin of safety from any potential harm due to pesticide residues. The tolerance level is established by making certain assumptions as to the pesticide's potential for toxicity or health risk to humans, and these assumptions are based on the types of laboratory animal studies just described.⁷⁷

For the reasons given above, high-dose experiments are an unreliable method by which to measure the potential for harm at the low doses pesticides are actually encountered in the food supply. Yet the FDCA makes a difficult process almost impossible by creating two separate standards for pesticide regulation.⁷⁸

- For raw or unprocessed foods, the EPA must establish the tolerance level by weighing the potential risks against the benefits derived from the use of the pesticide — a risk vs. benefits standard.⁷⁹
- For processed foods, the law establishes an absolute, zero-risk standard.

The separate standard for processed foods is based on the assumption that man-made chemicals can become concentrated during processing as, for example, water is squeezed out of tomatoes to produce tomato paste.⁸⁰ *If the pesticide residue concentrates in the processed food to a level exceeding the tolerance level for raw foods*, it will be treated as a food additive, rather than a residue. Food additives are governed by the infamous Delaney Clause of the FDCA.⁸¹

The Delaney Clause. The Delaney Clause prohibits even a trace of any food additive shown to cause cancer or induce tumors in laboratory animals or humans at any dose. When the clause was adopted in 1958, the existing technology could not detect trace contaminants below levels of several parts per million. Today, we can detect parts per trillion or less. Thus many substances that would have been considered a “zero” risk less than 40 years ago would be prohibited today.⁸²

However, because the Delaney Clause applies only to processed foods, America still applies a double standard to our food supplies.⁸³

In practice, the EPA is likely to ban any uses of a pesticide if processing eventually may concentrate it to levels exceeding the tolerance standard in any food item.

In *Les v. Reilly*, a 1992 case, the Ninth Circuit Court of Appeals held that the EPA must enforce the Delaney Clause’s zero tolerance standard.⁸⁴ While this case specifically dealt with only four pesticides, it has potential application to “more than 32 pesticides that are currently used on 80 to 100 food crops.”⁸⁵

Thus the Delaney Clause is at the center of a major controversy. Numerous critics have called for its reform. Even EPA Administrator Carol Browner has expressed an interest in reforming it. Early in her tenure at the EPA, she described the Delaney Clause as a “scientific anachronism.”⁸⁶

How does the clause measure up to the three principles of reform? It does not directly involve property rights. Moreover, because most processed foods are intended for interstate commerce, there is a strong justification for some federal involvement in the issue. However, the federal government is supposed to regulate, rather than prohibit, interstate commerce. It is critical that any regulations dealing with pesticides be based on sound scientific and economic principles.

“The Delaney Clause prohibits even a trace of any food additive shown to cause cancer or induce tumors in laboratory animals or humans at any dose.”

“In general, there is a negligible risk to human health from either natural or man-made pesticides in our food supplies.”

Cost-Benefit Analysis and the Delaney Clause. In general, there is a negligible risk to human health from either natural or man-made pesticides in our food supplies. The National Academy of Sciences implicitly recognized this fact when it recommended establishing “a negligible risk standard in setting and revising tolerances for all [carcinogenic] pesticides found in food.”⁸⁷ Others are even more blunt about the insignificant nature of health risks from pesticide residues. According to Dr. Sanford Miller, Dean of the Graduate School of Biomedical Sciences at the University of Texas, “Today’s pesticides represent trivial risks to the public and to our food safety. The pesticide residue risk is so low as to be meaningless, whatever the specific numbers of the risk estimates.”⁸⁸ The National Research Council’s Committee on Diet and Health agrees:

“Increased consumption of vegetables and fruits can be expected to result in increased ingestion of residues of herbicides and pesticides used in agriculture. The potential small increased risk ... that might result from increased exposures ... in the general population would be greatly outweighed by the potential benefits (i.e., reduced risk of cancers of the lung, stomach, colorectal and other sites and reduced risk of other chronic diseases) to be expected from greater fruit and vegetable consumption.”⁸⁹

Much of the argument for keeping the Delaney Clause in its current form seems to be based on one group’s desire to impose excessive costs on another. For example, if federal policies imply that pesticide-treated foods are less healthful than organic foods, many consumers may decide to buy organically grown produce. Thus, the clause is a tool for achieving a competitive advantage unjustified by objective conditions. This amounts to an unfair subsidy through federal regulation.

Solution. Because offsetting benefits (in the form of reduced cancer risks) coexist with pesticide residues, overregulating pesticides may be counterproductive — that is, harmful to human health. Therefore, we must base federal regulations on the best available scientific information — and repeal the Delaney Clause. In place of the outmoded clause, Congress should adopt a standard based on negligible risk to human health, rather than zero risk.

Case Study: The Endangered Species Act

The Endangered Species Act (ESA) of 1973 was the end result of several attempts to rewrite the nation’s species conservation laws during the 1960s and early 1970s. It moved beyond the earlier prohibitions against killing a listed species and prohibited its “harming or harassment.” The

Department of the Interior's Fish and Wildlife Service has interpreted these provisions to mean "modifying" habitat. As a result, under the ESA the federal government has assumed broad powers to regulate private property. Consequently, private rights to develop land are now considered inferior to the federal interest in preserving wildlife and plants.⁹⁰

As interpreted by the Fish and Wildlife Service, the ESA bestows essentially unlimited power on bureaucrats to confiscate private land where endangered species are or might be ("habitat") without compensation. This interpretation ignores the U.S. Constitution's Fifth Amendment requirement that property shall not be taken without the payment of just compensation.⁹¹ Consequently, the ESA potentially places an enormous burden on tens of thousands of private property owners across the country.

Relying on Unsound Science. Although it might surprise most Americans, the ESA is not limited to rare or truly endangered creatures. It has been interpreted to apply to "identifiable subpopulations," or groups, of distinctly nonendangered species if a particular colony may be at risk. Proponents of the ESA defend this position as an effort to protect the distribution and range of population of otherwise healthy species. Yet all species have a natural range limited by climate and food sources. Most such ranges tend to gradually fade out rather than end at clear boundary lines. So it stands to reason that most species will include a few isolated groups within small habitats. By going beyond strictly endangered *species*, the ESA allows federal control to expand without any compelling biological justification.

Currently, 800 plants and animals are listed by the ESA with another 3,300 under consideration for listing. However, most of the United States consists of land that — for one species or another — is at the edge of the natural range and may include a few isolated individuals. Therefore, the ESA potentially could regulate much, if not all, of the land in America. The effect can be seen with the salmon of the Pacific Northwest (which the ESA declares separate "species" depending on the tributary in which they spawn) and the Northern spotted owl of the same region (which is biologically almost identical to its numerous cousins to the south).⁹²

This policy leaves the ESA open to regulatory mischief. When a small population of any species becomes geographically isolated, ESA bureaucrats can declare them more precious than any human property right.

Failing to Save Species. Despite its high cost to private landowners, apparently the ESA doesn't save species. A study published by the Center for the Study of American Business found that:⁹³

- Of the more than 1,350 species listed under the ESA for protection, only 19 have been subsequently deleted.
- Seven of these 19 species had become extinct — hardly successes for the ESA.

"The Endangered Species Act potentially could regulate much, if not all, of the land in America."

“By confiscating private property, the ESA creates an incentive to eliminate habitat before rare species can find it.”

- Eight of the species were incorrectly listed in the first place due to original data errors.⁹⁴

Moreover, a 1990 General Accounting Office study determined that 80 percent of all listed species were still declining in spite of the ESA’s strict regulations. These disappointing results were entirely predictable. So long as private landowners have no incentive to preserve the habitat on which endangered species depend, the ESA will continue to fail. In fact, by confiscating private property, the ESA creates an incentive to eliminate habitat before rare species can find it. For example:

- Even environmentalists are beginning to acknowledge that the ESA may endanger some species by giving people an incentive to engage in what people in the Pacific Northwest call the “shoot, shovel and shut up” phenomenon.⁹⁵
- A similar response has resulted in the loss of habitat for the golden-cheeked warbler and black-capped vireo in Texas, where even billionaire Ross Perot plowed up 333 acres covered with juniper trees to prevent the birds from nesting on his land.⁹⁶
- “I am convinced,” Larry McKinney of the Texas Parks and Wildlife Department recently testified, “that more habitat ... has been lost in those areas of Texas since the listing of these birds than would have been lost without the ESA at all.”⁹⁷

The ESA and Federalism. The ESA puts a clever, if unwarranted, twist on the question of the federal commons. For centuries, certain hunted animals had been a common resource, not subject to private ownership until killed by a landowner (or someone with the landowner’s permission). In other words, the wildlife “resource” was treated as state property (or federal, in the case of migratory birds) until a private individual killed the animal, usually under a regulated process (hunting seasons, for example). Significantly, this state control was never asserted over plant life on private land, since the plants did not escape across property lines.

With the passage of the ESA, the relationships among the states, private citizens and the federal government changed dramatically. In essence, the federal government took away regulatory authority from the states and took away ancient hunting rights (and property rights) from private citizens. What had been state-level wildlife management was nationalized. Over time, the federal government came to assert that the habitat in which these wild animals lived was effectively an extension of the federal commons.⁹⁸

The ESA and Cost-Benefit Analysis. Once a species is listed, restrictions may be imposed on private land use decisions. The consequences of the listing process include tremendous costs to private owners.⁹⁹ Yet while the act imposes direct costs on a few individuals, proponents claim vague and un-

“The ESA is being intentionally abused and misused to block private (and even public) development.”

specified benefits for society at large. The ESA legislation explicitly rejects the calculation of costs and benefits in decisions to list a species as endangered.

An Excuse for Opposing Growth? In addition, the ESA is being intentionally abused and misused to block private (and even public) development. Some environmentalists have admitted as much. For example, Andy Stahl, a resource analyst with the Sierra Club Legal Defense Fund, declared, “Thank goodness the spotted owl evolved in the Northwest, for if it hadn’t, we’d have to genetically engineer it.”¹⁰⁰ The goal of Stahl and other environmentalists was not just to save the spotted owl but to prevent the logging of “old growth” forests in the Northwest.¹⁰¹ These forests consist of trees that may be centuries old but are extremely valuable to timber companies.

Next to the spotted owl incident, perhaps the best-known case was the attempt by environmentalists to stop construction of the Tellico Dam in Tennessee by maintaining that the affected stretch of river sheltered the last members of a species of fish called the snail darter. In this case, the effort was thwarted when Congress, under strong political pressure, voted to exempt the Tellico Dam project from the ESA. Small private landowners rarely receive such congressional attention.

The ESA and the Compensation Rule. Today, many landowners must provide public benefits (by protecting endangered species and their habitat) at private cost. Furthermore, rural landowners are not the only ones exposed to the ESA’s uncompensated takings. A recent Gallup poll conducted for Times-Mirror Magazines asked: “Should the government compensate private property owners” when “land is devalued by the need to protect an endangered species?” Fifty-nine percent of all respondents said “yes,” while only 28 percent answered “no.”¹⁰²

Solutions. Generally speaking, because nature works as it does, we cannot save species directly. The most we can do is save them indirectly by saving their habitats. If we, as a society, deem a species valuable enough to authorize state preservation of its habitat, we must compensate those who own the habitat. This is the only way to make the Endangered Species Act consistent with the Constitution.

Case Study: Wetlands

The Clean Water Act is descended from 19th-century legislation that aimed to keep navigable waterways free from physical obstruction and interference. Those laws prohibited the construction of piers and dams and the unauthorized dumping of dredged materials. In recent decades, the Clean Water Act also has covered the discharge of pollutants, because pollution can impact the quality of the water, if not its navigability.

Particularly when we are dealing with the infectious agents found in municipal sewage, public health risks can loom large. Thus, a governmental role exists for regulating the introduction of such materials into publicly owned bodies of water. We may find it necessary to impose certain restrictions for land along the shore or nearby. In most cases, the primary responsibility for such restriction falls to the states. Only when the federal commons is clearly involved does the federal government have a role.

Wetlands and the Clean Water Act. Unfortunately, the Clean Water Act has been extended beyond any justifiable position in regulating the land areas adjacent to, or connected to, navigable waters. In particular, Section 404 of the Clean Water Act has been interpreted to extend to almost any wet or swampy land in the United States.

- In 1975, the federal District Court for the District of Columbia in *Natural Resources Defense Council, Inc. v. Callaway* radically expanded the interpretation of congressional intent to include wetlands as part of the “waters of the United States.”¹⁰³
- Thus, the judiciary expanded the Clean Water Act to regulate any “discharge” into wetlands that eventually drain into navigable waterways.

Over time, federal wetlands regulations have come to include even isolated wetlands with no connection to navigable waterways. This regulatory definition emerged from the existence of certain soil types and moisture-loving vegetation along with brief periods of coverage by water — as little as seven days in the early definitions. And no federal jurisdiction was created without connection to interstate waters.

Ironically, throughout most of American history the federal government viewed true wetlands as an obstacle to progress. Swamps bred mosquitoes, which spread malaria and other diseases, so draining them was a high priority. Beginning with the Swamp Lands Act of 1849, the federal government distributed some 65 million acres to 15 states for “reclamation” purposes.¹⁰⁴ The federal grants were predicated on draining the swamps to “improve” them. Leading farm states such as California, Illinois, Iowa, Indiana and Ohio have eliminated more than 85 percent of their original wetlands acreage.¹⁰⁵ Thus, much of the current debate revolves around activities in states that retained a sizable portion of their original wetlands, along with smaller areas in states that developed their wetlands earlier.

To carry out their policies, federal agencies (primarily the Army Corps of Engineers and the Environmental Protection Agency) developed guidelines for “jurisdictional” wetlands. In 1989, following President George Bush’s campaign pledge to achieve “no net loss” of wetlands,¹⁰⁶ the agencies wrote a joint manual to create a uniform definition of wetlands within the federal

“Federal wetlands regulations have come to include even isolated wetlands with no connection to navigable waterways.”

“A baseball player knocking dirt off his cleats could violate the Clean Water Act.”

government. Unfortunately, they wrote the guidelines so broadly that it almost became difficult to find acreage *outside* the federal regulatory reach. As a result, thousands of private landowners found themselves compelled to apply for federal permits before “developing” their land. Under the ludicrous interpretations of this requirement that arose from *Callaway*, any activity that disturbed the dirt within wetlands might count as a “discharge” of fill material.

In one instance, John Arens, an attorney representing a Missouri farmer charged with violating the wetlands rules, forced an EPA witness to admit that *if a baseball diamond were built on the type of soil typical of wetlands, a player knocking dirt off his cleats could be in technical violation of Section 404.*¹⁰⁷

Today, a debate rages over federal regulation of areas that are privately owned and may only occasionally collect water. Rather than recommending that the federal government purchase these contested areas, proponents of a regulatory approach demand that the government restrict their use without compensating their owners.

Alaska has a permanently frozen layer of earth just below the surface known as “permafrost.” This prevents precipitation from soaking into the ground during thaws and creates vast stretches of wetlands. Thus, Alaska has more wetland acreage than the remaining 49 states combined. However, this wetland area encompasses almost every parcel in the state that is not a mountain or a glacier. Thus, under a strict “no net loss” policy, almost all development in Alaska would be stymied.

Although active farming operations are supposedly exempt from federal wetlands regulations, the variability of the nation’s total farm acreage creates potential conflicts with wetlands goals. For example:¹⁰⁸

- Between 1972 and 1982, the total cropland area in the United States grew from 295 million to 383 million acres, an average increase of 8.8 million acres per year.
- However, cropland had declined by 60 million acres from 1954 to 1972.

Thus, active cropland can expand or contract by 50 million acres or more over the course of a decade, and America’s farmers and ranchers need this flexibility to respond rapidly to changing world market conditions. However, the federal government risks creating a “use it or lose it” climate in land use policy. If farmers fear that they will lose the right to farm certain acres should that acreage temporarily revert to “wetlands,” they are likely to plow every acre, every year.

Criminalizing Wetlands Violations. In December 1990, the EPA and the U.S. Army Corps of Engineers issued a joint memorandum outlining a publicity campaign against wetland regulation violations.¹⁰⁹ The memoran-

“The EPA specifically set out to conduct some high-profile prosecutions for regulatory violations by Earth Day 1991.”

dum directed regional officials to “nominate” regulatory violations for high-profile prosecutions in time to meet an Earth Day 1991 deadline. It endorsed both civil and criminal penalties. The latter were not to be limited to those who intentionally disregarded federal regulations; they could apply even in cases of negligence. With the few criminal prosecutions, the federal government intended to frighten other wetlands owners into meek compliance.

Thus far, the most famous case is that of John Pozsgai of Morrisville, Pa. After purchasing a 14-acre dump site to expand his truck repair business, Pozsgai cleaned up over 7,000 old tires and several rusting cars. Neighbors may have been happy to see the junk hauled away, but when Pozsgai leveled about five acres with clean fill dirt the EPA took him to court. He was fined \$5,000 and sentenced to three years in jail.¹¹⁰ Pozsgai’s only crime: dumping dirt without permission.

In another widely reported case, Wall Street millionaire Paul Tudor Jones II tried to create a waterfowl habitat on his land along the Chesapeake Bay. The EPA determined that this activity amounted to a criminal act. Jones paid a \$1 million fine and “donated” a second million to support a wildlife refuge, thereby avoiding trial. But his employee, William Ellen, was sentenced to six months in jail and several additional months of home detention.¹¹¹

Wetlands and the Federalism Rule. For the 25 percent of wetlands in the Lower 48 states that are on federal property, the Constitution is explicit. Article IV, Section 3 grants to Congress the “Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States.” Executive Order 11990, issued in May 1977 by President Carter, requires executive branch agencies to avoid adverse impacts on wetlands to the “maximum extent possible.”¹¹² Thus, no constitutional difficulty is raised by federal wetlands regulations on federally owned property.

Wetlands and Cost-Benefit Analysis. Bearing in mind the requirement to compensate landowners, it makes sense for federal agencies to identify truly valuable wetlands and protect them through outright purchase — weighing their cost against their anticipated benefits. Since the present approach offers little incentive for good behavior by regulators, it requires reform.

Wetlands and Real Pollution. It is important to note that banning real pollution — that is, hazardous or biologically damaging material introduced to a waterway — does not require compensation under the Fifth Amendment. But we could control pollution without controlling a wetland itself; we need only control discharges from wetlands into navigable waterways. And until harmful materials are discharged into federal waters, the state is the appropriate regulator. Until the actions of a private property owner impact the legitimate federal estate, the federal government has no legitimate role.¹¹³

Solutions. To reform wetlands policies in America, Congress should:

- Identify the wetlands areas that fall within the federal estate,
- Rank the areas according to ecological value, and
- Purchase the areas deemed to be of highest or most critical ecological value.

Case Study: The Clean Air Act

The Clean Air Act became law in 1970 and has been amended several times, most recently in 1990.¹¹⁴ The last round of amendments included provisions ranging from:

- So-called acid rain regulations that reduce the amount of industrial emissions in order to reduce the acidity of lakes in the Northeast to
- Regulations aimed at reducing potentially toxic chemical emissions that in sufficient quantities can pose a health risk to humans to
- Tailpipe emissions standards for all new cars in America.

President Bush, proclaiming himself the “environmental president,” strongly supported the Clean Air Act Amendments of 1990. Unfortunately, Bush left us to pay the bill, estimated by his own experts to be at least \$25 billion per year.

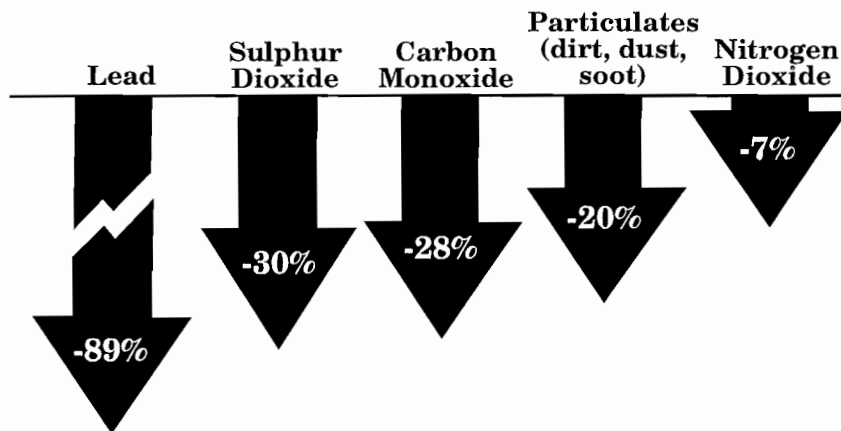
Breathing Easy Over Cleaner Air. Judging from the intensity of the debate over clean air, one might conclude that Americans face imminent disaster. We do not. Air quality in America continued to improve throughout the 1980s, even as the economy grew substantially. The EPA’s own statistics for the 10 years from 1979 to 1988 indicate that emissions of lead dropped by almost 90 percent, sulfur dioxide by 30 percent, suspended particulates by 20 percent, carbon monoxide by 28 percent and volatile organic compounds (which can react to form ground level ozone) by 7 percent. [See Figure IV.] And air quality in most areas has improved slightly since that time. Despite these successes, the Clean Air Act Amendments of 1990 imposed even more stringent standards on emissions. Perhaps the most controversial are the tailpipe emissions standards.

Tailpipe Emissions Testing. Acting under authority of the 1990 amendment, the EPA created federal mandates that impose enormous costs — in time and money — on the driving public with very little payoff in air quality. Under the mandates, state-approved testing organizations would have to place each car on a treadmill with the engine running, then measure its emissions through a range of simulated driving speeds.

“Air quality improved throughout the 1980s, even as the economy grew substantially.”

FIGURE IV

U.S. Urban Air Quality (1979-88)



Source: Environmental Protection Agency.

The regulation would apply not just in Southern California, which has smog problems, but also in parts of Arizona, Texas and 12 East Coast states from Virginia to Maine. The regulation ignores both economic costs and scientific realities.

- Sierra Research, Inc. estimated that the EPA plan would add about \$800 to the price of a new car.¹¹⁵
- The American Automobile Manufacturers Association was even gloomier, estimating that the price of the average car would increase by \$2,800.¹¹⁶
- Yet most auto pollution comes from a relatively small number of highly polluting older vehicles.
- And more than 50 percent of all auto emissions are produced by only 10 percent of the cars on the road. [See Figure V.]

Of course, the higher the price for a new car, the longer motorists are likely to continue driving their older, more polluting vehicles.

The Clean Air Act and Federalism. Few would deny that the federal government has a role to play when high levels of air pollution cross state boundaries. That clearly involves the federal commons. But the Clean Air Act has pushed that role far beyond any reasonable limit.

What the EPA has done is to take the Clean Air Act Amendments of 1990 as an invitation to intrude down to the local level. The EPA's standards are so stringent that a *metropolitan area is in noncompliance if air quality readings exceed the standards only four days in three consecutive years*. The EPA can force cities that do not meet the standards to adopt specific emissions control procedures, including:

"More than 50 percent of all auto emissions are produced by only 10 percent of the cars on the road."

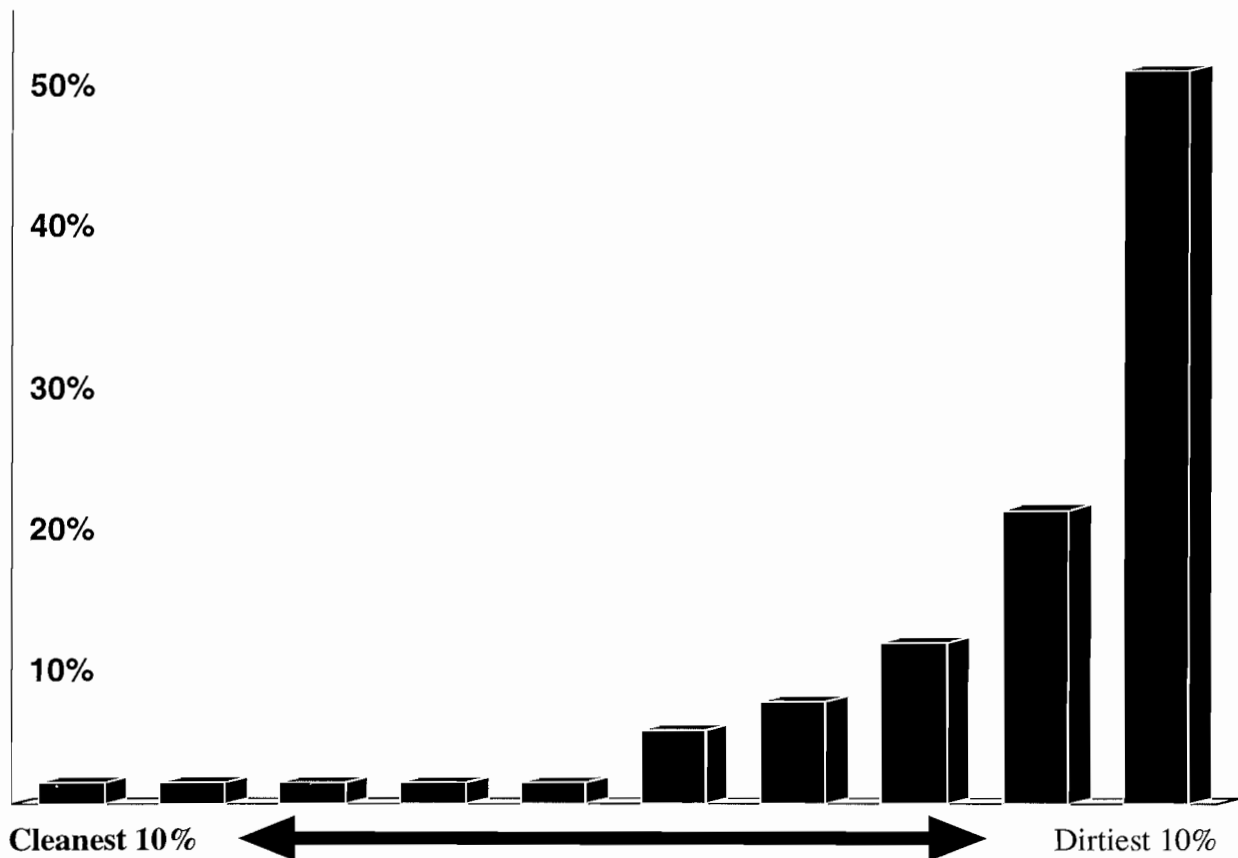
"Governors and state legislatures have been battling the EPA over many procedures, particularly those requiring tailpipe testing."

- Using reformulated gasoline mixtures with at least 30 percent of the oxygenates from "renewable" sources.¹¹⁷ These gasoline blends cost more, provide poorer performance and do not contribute appreciably to cleaner air.
- Mandatory carpooling.
- Tailpipe emissions testing procedures, replacing less costly decentralized approaches already in use.

Governors and state legislatures have been battling the EPA over many procedures, particularly those requiring tailpipe testing. However, the Clean Air Act empowers the EPA to punish state resistance by preventing the return of federally collected gasoline taxes and other highway funds. As a result:

FIGURE V

Total of All Auto Emissions



Note: Each bar represents 10 percent of all cars on the road, from the least polluting 10 percent (on the left) to the most polluting 10 percent (on the right).

- New Jersey faced the loss of \$200 million in highway funds if it failed to adopt EPA's emissions testing scheme.¹¹⁸
- Governor Thomas Carper of Delaware rejected EPA demands for his state, regardless of any funding cutoff.¹¹⁹
- Virginia became engaged in a running battle with regional EPA officials and even filed suit in federal court to block the EPA plan.¹²⁰
- Late last year, Pennsylvania's legislature rejected Governor Casey's endorsement of the EPA program.¹²¹

The Clean Air Act and Cost-Benefit Analysis. As previously mentioned the EPA has sought to force the entire nation to adopt the emissions standards it imposed in Southern California — an area with unique geographic and climatic conditions. [See the sidebar on EPA's California Dreaming.] In fact, the California Air Resources Board state standards are even more stringent than those of the Clean Air Act.¹²² And the EPA's own scientific studies indicate that pollution would be reduced to the same degree if there were one standard for cars sold in California and another, slightly less stringent, for those sold elsewhere.¹²³

Auto makers now are producing new cars that run at least 95 percent cleaner than those they built before the first Clean Air Act, so there is very little left to remove from new car emissions. And, outside of California, the existing standards are working well. It is not cost-effective or even desirable to squeeze the last molecule of pollution out of new car models.

Solutions. Still, in certain places at certain times air pollution is a problem. How should we deal with it? We should identify the relatively few, relatively dirty vehicles that contribute most of the harmful emissions. We can detect these vehicles with remote sensing devices like those perfected by Professor Donald Stedman of the University of Denver.¹²⁴

Remote sensors utilize an infrared beam of light that "reads" the tailpipe exhaust of a passing vehicle and conveys the reading to a tiny computer that registers the level of pollutants almost instantaneously. Because remote sensing devices are relatively inexpensive, municipalities can afford several of them for the cost of a single centralized testing station. And because they are portable, they can be used for random traffic checks. Cities in California, Arizona, Colorado and other states have tested them with encouraging results.

The Clean Air Act should be amended to, at a minimum, encourage innovation, local control, adoption of least-cost alternatives, remote sensing of vehicle emissions and rational risk assessment for air quality attainment standards.

"With remote sensing devices, we can identify the relatively few dirty vehicles."

EPA's California Dreaming

Despite the existence of widespread state and local opposition, the Environmental Protection Agency (EPA) has been relentless in its pursuit of one-size-fits-all national vehicle emissions regulations. In an effort to avoid the expense and complexity of requiring several different emissions standards for each car model, depending on where it is sold, the federal government has set a fairly stringent, yet not excessively expensive, standard for permissible auto emissions for new model cars. However, in recognition of the important state role in protecting human health and safety, the states are permitted to tighten these federal air standards.

Today, there are effectively two separate standards for pollution emissions for vehicles sold in the United States — the generic federal standard and the more stringent and more costly California standard.

California resorted to a tougher standard because of certain unique features of the southern part of the state. Especially in the area around Los Angeles, little rain falls through most of the year and air pollution emissions are not washed out as rapidly as they are elsewhere. Southern California is also heavily dependent on private automobiles, which leads to high levels of emissions. The regional geography (several coastal mountain ranges) combines with the climate, the car culture and prevailing ocean breezes to trap pollutants, leading to even higher concentrations. These factors all contribute to California's need to impose uniquely stringent standards.

But the EPA has consistently pushed for California standards across the country. For example, EPA Administrator Carol Browner recently announced that the EPA had decided to accept a longstanding proposal by the 12 states from Maine to Virginia (plus the District of Columbia) to impose California's more stringent vehicle emissions standards on that region.¹ EPA officials know that California and these northeastern states represent such a large share of the car market that all cars would have to conform to the high-cost California standard.

However, the proposal was drafted in February 1994, well before the historic congressional and state elections of last November (which among other things reflected voter anger at increasing federal regulations). Even at the draft stage, the "12-state" proposal was opposed by representatives from Delaware, New Hampshire, New Jersey and Virginia. Since then, six of the states have elected new governors and the District of Columbia has a different mayor. Rather than allow the new representatives to produce a proposal, the EPA quickly seized upon the earlier draft in an attempt to lock in the tougher standards.

Because the EPA refused to renegotiate in good faith with the new state representatives, Virginia filed suit in January of this year to block the EPA's proposals. "The EPA's demands are unreasonable, time-consuming and expensive for thousands of Virginians who live, work and commute in Northern Virginia," declared James S. Gilmore III, the state's attorney general.² "The Clean Air Act requirements demonstrate all of the evil consequences of the breakdown of our federal system."

Ultimately, Congress and the courts will have to settle the dispute.

¹ Julie Overy, "EPA Mandates California Low-Emission Vehicles in Twelve States," press release, Office of the Governor, Commonwealth of Virginia, December 16, 1994.

² Amy B. Resnick, "State Sues EPA," Arlington, VA, *Journal*, January 10, 1995.

"The American people are demanding federal environmental policies that preserve their values as well as the environment."

Conclusion

Federal environmental regulations are in serious need of reform. Currently, the U.S. Congress is debating general regulatory reform proposals that may provide the first steps toward more efficient, effective and equitable environmental regulation.

However, we should not assume that by passing a particular bill Congress will have finished its duties. As each major environmental regulatory law is brought up for reauthorization during the 104th Congress — Superfund, the Clean Water Act and the Endangered Species Act among them — members should apply the principles discussed in this study. The American people are demanding federal environmental policies that preserve their values as well as their environment. Congress should heed their demands.

NOTE: Nothing written here should be construed as necessarily reflecting the views of the National Center for Policy Analysis or as an attempt to aid or hinder the passage of any bill before Congress.

Notes

- ¹ See Virginia Postrel, "The Green Road to Serfdom," *Reason*, April 1990, pp. 22-28.
- ² On the distinction between Progressive and Reactionary Environmentalism, see John C. Goodman and Richard L. Stroup, "Progressive Environmentalism: A Pro-Human, Pro-Science, Pro-Free Enterprise Agenda for Change," National Center for Policy Analysis, NCPA Policy Report No. 162, April 1991.
- ³ Garrett Hardin, "Tragedy of the Commons," *Science*, Vol. 162, Nov. 11, 1968, pp. 1243-48. See also Garrett Hardin and John Baden, *Managing the Commons* (New York: W.H. Freeman & Co., 1977).
- ⁴ Terry L. Anderson and Don R. Leal, *Free Market Environmentalism* (San Francisco: Pacific Research Institute for Public Policy, 1991), p. 68.
- ⁵ Not all passenger pigeons were shot by humans. The ultimate cause of their demise was the destruction of their habitat.
- ⁶ See the discussion in Walter E. Block, "Environmental Problems, Private Property Rights Solutions," in Block, ed., *Economics and the Environment: A Reconciliation* (Vancouver: Fraser Institute, 1990), pp. 307-08.
- ⁷ *Ibid.*, pp. 315-18. In India, elephants are domesticated and used as beasts of burden. In Africa, elephants are wildlife.
- ⁸ Environmental Protection Agency, *Unfinished Business: A Comparative Assessment of Environmental Problems*, 1987.
- ⁹ K. Land, Marc J. Roberts and Stephen R. Thomas, *The Environmental Protection Agency: Asking the Wrong Questions* (New York: Oxford University Press, 1990).
- ¹⁰ See Goodman and Stroup, "Progressive Environmentalism: A Pro-Human, Pro-Science, Pro-Free Enterprise Agenda for Change."
- ¹¹ Peter Kirby and William Arthur, *Our National Forests: Land in Peril* (Washington, DC: The Wilderness Society and the Sierra Club, 1985), p. 4.
- ¹² John Baden, "Destroying the Environment: Government Mismanagement of Our Natural Resources," National Center for Policy Analysis, NCPA Policy Report No. 24, October 1986.
- ¹³ *Ibid.*
- ¹⁴ *Ibid.*
- ¹⁵ *Ibid.*
- ¹⁶ *Ibid.*
- ¹⁷ Fred L. Smith Jr., "A Free-Market Environmental Program for the Soviet Union." Paper presented to a Cato Institute conference "Transition to Freedom: The New Soviet Challenge," September 10-14, 1990, Moscow.
- ¹⁸ See Rodney Fort and John Baden, "The Federal Budget as a Common Pool Resource," in John Baden and Richard L. Stroup, *Bureaucracy vs. Government: The Environmental Cost of Bureaucratic Governance* (Ann Arbor: University of Michigan Press, 1981).
- ¹⁹ i.e., the one whose jurisdiction completely encompasses the scope of the problem.
- ²⁰ See, for example, Kent Jeffreys, "Amending Superfund: Reform or Revanche?" *Regulation*, No. 1, 1994, pp. 72-79.
- ²¹ See W. Michelle Simmons, "Rethinking the Safe Drinking Water Act," February 1995, Center for Policy Studies, Clemson University, Clemson, SC.
- ²² See Kent Jeffreys, "Whose Lands Are Wetlands?" *Journal of Regulation and Social Costs*, March 1992, pp. 33-59.
- ²³ Estimate derived from "Regulatory Reform: Information on Costs, Cost-Effectiveness and Mandated Deadlines for Regulations," U.S. General Accounting Office, March 1995, citing Thomas D. Hopkins, "Federal Regulatory Burdens," RIT Public Policy Working Paper, 1993, Rochester Institute of Technology.
- ²⁴ "Environmental Legislation: The Increasing Costs of Regulatory Compliance to the City of Columbus," a report of the Environmental Law Review Committee to the Mayor and City Council of Columbus, May 13, 1991.
- ²⁵ Testimony of Tom Davis, chairman, Fairfax County, VA, Board of Supervisors, before the U.S. House of Representatives Subcommittee on Investigations and Oversight of the Committee on Science, Space and Technology, March 22, 1994.

26 Susan M. Eckerly, "The Triple Threat of Government Red Tape," *Commonsense*, Vol. 1, No. 4, Fall 1994, pp. 65-78.

27 For a critical assessment of the limits of cost-benefit analysis, see Robert Formaini, *The Myth of Scientific Public Policy* (Social Philosophy and Policy Center, Bowling Green, OH, and Transaction Books: New Brunswick, NJ, 1990).

28 See, for example, Tammy O. Tengs et al., "Five Hundred Life-Saving Interventions and Their Cost-Effectiveness," *Risk Analysis* (in press) submitted for publication July 25, 1994.

29 Ibid.

30 Ibid. The figures were derived from David M. Eddy et al., "The Value of Mammography Screening in Women Under Age 50 Years," *Journal of the American Medical Association*, Vol. 259, No. 10, March 11, 1988, pp. 1512-19; and M.M. Kristein "Economic Issues in Prevention," *Preventive Medicine* (1977) 6(2), pp. 252-64.

31 John D. Graham, "Making Sense of Risk: An Agenda for the Congress," conference paper presented at the American Enterprise Institute, October 27, 1994, citing David M. Eddy, "Screening for Cervical Cancer," *Annals of Internal Medicine*, Vol. 113, 1990, pp. 214-26.

32 Ibid.

33 Kent Jeffreys, "Science, Economics, and Environmental Policy: A Critical Examination," Alexis de Tocqueville Institution, August 11, 1994, pp. 1-13.

34 See W. Kip Viscusi et al., *Learning About Risk: Consumer and Worker Responses to Hazard Information* (Cambridge, MA: Harvard University Press, 1987).

35 See, for example, Aaron Wildavsky, *Searching for Safety* (New Brunswick, NJ: Transaction Books, 1988).

36 Daniel K. Mitchell, "The Deadly Impact of Federal Regulations," *Journal of Regulation and Social Costs*, June 1992.

37 Roger Bate, "Pick a Number: A Critique of Contingent Valuation Methodology and Its Application in Public Policy," Competitive Enterprise Institute, January 1994.

38 Cesar V. Conda and Mark D. LaRochelle, "The New Populism: The Rise of the Property Rights Movement," *Commonsense*, Vol. 1, No. 4, Fall 1994, pp. 79-98.

39 H. Jane Lehman, "A Changing Tide on Wetlands Decisions," *Washington Post*, January 18, 1992, Page E1.

40 Jeffreys, "Whose Lands Are Wetlands?"

41 Campion Walsh, "Companies Argue Moratorium Case in Court," *Oil Daily*, February 1, 1995.

42 For a general overview of this issue, see Mark L. Pollot, *Grand Theft and Petty Larceny: Property Rights in America* (San Francisco: Pacific Research Institute for Public Policy, 1993).

43 *Whitney Benefits Corporation v. United States*, 926 F. 2d 1169 (1991).

44 Bill Richards, "Owls, of All Things, Help Weyerhaeuser Cash In on Timber," *Wall Street Journal*, June 24, 1992, p. 1.

45 Eric Zuesse, "Love Canal: The Truth Seeps Out," *Reason*, February 1981, pp. 16-33.

46 "Exaggerating Risk: How EPA's Risk Assessments Distort the Facts at Superfund Sites Throughout the United States," Hazardous Waste Cleanup Project, Washington, DC, June 1993.

47 Katherine N. Probst et al., *Footing the Bill for Superfund Cleanups: Who Pays and How?* (Washington, DC: Resources for the Future and the Brookings Institution, 1995).

48 For an early critique of Superfund's liability approach, see Richard Epstein, "The Principles of Environmental Protection: The Case of Superfund," *Cato Journal*, Vol. 2, No. 1, Spring 1982.

49 See, for example, James Lis and Melinda Warren, "Reforming Superfund," Center for the Study of American Business, Policy Study No. 118, February 1994, pp. 11-12.

50 This draconian approach to establishing liability under Superfund is widely criticized. Even a former administrator of EPA's Superfund office, Don Clay, has condemned these liability provisions. "Strict, retroactive and joint-and-several liability isn't fair," he says. William Tucker, "This Is No Way to Save the Earth," *Reader's Digest*, June 1993, p. 176.

51 Michael Fumento, "The Remediation of Superfund: Program Needs Way to Balance Costs, Benefits," *Investor's Business Daily*, October 23, 1991; and Richard L. Stroup and Bradley Townsend, "EPA's New Superfund Rule: Making the Problem Worse," *Regulation*, No. 3 (1993), pp. 74-75.

- 52 U.S. Environmental Protection Agency, "Superfund Historical Performance, 2nd quarter, FY 1994" (draft).
- 53 Quoted in William Tucker, "Superfund Sparks Industrial Flight," *Insight*, November 29, 1993, p. 9.
- 54 Probst et al., *Footing the Bill for Superfund Cleanups*.
- 55 Laura A. Mahoney, "Deriving Groundwater Cleanup Levels at Superfund Sites: Assessment of Current Federal Approach With Case Study," Proceedings of the Water Environment Federation 1992 Specialty Conference on Developing Cleanup Standards for Contaminated Soil, Sediment and Groundwater — How Clean is Clean? Alexandria, VA, 1992, p. 61.
- 56 Gary G. Benanav, "At Last, Congress May Finally Clean Up Superfund," *Wall Street Journal*, May 3, 1994.
- 57 General Accounting Office, "Federal and State Efforts to Protect Groundwater," cited in James Bovard, "The Real Superfund Scandal," Cato Institute, Policy Analysis No. 89, August 14, 1987, p. 9.
- 58 J. Winston Porter, "Let the States Supersede Superfund," (letter), *Washington Post*, May 9, 1994.
- 59 Probst et al., *Footing the Bill for Superfund Cleanups*.
- 60 See, for example, *Exaggerating Risk: How EPA's Risk Assessments Distort the Facts at Superfund Sites Throughout the United States* (Washington, DC: Hazardous Waste Cleanup Project, June 1993).
- 61 James M. Strock, "Wizards of Ooze: Lawyers Shouldn't Be the Only Ones Cleaning Up Under Superfund," *Policy Review*, Winter 1994, p. 42.
- 62 Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin Company, 1962).
- 63 One recent estimate of total pesticide use in America indicated that herbicides accounted for 61 percent of the total, insecticides 21 percent, fungicides 10 percent and all others approximately 8 percent. Source: Shirley A. Briggs and the staff of the Rachel Carson Council, *Basic Guide to Pesticides: Their Characteristics and Hazards* (Washington, DC: Hemisphere Publishing, 1992).
- 64 Donna U. Vogt, "Food Safety: Issues and Concerns Facing Congress," Science Policy Research Division, Congressional Research Service, Library of Congress, June 23, 1994, p. CRS-2.
- 65 Dennis T. Avery, *Global Food Progress* (Indianapolis: Hudson Institute, 1991), p. 250.
- 66 Avery, *Global Food Progress*, pp. 214-15.
- 67 Ibid.
- 68 National Research Council, *Pesticides in the Diets of Infants and Children* (Washington, DC: National Academy Press, 1993), p. 13.
- 69 Natalie Angier, "Chemists Learn Why Vegetables Are Good for You," *New York Times*, April 13, 1993, p. C1.
- 70 Dr. Miller is Dean of the Graduate School of Biomedical Sciences, University of Texas Health Science Center at San Antonio, and a former director of the Food and Drug Administration's Center for Food Safety and Applied Nutrition. Quoted in Avery, *Global Food Progress*, p. 136.
- 71 See Bruce N. Ames and Lois Swirsky Gold, "Environmental Pollution and Cancer: Some Misconceptions," pp. 153-82 in Kenneth R. Foster et al., *Phantom Risk: Scientific Inference and the Law* (Cambridge, MA: MIT Press, 1993).
- 72 *From Mice to Men: The Benefits and Limitations of Animal Testing in Predicting Human Cancer Risk* (New York: American Council on Science and Health, 1991)
- 73 Ames and Gold, "Environmental Pollution and Cancer: Some Misconceptions."
- 74 See Edith Efron, *The Apocalypstics: Cancer and the Big Lie* (New York: Simon and Schuster, 1984); also see Elizabeth M. Whelan, *Toxic Terror: The Truth About the Cancer Scare* (Ottawa: Jameson Books, 1985).
- 75 Elizabeth M. Whelan, "Mouse Terrorism: Pseudoscience and the Regulation of Environmental Chemicals," *Commonsense*, Vol. 1, No. 3, Summer 1994, pp. 30-47.
- 76 Under the FDCA, the EPA shares oversight responsibilities with the Food and Drug Administration (FDA).
- 77 Michael Fumento, *Science Under Siege: Balancing Technology and the Environment* (New York: William Morrow and Company, 1993), pp. 45-55.
- 78 For a complete analysis of this problem see National Research Council, *Regulating Pesticides in Food: The Delaney*

Paradox (Washington, DC: National Academy Press, 1987); and Donna U. Vogt, "The Delaney Clause: The Dilemma of Regulating Health Risk for Pesticide Residues," Science Policy Research Division, Congressional Research Service, Library of Congress, November 9, 1992.

⁷⁹ This is governed by Section 408 of the FDCA.

⁸⁰ It makes no difference that people will dilute the concentrated chemicals before they are eaten, as when water is added to flour (concentrated) to produce bread dough (diluted) or when tomato paste (concentrated) is made into sauce (diluted).

⁸¹ Section 409.

⁸² Fumento, *Science Under Siege*, p. 54.

⁸³ Vogt, "Food Safety: Issues and Concerns Facing Congress," in summary.

⁸⁴ See Keith Schneider, "Court Expands Pesticide Ban to Cover Many Used in Food," *New York Times*, July 9, 1992, p. A1.

⁸⁵ Vogt, "Food Safety: Issues and Concerns Facing Congress," at CRS-5.

⁸⁶ Margaret Kriz, "Taking Sides on Pesticides," *National Journal*, February 13, 1993, p. 428.

⁸⁷ *Regulating Pesticides in Food: The Delaney Paradox*, p. 12.

⁸⁸ Cited in *Global Food Progress 1991*, p. 134.

⁸⁹ National Research Council, Committee on Diet and Health, *Diet and Health: Implications for Reducing Chronic Disease Risk* (Washington, DC: National Academy Press, 1989), p. 695.

⁹⁰ For a detailed overview of the Endangered Species Act and its impact on private property owners, see Ike C. Sugg, "Caught in the Act: Evaluating the Endangered Species Act, Its Effects on Man and Prospects for Reform," *Cumberland Law Review*, Vol. 24, No. 1, 1993-94, pp. 1-78.

⁹¹ Indeed, a recent DC Circuit Court of Appeals decision, now before the Supreme Court on a writ of certiorari (*Sweet Home v. Babbitt*, decided March 11, 1994, accepted by the Supreme Court on January 9, 1995), declared that using the ESA to block "habitat modification" by private landowners was "neither clearly authorized by Congress nor a reasonable interpretation" of the statute.

⁹² See, for example, William K. Stevens, "Early Findings Link Threatened Owl to a Related Subgroup," *New York Times*, December 4, 1990, p. C4. See also Sugg, "Caught in the Act," pp. 52-53.

⁹³ *Ibid.*

⁹⁴ Large populations of these species were later discovered, so the species were removed from protection.

⁹⁵ Randy Fitzgerald, "When a Law Goes Haywire," *Reader's Digest*, September 1993, pp. 49-53.

⁹⁶ David Wright, "Death to Tweety," *The New Republic*, July 6, 1992, pp. 9-10.

⁹⁷ Larry McKinney, "Reauthorizing the Endangered Species Act — Incentives for Rural Landowners," in Wendy E. Hudson, ed., *Building Economic Incentives into the Endangered Species Act: A Special Report from the Defenders of Wildlife*, 2nd edition (Washington, DC: Defenders of Wildlife, 1993).

⁹⁸ Now that the resulting impact on private property rights is widespread and quite serious for many landowners, the ESA is being strenuously criticized. See Thomas Lambert and Robert J. Smith, "The Endangered Species Act: Time for a Change," Center for the Study of American Business, Policy Study No. 119, March 1994.

⁹⁹ Jonathan Tolman, "Of Mice and Men: A Look at the Endangered Species Act," Citizens for a Sound Economy Foundation, November 30, 1994.

¹⁰⁰ Sugg, "Caught in the Act," p. 53.

¹⁰¹ Charles McCoy, "U.S. Will Designate 11.6 Million Acres in Northwest to Protect Owls, Tall Trees," *Wall Street Journal*, April 29, 1991, p. A8.

¹⁰² "Natural Resources Conservation: Where Environmentalism Is Headed in the 1990s," Times-Mirror Magazines, National Environmental Forum Survey, June 1992, p. 24.

¹⁰³ 392 F. Supp. 685, (D.D.C. 1975).

¹⁰⁴ "Wetlands: Their Use and Regulation," Office of Technology Assessment, PB84-175918, March 1984, pp. 37-38.

- 105 T.E. Dahl, "Wetlands Losses in the United States, 1780s to 1980s," U.S. Department of the Interior, Fish and Wildlife Service, 1990, p. 6.
- 106 A policy under which each acre of natural wetlands that is developed or destroyed must be replaced by at least one acre of man-made wetlands.
- 107 Warren Brookes, "The Strange Case of the Glancing Geese," *Forbes*, September 2, 1991, pp. 104-12, at page 107.
- 108 Jeffreys, "Whose Lands Are Wetlands?" at page 37.
- 109 See *Regulatory Guidance Letter*, No. 90-9, "Wetlands Enforcement Initiative," December 17, 1990, U.S. Army Corps of Engineers.
- 110 Richard Miniter, "Muddy Waters," *Policy Review*, Spring 1991, p. 72. See also Joseph A. Slobodzian, "Judge: Fine Cut 97.5%, but Pozsgai 'No Hero,'" *Philadelphia Inquirer*, January 24, 1992.
- 111 Lehman, "A Changing Tide on Wetlands Decisions."
- 112 Gail Bingham et al., ed., "Issues in Wetlands Protection: Background Papers Prepared for the National Wetlands Policy Forum," The Conservation Foundation, 1990, p. 24.
- 113 Of course, a legitimate threat of future harm could trigger legal action by private or public entities.
- 114 See Kent Jeffreys, "Rethinking the Clean Air Act Amendments," National Center for Policy Analysis, NCPA Policy Backgrounder No. 107, October 16, 1990.
- 115 Thomas C. Austin et al., "The Cost-Effectiveness of Further Regulating Mobile Source Emissions," Sierra Research, Inc., Report No. SR94-02-03, February 1994, p. 102.
- 116 Cited in James C. McKinley Jr., "EPA Seeks Emissions Agreement for Northeast," *New York Times*, August 24, 1994, p. B5.
- 117 In practice, this means alcohol derived from grain crops.
- 118 P.L. Wyckoff, "Sanctions at Stake in Last-Ditch Effort on Auto-Test Mandate," *Star-Ledger* (Newark, NJ), November 6, 1994.
- 119 Ibid.
- 120 Amy B. Resnick, "State Sues EPA," *Arlington Journal*, January 10, 1995.
- 121 Matthew L. Wald, "EPA to Allow Flexibility in Auto Emission Testing," *New York Times*, December 10, 1994.
- 122 Patrick Bedard, "Shopping for Clean Air," *Car and Driver*, April 1995, pp. 110-15.
- 123 Julie Overy, "EPA Mandates California Low-Emission Vehicles in Twelve States," press release, Office of the Governor, Commonwealth of Virginia, December 16, 1994.
- 124 Patrick Bedard, "Still Smoggy: After All These Years," *Car and Driver*, April 1995, pp. 105-10.

About the Authors

Kent Jeffreys is a Senior Fellow, National Center for Policy Analysis. Mr. Jeffreys, who holds a J.D. from the University of Mississippi, is an expert in environmental issues including risk analysis, unfunded mandates, environmental racism, global warming and climate change, Superfund, wetlands, endangered species and property rights. Mr. Jeffreys also is the former Director of Environmental Studies at the Competitive Enterprise Institute, a former Energy and Environmental Policy Analyst for the Heritage Foundation and a former Republican Study Committee Analyst for the U.S. House of Representatives. His television appearances have included *MacNeil/Lehrer*, C-Span and *TechnoPolitics*, and he has testified before Congress on numerous environmental issues.

About the NCPA

The National Center for Policy Analysis is a nonprofit, nonpartisan research institute, funded exclusively by private contributions. The NCPA originated the concept of the Medical IRA (which has bipartisan support in Congress) and merit pay for school districts (adopted in South Carolina and Texas). Many credit NCPA studies of the Medicare surtax as the main factor leading to the 1989 repeal of the Medicare Catastrophic Coverage Act.

NCPA forecasts show that repeal of the Social Security earnings test would cause no loss of federal revenue, that a capital gains tax cut would increase federal revenue and that the federal government gets virtually all the money back from the current child care tax credit. Its forecasts are an alternative to the forecasts of the Congressional Budget Office and the Joint Committee on Taxation and are frequently used by Republicans and Democrats in Congress. The NCPA also has produced a first-of-its-kind, pro-free enterprise health care task force report, written by 40 representatives of think tanks and research institutes, and a first-of-its-kind, pro-free enterprise environmental task force report, written by 76 representatives of think tanks and research institutes.

The NCPA is the source of numerous discoveries that have been reported in the national news. According to NCPA reports:

- Blacks and other minorities are severely disadvantaged under Social Security, Medicare and other age-based entitlement programs;
- Special taxes on the elderly have destroyed the value of tax-deferred savings (IRAs, employee pensions, etc.) for a large portion of young workers; and
- Man-made food additives, pesticides and airborne pollutants are much less of a health risk than carcinogens that exist naturally in our environment.

What Others Say About the NCPA

"...influencing the national debate with studies, reports and seminars."

— **TIME**

"...steadily thrusting such ideas as 'privatization' of social services into the intellectual marketplace."

— **CHRISTIAN SCIENCE MONITOR**

"Increasingly influential."

— **EVANS AND NOVAK**