



MID-TERM REPORT CARD

BUSH ADMINISTRATION'S
ENVIRONMENTAL POLICY
JANUARY 2003

Edited by Bruce Yandle and Jane S. Shaw
PERC—THE CENTER FOR FREE MARKET ENVIRONMENTALISM



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— *Bruce Yandle and Jane S. Shaw*
Editors

INTRODUCTION

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OVERALL GRADE: C-

ABOUT THE REPORT CARD

This mid-term report card was developed by PERC—the Center for Free Market Environmentalism—to evaluate actions affecting natural resources and the environment taken by the George W. Bush administration during its first two years. The report card assesses actions in the light of free market environmentalism (FME). Consideration was given to how the executive branch played the hand passed along by the Clinton administration and how the new team began to play its own cards.

Free market environmentalism is a way of looking at environmental problems that recognizes the role of incentives and the importance of private property rights in encouraging stewardship. In viewing public sector activity, free market environmentalism identifies specific ways to improve public management by changing managers' incentives and opening up opportunities for voluntary action. These include: 1) decentralizing regulation where possible; 2) encouraging merit-based waivers of command-and-control where pos-

sible; 3) adopting only regulation that is, on net, beneficial and cost-effective; and 4) tying public sector managers' budget to their performance.

We recognize that, even at best, this report card is an incomplete and imperfect assessment. As students and professors well know, this is the way it is with all report cards, but even more so in this case. In assessing an administration's environmental policy actions, there is no sure way to know how hard the leaders may have pushed to alter policy one way or another. Struggling to avoid the passage of laws that might violate FME principles may be as heroic as working to pass FME-based laws. However, like all report cards, this one does not assess effort as much as outcomes.

In developing their assessments, the graders were asked to consider the following.

Did the president and his administration meet the following standards?

1. The administration defined and protected private property rights in

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the ownership and use of environmental assets.

For example, were property rights in grazing and timber cutting rights extended to allow more market participation and trading? Were incentives changed to induce more species protection and cleanup of hazardous waste by protecting the land rights held by private parties?

2. The administration made a deliberate attempt to draw on market forces, as opposed to command-and-control, in determining and enforcing standards.

Were the states allowed to set water quality standards employing watershed and river basin associations, for example? Are states allowed to use common law or permit trading to achieve quality goals? Are designated Superfund sites to be sold to the highest bidder, with performance standards set and joint and several liability rules for-given?

3. The administration provided federal agencies with the ability to charge market-based fees for services and to keep the revenues collected at the point of the services being provided.

Did the administration take the initiative to set market-based visitor fees to federal parks and lands managed by the U.S. Park Service, Bureau of Land Management, and Department of Agriculture? Were the managing agencies allowed to keep the revenues collected within the facility or agency

for use in improving the facilities?

4. The administration decentralized regulation by devolving regulation to the state and local level.

Was Superfund, in effect, devolved to states that demonstrate ability to manage the process? Were mandates for state vehicle inspection and maintenance programs exchanged for programs that focused on reducing auto emissions from vehicles that offend the environment?

5. The administration avoided new legislation or executive action that generates harmful environmental costs that are not assessed and accounted for in the action.

What role did the administration take in the farm bill expansion of commodity programs that produce surpluses and increase uses of nitrate fertilizers that invade rivers and streams; protection of the steel industry that perpetuates life of older, more polluting steel makers; delays in use of genetically engineered foods, perpetuating use of insecticides in production of older products?

6. The administration limited the ability of regulatory agencies to circumvent congressional and executive branch responsibilities and override recognition of the opportunity cost of environmental actions.

Was the regulatory review process strengthened to limit the likelihood that the

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Environmental Protection Agency would embrace the Kyoto Agreement, which has not been ratified by Congress? Did the administration raise the standard for applying benefit-cost analysis to newly proposed regulations, focusing where possible on reductions of income and health that regulation can cause?

7. The administration encouraged private action and public/private sector cooperation in achieving environmental goals, thereby avoiding expansion of federal involvement and supporting common law contracting, innovation and experimentation.

Did the federal government adopt the trust concept as a way to manage the numerous national monuments designated by the Clinton administration? Did it sponsor community-based pilot projects to improve our forests and clean up our waters?

This report undoubtedly raises an age-old problem experienced in schools and universities—how to interpret grades. Is a C in one professor's physics class comparable to a C in another professor's economics course? We do not guarantee that, for example, a B on agricultural chemicals policy from Delworth Gardner is the same as the B on White House regulatory review policy assigned by Brian Mannix. No effort was exerted by the editors to force the grading system into a mold of comparability. But each grader, who worked independently, offers a detailed explanation for the elements considered as well as for the grading logic applied.

Each report card lists the areas covered and gives a letter grade for each, along with the grader's name. In most cases, grades are also provided for components of the larger topic. For example, Del Gardner gave an overall grade of B for agricultural chemicals policy. Within the category are individual grades for environmental policies associated with the new farm bill (D), genetically engineered crops (A), and organic crops (A). Each grader determined the overall grade for his or her category.

To the extent that generalizations can be drawn, a grade of C seems to be given when the Bush administration maintains the status quo with respect to free market environmentalism principles. If policy moves toward FME, the grade rises; if policy moves away, it falls. When the grades were considered together, the result was a C-.

The final grade of C- implies that the Bush administration's actions have drifted away from the FME position during these first two years. An overall grade of C- is not quite as good as a C. But these are mid-term grades and the reports contain recommendations for improving the final assessment.

The graders have shown considerable care in making their assessments, determining grades, and communicating the logic they applied. Even so, we know that there could well be major areas of importance we missed and work by the Bush administration that we may have inadequately assessed. This said, we do what all fair-minded scholars do. We invite criticism, and we hope that the criticism we receive will help us to improve our final report card.

We at PERC believe that inspiring de-

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bate is more important than the grade itself. We welcome discussion about the relative merits of free market environmentalism and the prospects for improving how we go about protecting and enhancing environmental assets. Fortunately, we continue to see environmental progress being made on most fronts, even with the decades-old command-and-control policies that are generally used. It is our belief that when FME is more fully applied, even more progress will emerge.

ABOUT THE GRADERS

To grade the Bush administration, we recruited policy analysts who share a free market perspective and who scrutinize environmental issues closely. A short biography of each grader follows:

TERRY L. ANDERSON is executive director of PERC, senior fellow at the Hoover Institution, Stanford University, and professor emeritus at Montana State University. His work helped launch free market environmentalism and has prompted public debate over the balance between markets and government in managing natural resources. Anderson is the author or editor of 26 books. Among these, *Free Market Environmentalism*, coauthored with Donald Leal, received the 1992 Sir Antony Fisher International Memorial Award; a revised edition was published in 2001. Other books include *Enviro-Capitalists: Doing Good While Doing Well* (1997), also coauthored with Leal, and the new *Property Rights: Cooperation, Conflict,*

and Law, coauthored with Fred S. McChesney (2003). Anderson has published widely in both professional journals and the popular press, including the *Wall Street Journal*, the *Christian Science Monitor*, and *Fly Fisherman*. Anderson received his B.S. from the University of Montana in 1968 and his Ph.D. in economics from the University of Washington in 1972.

HOLLY LIPPKE FRETWELL is a research associate with PERC and an adjunct professor at Montana State University. After completing her master's in resource economics at Montana State, Fretwell worked with Northwest Economics Associates in Vancouver, Washington, examining timber export regulation in the Pacific Northwest. She has consulted for organizations including Plum Creek Timber and the Center for International Trade in Forest Products. Author of numerous articles on natural resource issues, Fretwell has published in professional journals and the popular press, including the *Wall Street Journal*, the *Journal for Environmental Economics and Management*, the *Journal of Forestry*, and *Consumers' Research*.

B. DELWORTH GARDNER is professor emeritus of economics at Brigham Young University. Recognized for his research in agricultural economics, Gardner is known especially for his path-breaking analyses of the impact of government policy on issues such as water allocation, livestock grazing, and oil shale development. He is a fellow of the American Association of Agricultural Economics and served as

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president of the Western Agricultural Economics Association. Gardner has been a faculty member at the University of California at Davis, Colorado State University, and Utah State University. He has been a Visiting Scholar at Resources for the Future and was a Julian Simon Fellow at PERC in 2002. Gardner has been a consultant to many organizations, including the Agency for International Development; the Ford Foundation, India; and the California Department of Water Resources. Gardner received his Ph.D. degree in economics from the University of Chicago.

DONALD R. LEAL is a senior associate with PERC where he has been carrying out research in natural resource and environmental issues since 1985. He has done pioneering work in federal and state land management, community-managed fisheries and wildlife, and environmental entrepreneurship. He is coauthor with Terry Anderson of *Free Market Environmentalism* (2001) and *Enviro-Capitalists: Doing Good While Doing Well* (1997). He has written numerous articles and policy papers on privatizing ocean fisheries, water marketing for fish and wildlife, creating self-sustaining parks, and applying the trust concept to public lands. His pieces have appeared in publications such as the *Wall Street Journal* and the *Chicago Tribune*, as well as specialized journals. Leal received his B.S. in mathematics and M.S. in statistics from California State University at Hayward.

ANGELA LOGOMASINI is director of risk and environmental policy at the Competi-

tive Enterprise Institute (CEI) in Washington, D.C. Before joining CEI, Logomasini held positions as a legislative assistant on Capitol Hill, where she concentrated on energy and environmental issues; as environmental editor for the Research Institute of America; and as director of solid waste policy with Citizens for the Environment. Coeditor of CEI's policy guide for legislators, *The Environmental Source*, she has written articles for the *Wall Street Journal*, the *New York Post*, and the *Washington Times*. Logomasini holds a master's degree in politics from Catholic University of America and is currently pursuing a Ph.D. degree in American government there.

BRIAN MANNIX is a senior research fellow at the Mercatus Center at George Mason University, serving in its Regulatory Studies Program. Previously he was deputy secretary of natural resources of the Commonwealth of Virginia. Mannix was managing editor of *Regulation* magazine at the American Enterprise Institute from 1987–89. He worked as an economist in the Office of Management and Budget's Office of Information and Regulatory Affairs from 1981 to 1987, and at one of its predecessor agencies, the President's Council on Wage and Price Stability, from 1979 to 1981. Mannix holds graduate degrees in chemistry and public policy from Harvard University.

DAVID W. RIGGS is executive director of GreenWatch (www.greenwatch.org) at the Capital Research Center in Washington, D.C. As manager of GreenWatch, Riggs oversees an online database and informa-

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tion clearinghouse for over 500 nonprofit environmental groups. Before joining the Capital Research Center, Riggs was director of land and natural resource policy at the Competitive Enterprise Institute in Washington, DC. He has served as senior fellow for economic and environmental studies at Center of the American Experiment, a state-based public policy think tank in Minneapolis, Minnesota. Previously he was a faculty member in the Texas A & M University system, working as an economist for a state-level public agency and teaching economics at Tarleton State University. Riggs received his Ph.D. in applied economics from Clemson University.

JOEL SCHWARTZ is an environmental consultant specializing in air pollution and chemical risk policy and science. He is also a senior fellow with Reason Public Policy Institute (RPPI), a policy think tank. Before launching his consulting practice, Mr. Schwartz directed RPPI's Air Quality Project and published studies on chemical risks and extended producer responsibility. Schwartz has served as executive officer of the California Inspection and Maintenance Review Committee, a government agency charged with evaluating California's vehicle emissions inspection program and making recommendations to the legislature and governor on program improvements. He has also worked at the RAND Corporation, the South Coast Air Quality Management District, and the Coalition for Clean Air. Schwartz received his master's degree in planetary science from the California Institute of Technology. He was a German

Marshall Fund fellow in 1993, when he studied European approaches to transportation and air quality policy.

ABOUT THE EDITORS

JANE S. SHAW is a senior associate of PERC. She supervises many of PERC's publications and PERC's outreach to audiences such as journalists and business executives. Her background is in writing and editing. She is coauthor with Michael Sanera of *Facts, Not Fear: A Guide to Teaching Children about the Environment* (1999) and coeditor with Ronald D. Utt of *A Guide to Smart Growth: Shattering Myths and Providing Solutions* (2000). She is the editor of a new series of books on environmental problems, *Critical Thinking about Environmental Issues*, published by Greenhaven Press and is author of *Global Warming*, a book in the series. Before joining PERC in 1984, Shaw was associate economics editor at *Business Week*, and before that a correspondent for McGraw-Hill Publications in Washington, D.C., and Chicago. Shaw is a senior editor of *Liberty* and serves on the Advisory Board of *Regulation*, a Cato Institute publication. She is currently vice president of the Association of Private Enterprise Education.

BRUCE YANDLE, who directed the report card project, is professor emeritus of economics at Clemson University and a senior associate of PERC. In addition to publishing and speaking widely about economics, Yandle has practical government experience. He was a senior economist on the staff

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of the president's Council on Wage & Price Stability, where he was responsible for reviewing newly proposed environmental regulations, and he served as executive director of the Federal Trade Commission. A member of the editorial board of the *European Journal of Law & Economics*, Yandle has taught environmental law as a visiting faculty member at Montpellier University in France and in MBA programs in Germany and Italy. He is author or editor of fourteen

books as well as numerous articles in professional journals. Among his most recent books are *Common Sense and Common Law for the Environment* and *Agriculture and the Environment*, co-edited with Terry L. Anderson. Yandle is also codirector of the Kinship Conservation Institute, a month-long school for emerging environmental leaders conducted by PERC. Yandle received his Ph.D. degree in economics from Georgia State University.

AGRICULTURAL CHEMICALS OVERALL GRADE: B

Farm Act	D
Genetically Modified Crops	A
Organic Crops	A

INTRODUCTION

Agricultural chemicals are widely perceived as diminishing the quality of the natural environment. Nitrogen and phosphorus move from fertilizers into waterways, where they may reduce or even eliminate the ability of water to support animal life. Pesticides and herbicides may be toxic to human beings and animals that ingest them. Workers who apply these chemicals may be exposed to dangerous levels of the chemicals.

Although scientific evidence (Gardner 2001; Miller 2001) indicates that farm chemicals may be much less dangerous than was thought two decades ago, the perception of harm remains. As long as the public thinks that signifi-

cant health and environmental damage may occur, public policy will be directed toward prevention and alleviation of the principal effects.

The Bush administration has addressed three major policy issues that affect the use of chemicals in agriculture. One issue is new federal farm income and price policies, which encourage farmers to use more chemicals in crop production than they would have under the former policies. Another issue is the policies affecting the development and promotion of genetically modified plants (GMOs), which often produce natural resistance to harmful pests and weeds. The third is policies that affect organic crops, which are crops that use fewer agricultural chemicals than tra-

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ditional farming. Viewed from the perspective of free market environmentalism, the Bush administration's record on these issues is uneven.

For all of these reasons, President George W. Bush should have vetoed this bill, and this is the reason for the harsh grade.

THE 2002 FARM ACT

The 2002 Farm Security and Rural Investment Act is expected to encourage more chemical use. In 1996, the Federal Agricultural Improvement and Reform Act (FAIR), also widely known as the Freedom to Farm act, removed many subsidies and acreage restrictions and moved farm policy significantly toward free markets. The 2002 act, however, reverses direction. It expands the scope of the welfare net for U.S. farmers and spurs more production of corn, cotton, and other crops, undoubtedly further burdening the assimilative capacity of major rivers and coastal waters that receive the chemicals used in agricultural production.

Like all major farm bills over the last two decades, the 2002 farm bill became a political Christmas tree, with ornaments attached by politicians representing specific commodity interests as well as other constituents of their various states. The act induces land, labor, and capital resources to remain in the farm sector—where they will be inefficiently utilized. In addition, the act produces an inequitable distribution of income. The principal beneficiaries will be large commercial farmers who already have incomes and wealth above the average for all Americans. Environmentally, the act is a step backwards because it motivates farmers to use more chemicals.

BACKGROUND ON FARM POLICY

The 1996 Freedom to Farm law (FAIR) represented a sharp departure from previous farm bills because it partially decoupled price supports from output. Before FAIR, income support consisted primarily of a loan program and target prices. The loan program permitted farmers who grew the so-called basic crops (wheat, feed grains, rice, cotton, and rice) and soybeans to obtain loans from the government. The loans were proportional to the expected output of these crops, and expected output was based on a farm's previous record of production. Hence, larger output meant a larger loan. This feature of the loan program gave farmers an incentive to use more inputs, including chemicals, to increase production. The loan could be repaid by selling the crop in the market and then repaying the government. Or, if the market price turned out to be below the loan rate, a farmer could simply forfeit the crop to the federal government's Commodity Credit Corporation. Hence, the crop itself served as collateral for the loan.

The second major pillar of farm income support was a target price system, which covered the basic crops through "deficiency payments." These payments to farmers were meant to cover the difference between target prices set by Congress and either the actual market price or the loan

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rate, depending on which was higher. This difference was known as the “payment rate.” The payment was then calculated by multiplying the payment rate by a base yield to arrive at a payment rate per acre. The base yield (output per acre) was frozen at 1988 average yields to remove the incentive for increasing inputs (including chemicals) in order to increase yield. The number of acres that qualified for the deficiency payment was a farm’s acreage base, established by the Secretary of Agriculture. The acreage removed from production at the secretary’s discretion was called a “set-aside.” For example, the set-aside may have been established at 80 percent of the farm’s acreage base, and could vary from year to year depending on the Department of Agriculture’s assessment of market conditions and prices for the various commodities receiving support.

This deficiency payment system was discontinued in 1996. Instead, a direct income “safety net” was provided. Farmers received direct payments known as Production Flexibility Contract (PFC) payments. The amount of these payments was not tied to current production—farmers could collect payments even if production were reduced to zero. This meant that farmers would produce crops only if they anticipated that market sales would exceed the costs of production, a condition required for economic efficiency. Unlike the past, farmers were not induced to produce more simply to collect larger government payments that were tied to their production levels. Under Freedom to Farm,

the direct payments were based on historical levels of support but were scheduled to diminish annually and finally be eliminated in five years. Hence, the FAIR act was designed to wean agriculture from government support. Of crucial importance to environmental policy, this made farmers recognize market forces and make more careful decisions about what and how much to produce. This tended to reduce excessive use of agricultural chemicals.

Unfortunately, in the late 1990s market prices of farm products fell sharply. Favorable weather, a large supply response to the high prices of 1996, and a decline in the international demand for American farm exports, due at least partially to the financial crisis in East Asia, were the primary factors (Doering and Paarlberg 1998). Congress responded to the lower prices by increasing the direct payments and by initiating marketing loan deficiency payments (LDPs), which essentially paid farmers the difference between the loan rate and the market price on their entire production of a covered commodity. Total government income support to farmers actually increased during the period 1996-2001 when it was expected to decrease. In 2000 total direct subsidies exceeded \$20 billion.

Another problem arose with the direct payments. Farmers did not like them to be decoupled from production because they looked like welfare payments. Political pressures mounted, therefore, to back away from Freedom to Farm and restore many of the subsidy programs of earlier farm legislation.

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DETAILS OF THE FARM ACT

The 2002 FSRI act returns much of American agriculture to a system of loan rates and target prices that gives incentives to farmers to increase variable inputs including fertilizer, pesticides, and herbicides in order to increase yields. The significant features of the act relevant to this issue are discussed next.

Direct Payments

In the 2002 act, direct payments to producers of wheat, feed grains, cotton, and rice are increased above the levels specified in the 1996 act, and these payments are scheduled to remain constant over the seven-year life of the act. Producers of oilseeds are added to the list of those receiving direct payments, and these payments continue to be decoupled from production and, hence, by themselves do not provide incentives to use output-increasing chemicals.

Loan Rates

Marketing loan rates are set at higher levels than those established in FAIR, except for cotton and rice, and this means that loans generally will be higher. In addition, loans are provided for the growers of other crops, including wool, mohair, honey, dry peas, lentils, and small chickpeas. Since loan rates are stated in terms of dollars per unit of quantity (bushels or pounds), the amount of the loan is based on the level of expected production. Alternatively, if the farmer opts for a marketing loan deficiency

payment based on production, as described above, instead of a conventional loan, incentives are created to increase production.

Countercyclical Payments

The new act calls for the return of target prices, although they are now called “countercyclical” payments (CCP). These payments are to be made to owners of an acreage base in program crops whenever the market price of the crop falls below a specified target. These payments are decoupled from current production, but, significantly, the new bill allows producers either to retain their current base acres (fixed in 1985) or to update base acres using an average of acres planted to all covered commodities in years 1998-2001. Hence, if farmers expect that opportunities will exist to update the base on a regular basis, an incentive will be created to increase yield and acreage in order to receive higher payments. This would have the effect of increasing chemical use. However, the CCP payments will also be paid based on own-farm program yields, thus giving incentives to increase yield by applying more chemicals.

Conservation Programs

Acreage set-aside programs had been used for several decades before 1996 to limit the expense of government payments to farmers based on production. The Food Security Act of 1985 established a long-term Conservation Reserve Program (CRP) as well, through which the government contracted with farmers to receive a payment

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if they agreed to remove acreage from crop production for periods of ten years (or even longer if the contracts were renewed). These cropland-removal policies motivated growers to substitute capital inputs, including chemicals, for the land lost to the set-aside and CRP programs. The 1996 FAIR eliminated the inefficient short-term acreage set-asides but retained the long-term CRP.

The 2002 act caps the CRP at 39.2 million acres, an increase over the FAIR act, and makes it easier for landowners to re-enroll old CRP acreage as well as to enroll new acres under wildlife, wetlands, and water quality protection programs. The bill also contains a two million-acre Grassland Reserve Program, through which designated grassland reserve lands can qualify for 10, 15, 20, and 30-year agreements/easements, and the owners of this land will receive a government payment.

Conservation programs have always been important for some agricultural producers to supplement incomes, and this is especially true for producers who may be moving out of the farm sector. Politicians in all regions have an incentive to use these programs to benefit their constituents, even when there is no resource degradation problem in a specific region. Hence, funds designated for these purposes have not been as effective for conservation as they might have been if they had been more carefully targeted to areas of real conservation need. And even though conservation programs are initiated principally to improve the environment, slippage always occurs. As lands are removed from production, farmers tend to compensate for production loss in other

ways. They may convert other land previously not under tillage into cropland, and they tend to use more chemicals on the land that is cropped. Hence, the net impact of the conservation programs on chemical use is far from clear.

Because of the perverse environmental effects generated by the income support policies and other farm bill programs, the Bush Administration receives a D for endorsing this legislation.

***Farm Act* D**

GENETICALLY MODIFIED CROPS

“The fruits of agricultural biotechnology represent one of the most promising advances science offers us,” writes Dean Kleckner, former president of the American Farm Bureau Federation. “By boosting yield, biotech crops have improved margins for small family farmers who take advantage of them. They reduce the pressure to turn wilderness into farmland and provide hope that we can keep up with the nutritional demands of a hungry and growing world” (Kleckner 2002, A18).

In short, genetically modified crops or organisms (GMOs) offer the prospect of reducing the environmental burden associated with greater agricultural production. At the same time, several questions arise in the nexus of chemical use in agriculture and the development of GMOs in crops and foods. What is the impact on chemical use by using GMO crops rather than conventional ones? How extensively are GMO crops being used in American agriculture? How is

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the emerging industry structured, how is it regulated, and what kinds of property rights problems arise?

Transgenic (another word for genetic modification) research in plants has had two primary thrusts. One has been to make crops more tolerant of herbicides so that applications of herbicides will kill competitive weeds without affecting yields of the crop. Another is to produce plants that have built-in pesticides so the use of chemical pesticides can be reduced.

The United States Department of Agriculture (USDA), the Food and Drug Administration, and the Environmental Protection Agency regulate GMOs in foods and crops. Under statutory authority, each administration is required to propose new guidelines “aimed at preventing low levels of biotechnology-derived genes and gene products from being found in commercial use, commodities, and processed food and feed until appropriate safety standards can be met” (*Food & Drink Weekly* 2002, 1). Unlike the regulatory agencies in many other countries, especially those in Europe that have been highly negative about GMO foods, in recent years each of these regulatory agencies in the United States has endorsed GMO foods as fit for the market. In fact, the majority of our processed foods (one estimate is 70 percent) now contains at least one component that has been genetically engineered (Kleckner 2002).

On September 16, 2002, the Bush administration released guidelines that were designed to assist biotech companies that produce GMO crops (*Chemical Market Reporter* 2002). These guidelines provide regu-

latory assistance for the industry in the use of bioengineered plants or plant materials to produce biological products, including intermediates, protein drugs, medical devices, new animal drugs and veterinary biologics regulated by the Food and Drug Administration or the USDA.

In addition, the Bush administration has pressured the European Union to relax its regulations on the importation of GMO foodstuffs into Europe. The administration argued that these regulations violate World Trade Organization rules that require that U.S.-grown food not be treated differently from European-grown food. As of this date, however, the U.S. government has not decided to take legal action, and given the overlap of this issue with general trade policies, perhaps this course is prudent.

By implementing guidelines and policies that are founded on solid scientific knowledge, the Bush administration (like previous administrations) is moving forward in a responsible way. In a new industry such as biotech, the matter of property rights is of crucial importance. Innovators must be rewarded for the investment in research and development in order for it to be produced at efficient levels, but competition and freedom of entry are also necessary to force prices down for consumers. Existing regulatory constraints do not appear to be a significant barrier to entry of new firms. From the evidence available, the Bush administration seems more supportive of private property rights, the expansion of world trade (despite the mixed signals from the farm bill and the erection of steel and lumber tariffs), and international

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organizations that facilitate trade such as the World Trade Organization than the previous Clinton administration was. This support of property rights and world trade is essential if biotech is to fulfill its promise.

Currently, an issue that is being widely debated is whether or not the federal government should require labeling of foods containing biotech genetic materials. In 1993, Hoban and Kendall (1993) pointed out that over 90 percent of consumers receive information about food and biotechnology primarily through the popular press and television, leading some to question whether consumers would benefit from government labeling. The European countries have taken this course. Oregon had a ballot initiative in the 2002 election that would require such labeling, but 72 percent of the voters rejected it. Henry Miller, an eminent authority on genetically modified foods, strongly opposes government labeling. He argues that such a label implies risks for which there is no evidence, and that misleading consumers will push the costs of product development much higher. He argues, for example, that the United Kingdom's mandatory-labeling law had the effect of "stampeding food producers, retailers, and restaurant chains to rid their products of all gene-spliced ingredients to avoid introducing new 'warning' labels and risk losing sales" (Miller 2002, A18).

In contrast to the European countries, the Bush administration is resisting pressures for federal involvement in labeling GMO foods. For this resistance, for issuing guidelines assisting biotech companies, and

for strong opposition to the European limitations on imports of American GMO crops, the Bush administration receives an A grade.

Genetically Modified Crops A

ORGANIC CROPS

The labeling issue for organic farming is quite different from that of GMO foods. Unlike GMO labeling, which arouses fear in consumers for reasons that lack any scientific support, organic labels provide specific information about how the foods are produced. Hence, the labeling conveys useful information to the consumer that fewer chemicals are utilized. Without standards and labeling there would be little agreement about what an organic food is. In addition, unless standards are national in scope, it would be possible for standards to vary among states, leading to confusion among consumers, since foods are often marketed across state boundaries.

The USDA promulgated final rules implementing the Organic Foods Production Act in December, 2000. These rules require all except the smallest producers and handlers be certified by a state or private agency accredited under the uniform standards developed by the USDA.

State and private certifier fees for inspections, pesticide residue testing, and other certification services represent an added expense for organic producers. In 2001, therefore, the USDA established a certification cost-share program to help pay for certifiers in 15 states. The 2002 act's

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National Organic Certification Cost-Share Program provides funds that will complement this program, making organic growers in all states eligible for certification cost-share assistance. The maximum federal share of the cost is 75 percent annually, with payments up to \$500 per producer or handler.

Bush's Department of Agriculture announced federal standards for all organic crops and livestock products. Developed from extensive industry input and hundreds of thousands of public comments, the standards went into effect on October 21, 2002. The USDA "organic" seal tells consumers that a product is at least 95 percent organic—that is, 95 per cent or more of the ingredients are organic (products with 70 to 95 percent organic ingredients can say so on the label but they can't display the seal) (USDA 2002). The federal standards for crops and livestock include such requirements as controlling pests and weeds "primarily through management practices including physical, mechanical, and biological controls; when these practices are not sufficient, a biological, botanical, or allowed synthetic substance may be used." Genetic engineering, irradiation, and sewage sludge are also prohibited. "Producers would be required to feed 100 percent organically produced feeds to livestock but could also provide allowed vitamin and mineral supplements," and organically raised animals "could not be given hormones or antibiotics" (*Agricultural Outlook* 2000, 9).

Organic farming has been one of the fastest growing segments of U.S. agri-

culture in recent years, but it is building on a small base and faces numerous production and marketing obstacles to more widespread adoption. The Organic Agriculture Research and Extension Initiative in the 2002 farm act, therefore, was designed to fund projects that address these obstacles. (Economic Research Service 2002, 1).

The proportion of organic farms differs substantially among different cropping sectors of U.S. agriculture. Fruits, vegetables, and other high-value specialty crops are more organic—that is, more likely to avoid traditional herbicides and pesticides. The Initiative authorizes \$3 million per year in new mandatory appropriations in fiscal years 2003–07, and these funds will be used to administer competitive research grants, largely by the USDA's Cooperative State Research, Education, and Extension Service. The research goals are to determine desirable traits for organic agriculture and to conduct advanced research on organic farms, including production, marketing, and socioeconomic research. The act also establishes a National Organic Certification Cost-Share Program to assist producers and handlers of agricultural products in obtaining certification under the National Organic Program authorized by the Organic Foods Production Act of 1990. The program provided \$5 million in fiscal year 2002, and these funds are to remain available until expended. The maximum federal cost share is 75 percent annually, with payments up to \$500 per producer or handler.

AGRICULTURAL CHEMICALS

The Conservation Security Program, set up by the farm act, provides payments to producers for adopting or maintaining a wide range of management, vegetative, and land-based structural practices to address resource concerns. These may interest organic farmers and the technical assistance features of the program may help organic farmers and other farmers interested in moving to organic farming systems.

It is questionable whether such assistance to organic producers is justified on economic efficiency grounds. But the same question could be raised about most federal programs that subsidize agriculture. This industry has a long history of receiving governmental support, so it is not surprising that organic farmers wish to be aided as well. But where will this inefficient support end, and what purposes are served by throwing good money after bad?

How much total chemical use in the farm sector will be reduced by the advent of organic farming depends on what proportion of agricultural output is produced on organic farms. This will be largely determined by the size of the market for organic foods and the prices consumers are willing to pay. It is too soon to predict an answer to these questions with any degree of accuracy, but the Bush administration deserves an A for clarifying for consumers what organic foods are so that they can make judgments about their consumption.

***Organic Crops* A**

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AIR QUALITY REGULATION OVERALL GRADE: D

Particulates and Ozone	F
Oxygenate Mandate	F
New Source Review	B+
Clear Skies Initiative	D
Changing the Debate	F
Vehicle Inspection and Maintenance	F

INTRODUCTION

The United States has made great strides in reducing air pollution during the last few decades (Goklany 1999; Schwartz 2003b). Carbon monoxide (CO) and sulfur dioxide (SO₂), for example, declined 75 during the last 30 to 40 years, while nitrogen oxides (NO_x) declined 14 percent since 1980. Indeed, virtually all areas of the country comply with federal health standards for these pollutants. Current air pollution levels are only a fraction of levels experienced 30 years ago, and ongoing processes, such as natural fleet turnover and already adopted regulations, will mitigate most remaining air pollution concerns in coming years.

Yet federal air pollution regulations

continue to cost Americans tens of billions of dollars per year (Lutter and Belzer 2000; Lutter 1999). Like air pollution, lower incomes also reduce people's health and welfare. The Bush administration had an opportunity during its first two years to focus on reforms that would reduce unnecessary regulatory costs and increase the net health and welfare benefits from air pollution regulation. Instead, with the exception of its New Source Review modifications, it has chosen air quality policies that will cause net harm to Americans' health and welfare. It has failed to base policies on rigorous scientific and economic analysis of the health and welfare effects of proposed policies and has adopted its critics' erroneous views about current air pollution levels, trends, and risks.

JOEL SCHWARTZ

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TODAY'S REGULATORY SETTING

Dating back to the 1970 Clean Air Act, regulation of the nation's air quality is primarily a technology-based, command-and-control approach that specifies how, when, and where specific air pollution control actions will be accomplished. Some market-based exceptions have emerged in recent years, however.

The chief market-based program is designed to reduce SO₂ emissions from coal-fired electric utilities. It sets a cap on total emissions of SO₂ but allows the managers of individual plants to decide whether to reduce emissions or purchase allowances from other utilities that have cut back more than enough to meet their reduction target. A declining cap keeps overall emissions going down, while the flexibility of the trading program greatly reduces pollution control costs.

EPA's bubble concept, offset mechanism, and banking rule for industrial plants are also exceptions to command-and-control regulation. They give facilities greater flexibility, generating a given level of pollution reduction with fewer costs.

For mobile sources such as cars and trucks, Clean Air Act regulations require specific emission limits and specific technologies. Mobile source regulations are enforced through a national system of manufacturing certification and, where air quality fails to meet national standards, by state-run vehicle emission testing programs.

The EPA has promulgated a number of health standards for air pollution, and the nation has made great progress in attain-

ing them.¹ About 86 percent of the nation's ozone monitoring locations now comply with the federal 1-hour ozone standard, up from only 50 percent 20 years ago. Most monitoring locations—56 percent—also comply with EPA's new, tougher ozone standard (the 8-hour standard). Of locations that exceed the 8-hour ozone standard, more than two-thirds exceed by less than 10 percent.

PM₁₀ (airborne particulate matter under 10 micrometers in diameter) declined about 20 percent from 1991 to 2000, and more than 97 percent of monitoring locations now meet federal PM₁₀ health standards. Most monitoring locations—70 percent—also comply with EPA's tough new annual standard for PM_{2.5} (particulate matter under 2.5 micrometers in diameter). Of locations that exceed the annual PM_{2.5} standard, three-quarters exceed by less than 20 percent.

Serious air pollution problems have become relatively regionalized. Most locations with very high PM_{2.5} and ozone levels are located in just two regions—the southern portion of California's Central Valley and the greater San Bernardino area in southern California. California's regulations are generally more stringent than federal requirements, so federal policy will do little to improve air pollution in those areas.

Pollution will continue to decline even without any additional regulatory intervention. Motor vehicles are the overwhelming source of both ozone- and PM_{2.5}-forming pollution, and emissions from gasoline vehicles are declining by about 10 percent per year, as cleaner and more durable newer models replace older high-polluters (Kean et al. 2000; Pokharel et al. 2003; Schwartz

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2003b). Likewise, diesel truck emissions are declining by several percentage points per year due to fleet turnover (EPA 2000). Despite these ongoing reductions, EPA has already adopted regulations that phase in between 2004 and 2009 and require an additional 80 to 90 percent reduction in new-vehicle emissions when compared with current new-vehicle levels.

Industrial emissions will also continue to decline due to already adopted regulations. For example, starting in 2004, the EPA will cap warm-season NO_x emissions from coal-fired power plants and industrial boilers at 60 percent below current levels, while power-plant SO₂ emissions will be capped at 20 percent below 2000 levels, and 43 percent below 1990 levels, by 2010.

POLICIES IN THE PIPELINE

A number of regulations were “in the pipeline” when the Bush administration took office. The administration’s action on three major regulations affecting air quality are discussed below.

New Particulate and Ozone Standards

The EPA, in 1997, promulgated a more stringent standard for ozone and new daily and annual standards for PM_{2.5}. These standards were tied up in court until recently, but the Bush EPA now plans to begin enforcing them in 2004. Yet the standards remain problematic from the perspective of net benefits to society.

The EPA’s own analysis of the new 8-

hour ozone standard concluded that meeting the standard would cost Americans substantially more than the value of the health benefits achieved (EPA 1997a; Lutter 1999).

The Bush Administration had a chance to revisit this standard, because in 1999 the federal appeals court for the D.C. Circuit remanded the ozone standard to EPA. The court’s remand required the EPA to consider the beneficial effects of ground-level ozone in providing shielding from the sun’s ultraviolet rays when setting the ozone health standard.

An internal EPA analysis estimated that attaining the 8-hour standard would result in an additional 696 cases per year of skin cancer (EPA 1997b). The EPA has never officially released this study, and did not consider the negative health effects of ozone reductions in setting the 8-hour standard in 1997.

Rather than use the remand as an opportunity to ensure that the new ozone standard would result in net public health benefits, the Bush EPA elected to keep the ozone standard as originally promulgated (EPA 2003). Indeed, although EPA’s own unreleased study found that the methods for estimating increased skin cancer rates due to lower ozone are “well established,” in its response to the court remand, EPA nevertheless claimed the effects of lower ozone on skin cancer rates are “too uncertain” to warrant reconsideration of the standard (EPA 1997b, 2003).

Unlike the ozone standard, the EPA predicted large net benefits from attaining the annual PM_{2.5} standard. The reason is that some studies have linked long-term expo-

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sure to $PM_{2.5}$ with increased risk of death from cardiovascular disease and cancer. However, after reviewing the evidence, a supermajority of the Clean Air Science Advisory Committee—the EPA’s independent expert review panel of health and atmospheric science professionals—did not support an annual $PM_{2.5}$ standard as low as 15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)—the level the EPA chose.

Recent reanalyses of the studies upon which the standard was based suggest that the original claim of a link between current $PM_{2.5}$ levels and mortality might have been spurious (Lipfert in press; Schwartz 2003c). In addition, two more recent studies of chronic $PM_{2.5}$ exposure and mortality found that $PM_{2.5}$ either had no effect on mortality, or that the threshold for harm is somewhere around 20 to 25 $\mu\text{g}/\text{m}^3$ —well above the current federal standard of 15 $\mu\text{g}/\text{m}^3$ (Lipfert et al. 2000; Lipfert and Morris 2002). The case for the current annual $PM_{2.5}$ standard thus appears weak, given the large expected costs of meeting the standard and much lower health benefits than the EPA assumed.

The acute health effects of $PM_{2.5}$ at current levels are also a subject of debate among epidemiologists. Some argue that the apparent effect of $PM_{2.5}$ is real, while others believe methodological errors are causing researchers to assign health effects to $PM_{2.5}$ that are actually due to other pollutants or to nonpollution factors, such as extreme temperatures. The recent discovery of a software glitch that may have caused overestimates of particulate health effects in potentially dozens of studies has exacer-

bated these concerns (Greenbaum 2002; Grant 2002). In any case, all but a few percent of monitoring locations comply with the daily $PM_{2.5}$ standard, and ongoing reductions in vehicle emissions—the main source of $PM_{2.5}$ in populated areas—will keep these particulates declining into the future.

The EPA is required by law to review its PM health standards every five years, and generates a “criteria document” intended to provide a rigorous and objective scientific foundation for this review. The EPA released the second and third drafts of its latest PM criteria document, in April 2001 and April 2002 (EPA 2002). A number of health researchers have criticized these drafts for omitting or misrepresenting studies that refute the hypothesis that exposure to relatively low $PM_{2.5}$ levels can cause harm, while taking at face value those studies that support the EPA’s current PM standards (Lipfert 2002; Moolgavkar 2002).

The evidence suggests the current annual $PM_{2.5}$ standard is more stringent than necessary to protect public health and will be costly to attain. Despite the administration’s expressed focus on rigorous science and net benefits from regulations, it has failed to ensure that the next round of the EPA’s PM standards review will faithfully reflect the weight of the evidence on PM’s health effects.

Particulates and Ozone F

Oxygenate Mandate

The Clean Air Act requires that additives known as oxygenates, such as ethanol or methyl tertiary-butyl ether (MTBE), be added to gasoline that is sold in areas with

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air pollution problems. When Congress created this requirement in 1990, oxygenates were thought to reduce vehicle pollution, particularly carbon monoxide. The most common additive, MTBE, is being phased out because it pollutes drinking water. This leaves ethanol as the only viable alternative that satisfies the regulatory requirements.

Recent studies by the EPA and the National Academy of Sciences suggest, however, that oxygenates won't improve air quality and could make it worse by increasing emissions of nitrogen oxides and volatile organic compounds, which contribute to smog. Adding ethanol to gasoline costs about 5 cents extra per gallon and will reduce fuel economy by about 3 percent, for an effective increase of about 10 cents per gallon in the cost of gasoline. If the oxygenate mandate causes ethanol demand to outstrip supply, as some energy analysts predict, motorists could suffer much bigger price increases, as much as 50 cents per gallon according to some estimates.

Despite the case against oxygenates, the Bush administration rejected petitions by California and other states for the EPA to exercise its legal authority to waive the oxygenate requirement, apparently due to political considerations. Most ethanol is produced from corn grown in the Midwest. Midwestern legislators and their agribusiness constituents were responsible for inserting the oxygen mandate into the Clean Air Act in the first place.

The administration missed an opportunity to strike a blow both for consumers and for sound environmental regulation by waiv-

ing this expensive and environmentally detrimental requirement.

***Oxygenate Mandate* F**

Reform of New Source Review

New Source Review (NSR) is the Clean Air Act's regulatory approach to major new industrial air-pollution sources and also to existing facilities that undergo a modification beyond routine repairs or maintenance. NSR requires that major new or modified industrial facilities in air pollution nonattainment areas control air pollution to the Lowest Achievable Emission Rate (LAER). Facilities must also obtain emission reductions, or offsets, elsewhere in the nonattainment area to counter any increase in their emissions.

The EPA has issued thousands of pages of confusing and often conflicting guidance on when and how NSR applies. Furthermore, critics charge that NSR has caused net decreases in air quality and also harmed plant reliability. By treating existing plants differently from new plants, NSR has discouraged the construction of newer, more efficient, and lower-emitting facilities and has also failed to create an incentive for companies to seek cost-effective emission reduction opportunities from existing plants. NSR has also encouraged owners of older plants to put off needed maintenance for fear of triggering the NSR process (Gruenspecht and Stavins 2002; Swift 2001).

The Bush administration has proposed a number of reforms that would create greater clarity and predictability in how NSR regulations are applied, and would also

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relax the conditions under which existing-source modifications would trigger NSR. The proposed changes would not affect NSR for new industrial facilities.

Environmentalists harshly criticize these proposals, claiming inaccurately that they would allow large increases in industrial pollution emissions. Under the EPA's "SIP Call" regulation for NO_x emissions, power plants and industrial boilers in the eastern half of the United States will have their warm-season NO_x emissions capped at 60 percent below current levels starting in 2004. Industrial NO_x emissions, rather than increasing, will therefore decline substantially (EPA 1998).² Likewise, the current SO₂ trading program requires a 20 percent reduction in total SO₂ from power plants between 2000 and 2010 (in addition to cuts already implemented between 1995 and 2000). SO₂ emissions will therefore also decline, irrespective of NSR requirements (EPA 2001).

The administration's NSR reforms will likely reduce the costs of complying with environmental regulations while, at worst, having no net effect on air quality. Although this represents a positive step, a better approach would be to remove NSR requirements for individual facilities and instead rely on a regional declining emissions cap-and-trade program. As shown by the current SO₂ trading program, a cap-and-trade program would enhance air quality, reduce environmental compliance costs, increase incentives for innovation in pollution control techniques, and get the EPA out of the business of micro-managing industrial facilities.

New Source Review **B+**

A NEW INITIATIVE: CLEAR SKIES

The Bush administration introduced the Clear Skies Initiative or CSI (S. 2815) essentially as a response to Senator James Jeffords' Clean Power Act (S. 556). The CSI would require deep cuts in power plant emissions of NO_x, SO₂, and mercury during the next 16 years, beyond those already required by current regulations. The cuts are not as deep or as rapid, however, as those required by Senator Jeffords' bill (Resources for the Future 2002).³

The CSI takes the positive step of allowing power plants to achieve the required pollution reductions through a declining cap-and-trade program and reduces cumbersome and expensive NSR requirements. However, the administration hasn't adequately assessed whether the value of the health benefits from the CSI would outweigh the costs it will impose on consumers in the form of higher electricity bills. As noted above, the whole country now meets the SO₂, NO_x and CO standards. A few percent of monitoring locations still fail the PM₁₀ standards and the daily PM_{2.5} standard, while about 14 percent still fail the 1-hour ozone standard. Based on ongoing declines in emissions due to fleet turnover and already adopted regulations, most remaining nonattainment areas will meet these standards within several years.

Only the new 8-hour ozone standard and annual PM_{2.5} standards still pose a substantial attainment challenge. Yet enforcing these standards would likely reduce public health and welfare due to their large costs and small health benefits (Schwartz 2003b).

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An irony of the CSI (and the Clean Power Act as well) is that it won't help the three areas of the country with the most serious air pollution problems—the greater San Bernardino region of southern California, California's southern Central Valley, and Houston. The two California areas have both the worst ozone and worst PM_{2.5} pollution in the nation, while Houston comes in third behind the two California areas on ozone. Yet the California areas have no coal-fired power plants, and power plants and industrial sources make up only a few percent of ozone- and PM-forming emissions there (California Air Resources Board 2003; California Energy Commission 2002).⁴ In Houston, recent evidence suggests that previously overlooked hydrocarbon emissions from petrochemical plants along the shipping channel are playing a large role in the region's ozone problem (Henry et al. 1997).

Although achieving reductions through a cap-and-trade program is a positive step, CSI in its current form would likely cost the public far more than the health benefits it might achieve.

Clear Skies Initiative* D*MISSED OPPORTUNITIES**

President Bush had a number of opportunities to redirect the path of air quality policy, including changing the terms of policy debates and reforming ineffective automobile inspection and maintenance programs. Unfortunately, he failed to take advantage of these opportunities.

Changing the Debate

Since President Bush took office, environmentalists' rhetoric might make one think air pollution has been getting worse, will worsen further, and dwarfs other threats to American society (Natural Resources Defense Council 2002; Public Interest Research Group 2002). Numerous polls show that a large majority of Americans believe air pollution has been increasing and will continue to do so (Schwartz 2003a). Yet the reality is that pollution has been declining for decades and large additional pollution declines are in store across the United States in the future, regardless of any actions under consideration by the Bush administration (Schwartz 2003b).

Although the Bush administration can't control what other organizations claim, it has missed an opportunity to change the debate by focusing on real trends in air pollution levels and risks. Instead, it has played by its critics' rules, implicitly conceding a false view of the nation's air quality and then asserting that policies like Clear Skies will solve an artificially inflated problem.

Changing the Debate* F*Vehicle Inspection and Maintenance**

Most metropolitan areas require motorists to bring their cars in for a periodic emission inspection. The goal is to detect cars with excessive emissions and ensure they are repaired to meet required standards. These programs are generically known as inspection and maintenance, or I/M programs. Numerous studies have

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shown, that regardless of how these programs are structured, they do little to reduce air pollution, yet they cost motorists billions per year nationwide (see citations in Green 1997).

There are two major reasons for I/M's ineffectiveness. First, most cars must be tested, but only a few percent of cars account for most vehicle pollution, so most of the money gets spent on testing clean cars rather than on reducing air pollution. Second, although the intent of I/M programs is to ensure that cars are low-emitting on the road, motorists are required to pass a test at a time of their choosing, once each year or two (Green 1997). This is like trying to stop drunk driving by requiring motorists to come in to the motor vehicle department for a scheduled sobriety test each year. In practice, many motorists flout program requirements and few cars receive lasting repairs.

The latest incarnation of I/M requires that 1996 model and newer cars be tested by querying the cars' on-board diagnostic (OBD) computer and sensor system. OBD-based programs exacerbate the worst features of I/M, as they focus only on newer cars—those least likely to have an emission problem, and still fail to address the underlying structural problems that have limited I/M's effectiveness.

Emissions studies show that about 50 percent of vehicle emissions come from about 5 percent of cars (Pokharel et al. 2003). A technology called remote sensing—available since the late 1980s—allows rapid, inexpensive measurement of vehicles' emissions as they drive on the road. Remote sensing can be used to cheaply

identify those cars with very high emissions, without the need to waste large amounts of money and motorists' time on scheduled tests. Owners of high-emitting cars can then be required to repair them, or be offered cash to voluntarily scrap these cars. A scrap program with targeted remote sensing could reduce auto pollution by as much as 10 to 15 percent at a fraction of the cost of both ineffective current I/M programs and just about any other air pollution reduction measure. Nevertheless, the EPA and some state environment agencies have gone to great lengths to prevent remote sensing from playing a significant role in vehicle emissions policy.

The Bush administration has not challenged the EPA's ongoing I/M activities or introduced alternatives. Thus it is missing an opportunity to achieve large pollution reductions while at the same time lifting an unnecessary burden from motorists.

***Vehicle Inspection and Maintenance* F**

SUMMARY

The Bush administration earns an overall grade of D for its air pollution policies. It has failed to improve two key regulations that were in the pipeline when the president took office, and the Clear Skies Initiative will likely reduce health and welfare in spite of its innovative cap-and-trade program. Overall, President Bush has failed to ensure that existing and new air quality regulations will have net health and welfare benefits for Americans.

***Air Quality Regulation* D**

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NOTES

1. The EPA has two ozone standards. The current one, known as the “1-hour standard,” requires that daily ozone levels exceed 125 parts per billion (ppb) on no more than 3 days in any consecutive three-year period. Ozone levels are determined based on hourly averages (hence the name of the standard). The EPA’s new, more stringent standard is known as the “8-hour standard.” It requires that the average of the fourth-highest daily, 8-hour average ozone level from each of the most recent three years not exceed 85 ppb. The standards are difficult to compare due to their different forms, but the current 1-hour standard is rough equivalent to an 8-hour standard set at about 95 ppb.

The daily $PM_{2.5}$ standard has a complicated formulation, but essentially requires that no area average more than about 7 days per year with a 24-hour-average $PM_{2.5}$ level greater than 65 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The annual standard requires that the average $PM_{2.5}$ level during the last three years be no greater than $15 \mu\text{g}/\text{m}^3$.

2. The cap only applies to eastern power plants because of the East’s high reliance on coal for electricity. Power plants account for a much smaller portion of pollutant emissions in the West due to the West’s much greater reliance on natural gas and hydroelectric power.

3. Clear Skies Initiative documents are available online at: www.epa.gov/clearskies/.

4. California regional emissions inventories are available online at: www.arb.ca.gov/emisinv/maps/statemap/abmap.htm.

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ARCTIC NATIONAL WILDLIFE REFUGE OVERALL GRADE: C

INTRODUCTION

Whether to allow exploration of oil and gas in part of the Arctic National Wildlife Refuge was one of the most contested debates the Bush administration entered. Even during the presidential campaign, George W. Bush and Dick Cheney made it clear that they supported exploration and production from this energy-rich frontier. The administration consistently claimed that exploration and production did not have to adversely affect the environment of the area; but at the same time, the team hung most of its defense on energy independence and job creation. President Bush even went so far as to say, “This energy bill that we’re working on is a jobs bill” (Lindlaw 2002). To counter this argument, opponents contended that total supplies from the region would replace only a few months of oil imports from the Middle East.

THE ANWR DEBATE

Once in office, the administration continued the debate, armed with the fact

that environmental groups that own land allow many kinds of development as long as they are conducted with sensitivity to environmental concerns. As an example, free market environmentalists point out that the National Audubon Society, which owns mineral rights on its Rainey Wildlife Sanctuary off the Louisiana coast, for many years had contracts with energy companies that pumped natural gas (and some oil) from the sanctuary until the energy reserves were depleted. The Audubon Society received royalties that were invested in other conservation efforts. It required that the energy companies minimize their impact on the sanctuary by using special equipment and drilling techniques. A writer for *Audubon* magazine paraphrased the manager of the sanctuary: “[H]e allowed as how he liked the idea of cooperating with industry in a situation where it was likely there would be no adverse impact on the biotic community” (Mitchell 1981, 16–17). The free market environmental lesson from this experience is that environmentalists with ownership of resources will pragmatically consider the tradeoffs between “just saying no” to development and en-

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hancing conservation values with revenues from development.

The Bush administration made an effort to apply the free market environmental lesson from the Audubon example to ANWR, but it did not give the environmental groups a direct stake in the decision to explore and develop ANWR energy reserves. Although the administration demonstrated its commitment to environmental protection, it retained authority over decisions affecting the environment and it failed to come up with a way to reward environmental groups for “buying into” the program.

The administration instructed the Secretary of the Interior to establish a competitive oil and gas leasing program that would require environmentally sound exploration and development techniques and ensure no significant adverse effects on fish and wildlife. This differed from the Audubon’s Rainey preserve case in that the Interior Department, not the environmental groups, would determine whether the exploration and development were environmentally sound.

In addition, the administration tried to make energy development more palatable to opponents by throwing two bones to environmental groups. There was not enough meat on the bones. The administration supported the Arctic Coastal Plain Domestic Energy Security Act of 2001 (H.R. 4). This bill designated that 50 percent of the adjusted gross revenues from bonus payments for leases be deposited into the Renewable Energy Technology Investment Fund to promote renewable energy technologies, and that 50 percent be deposited into the Roy-

alties Conservation Fund to be used by the secretaries of Interior and Agriculture for “grants, contracts, cooperative agreements, and expenses for direct activities . . . to restore and otherwise conserve lands and habitat and to eliminate maintenance and improvements backlogs on Federal lands, including the costs of administering and reporting on such a program.” This proposal provided revenue for federal agencies to pursue laudable environmental goals, but nothing directly to the environmental groups. It did not change their incentives.

A more savvy approach would have been to establish a fund, patterned after the National Science Foundation, from which environmental groups could apply for grants to pursue specific projects for improving the environment. Just as funds from the Rainey Wildlife Sanctuary gave Audubon the incentive to allow energy production, earmarking funds for use by environmental groups, not federal agencies, would change the incentives to some extent. At least there would be a cost to saying “no” to energy exploration and development in ANWR.

SUMMARY

For trying to tie revenues from oil development in ANWR to investments in environmental improvements, the Bush administration deserves high marks. Because it did not give environmental interests a more direct stake in how oil revenues would be invested, however, the administration receives a C.

Arctic National Wildlife Refuge C

ARCTIC NATIONAL WILDLIFE REFUGE

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BROWN FIELDS & SUPERFUND OVERALL GRADE: C-

Brownfields	F
Superfund	B-

INTRODUCTION

The federal Superfund program (formally known as the Comprehensive Environmental Response, Compensation, and Liability Act or CERCLA) was enacted to hold parties responsible for their contamination of property. However, the law holds anyone remotely connected to a contaminated site liable for cleanup even when no one has been harmed and no significant risk is imposed. This liability has had devastating effects, including the creation of unwanted “brownfields” that cannot be sold or developed because a developer may be liable for virtually unlimited cleanup costs.

The Bush administration has taken some steps to deal with the problems posed by the continuing Superfund program and the related brownfields stagnation. The actions have done little to correct the problem, however, and through support of flawed legislation

may have expanded Superfund’s harmful impact.

SUPERFUND, BROWNFIELDS, AND THE STATES

The Environmental Protection Agency implements Superfund by identifying contaminated sites on the National Priorities List (or NPL). After a site is listed, the EPA can sue—for all the cleanup costs—anyone who generated or transported waste (or simply arranged for its transport) that is found on a contaminated property, as well as anyone who operated a disposal facility or owns property that became contaminated. The EPA labels these individuals or companies “potentially responsible parties.” The legal principle of joint and several liability is applied.

Alternatively, the EPA can clean a site (paying for the cleanup with funds in the federal Superfund) and then seek

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reimbursement by suing potentially responsible parties. The EPA can also engage in lengthy litigation beforehand to obtain funds for subsequent cleanup. Parties found responsible may sue other parties to gain compensation for their costs.

The EPA sets cleanup standards for each site based on state, local, and federal laws. For example, sometimes the EPA will use federal drinking water standards to decide how clean water supplies at a site must be—even if the water will never be used for drinking. These standards usually result in very expensive cleanups.

The system has proven to be a colossal failure. Superfund cleanups can take decades, cost millions if not billions of dollars, and often do not address significant risks (Logomasini and Riggs 2002, 165–70).

In addition, many former industrial sites sit idle in cities around the nation. Even though these properties are not listed on the NPL, the fear that the EPA will eventually list them—and seek compensation—prevents potential investors from redeveloping them. Many investors move to untouched “greenfields,” instead. The remaining brownfields contribute to urban decay.

State governments have recognized the brownfields problem. To correct it, they have set more sensible cleanup standards and offered liability relief to innocent parties, generating thousands of cleanups (Gattuso 2000a, 2000b). According to one study, while the EPA has spent about \$1 billion working on about 1,000 sites, states spent about \$700 million annually cleaning about 11,000 sites (Porter 1995). However, because federal Superfund liability could still be applied to

these sites if the EPA puts them on the National Priorities List, fewer brownfields are cleaned up under state programs than could be. Many potentially productive sites sit idle.

BROWNFIELDS REFORM

The key to brownfields reform is to remove these sites from EPA and Superfund authority. If parties that cleaned these sites under state programs could receive liability relief from the federal government, the brownfields problem could essentially be solved.

Early on, the Bush administration targeted brownfields reform as a top environmental priority. It had the opportunity to take a position on two congressional bills addressing Superfund liability.

One bill passed by the Senate (S. 350) bill failed to provide finality for site owners; it allowed the EPA to apply Superfund liability even after a site was cleaned under the brownfields program. The House bill under consideration (H.R. 1831) provided limited exemptions for small business (H.R. 1831).

The Bush administration put pressure on House members to pass the Senate brownfields bill. At a June 2001 conference on brownfields, EPA Administrator Christine Todd Whitman said that the EPA should continue to have a final say on brownfields cleanups. She justified this position by saying that the agency has never superseded a brownfields cleanup decision, and she cautioned members of the House not to “lose everything” because the Senate bill

BROWNFIELDS AND SUPERFUND

did not provide finality (Preston 2001, A3).

Members of the House caved in during September 2001, combining H.R. 1831 with S. 350 into one bill. The president signed the Small Business Liability Relief and Brownfields Revitalization Act in January 2002.

Background on Brownfields

Thousands of brownfields sites have been cleaned up under state programs, which provide legal documentation guaranteeing complete liability relief to parties that voluntarily clean and redevelop these sites (Gattuso 2000a, 2000b). Many other sites, however, remain idle because state liability cannot protect parties from federal Superfund liability.

Recognizing this problem, the EPA launched a federal brownfields initiative in 1994. The program provided grants to some sites. The agency often attached strings, including stringent Superfund cleanup standards that often complicated and raised the costs of cleanup efforts.

The new law expands this program and federalizes brownfields development—in spite of serious documented failures of the EPA’s brownfields program (Gattuso 2000a, 2000b). The law authorizes spending \$200 million a year, more than doubling past spending levels, for EPA brownfields grants. Basically, it allows the EPA to set standards for brownfields cleanups. The law also gives the EPA authority to apply any Superfund cleanup standards that the agency deems “necessary and appropriate” for grant recipients.

In addition to enabling the EPA to set standards at specific sites, yet another grant provision essentially pays state governments to implement uniform federal standards for brownfields. To be eligible for a grant, the law requires that states either enter into a memorandum of agreement with the EPA regarding the structure of their program or follow specific EPA regulations. The regulations must require the states to create inventories of brownfield sites—creating lists comparable to Superfund’s National Priorities List. As with the NPL, listing brownfields could increase disincentives for cleanups at these sites because listing will highlight potential liability concerns at sites. In addition, states have to ensure that cleanups meet all relevant state and federal standards—which subjects these sites to Superfund’s onerous standards rather than the more reasonable and flexible standards that states had applied in the past.

The section has a provision that supposedly would prevent the EPA from taking enforcement actions at sites cleaned under these programs. This provision has been marketed as turning brownfield responsibilities over to the states and spurring private cleanups by recognizing state liability relief policies. Yet the exceptions render the provision meaningless.

The EPA can intercede with an enforcement action if the agency determines that “a release or threatened release may present an imminent and substantial endangerment to public health, welfare, or the environment.”¹ That is the same standard the EPA uses to become involved in Superfund sites, so the law gives the EPA as much control

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over state-led brownfields cleanups as it has over cleanups under Superfund. Hence, the new law fails to provide what has been called finality—the assurance that a private party will gain liability relief if it voluntarily acquires and cleans a contaminated site (Gattuso 2001). Without such assurances, many private parties won't want to get into the business of cleaning brownfields.

There are other problems with the law. For example, the new grants will go almost exclusively to governmental bodies and non-profit organizations (the only private parties that can obtain grants are Native Americans). This public emphasis undermines the main goal of state-level brownfields programs, which is to spur private investment by removing government-created barriers to redevelopment.

The new law includes several provisions that are supposed to provide liability relief to some parties who assume ownership of a contaminated site or whose land is contaminated by an adjoining property, but the exceptions greatly undermine their usefulness. The provisions also impose many new obligations for parties seeking relief.

Some developers have already decided against redevelopment of some brownfield sites (*Hazardous Waste News* 2002). One legal analysis explains why:

This relief does not come without strings attached. In fact, so significant are these “strings” that they raise serious questions about the ability of the amendments to achieve their intended purpose. . . . The amendments could actually serve to increase liability risks

or other problems for parties involved in Brownfields transactions by creating a new due care standard that may be used to impose Superfund liability where it could not have been imposed previously. (Humphreys and Drye 2002, 12)

Special Liability Exemptions

The new law provides special exemptions for two categories of parties: *de minimis* contributors and small business—the original goal of the House legislation. The *de minimis* protection exempts transporters and generators of less than 110 gallons of liquid waste or 200 pounds of solid waste to sites that subsequently were added to the NPL. But the law includes some exceptions that could undermine it completely. For example, the EPA can still bring an action against these parties if it deems that the party's waste “significantly contributed or could have significantly contributed” to the cost of the response action—an exception that gives the EPA broad discretion.

The small business liability exemption applies to generators of municipal solid waste (basically household waste) in the following categories: residential property owners; small businesses with 100 or fewer full-time employees; and nonprofit organizations that employed 100 or fewer full time employees at the site where the waste was generated.

These provisions may provide some justice for parties that legally generated or transported relatively small amounts of waste to disposal sites. They should not be held responsible if someone mismanaged it

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at the disposal site. However, many other parties are subject to Superfund liability unjustly. Skimming out certain parties only increases the burden on the other innocent parties. A just liability scheme would focus solely on parties that mismanaged waste. So, while this provision does make the law more just for some, it makes it less just for others who end up bearing a larger share of the costs.

BROWNFIELDS POLICY ASSESSMENT

The administration's advocacy of S. 350 represents a lost opportunity to advance free-market reforms and devolve responsibility to states. Clearly, the administration's strong advocacy had a decisive impact. Instead of capitalizing on state-level successes, the new policy has moved the issue in the wrong direction. The law federalizes brownfield cleanups and may have expanded Superfund liability. These policies won't solve the brownfields problem, and chances are high that it may make them worse. Opportunities to remedy these failures are dim, given the difficult politics of Superfund reform in Congress.

Brownfields* F*SUPERFUND**

In addition to favoring legislation that was designed to reduce the problem of brownfields, the Bush administration has been in charge of implementing Superfund for the past two years. Its management of

this troubled program is assessed below.

Taxes

Initially, the federal Superfund was paid for primarily by a tax on crude oil and other chemicals that expired in 1995. Environmental groups have criticized the administration for opposing the reinstatement of the Superfund tax, and members of both the House and Senate have introduced legislation to reinstate the tax.

The administration deserves credit for not reinstating the tax, which was unjust. It was a perversion of the "polluter pays" principle and it promised to raise energy prices for consumers. Researchers have shown that the cost of collecting the tax exceeds the amount of revenues obtained (Probst, Fullerton, Litan et al. 1995). It is a loser.

A correct understanding of the "polluter pays" principle holds that if you cause environmental damage, you should pay to correct the harm. In a market system, that means compensating the party whose property you damaged. The Superfund tax was simply an arbitrary tax on industries that produce oil or chemicals. The firms were taxed for being in these businesses, and the tax had nothing to do with their individual actions. EPA Administrator Christine Todd Whitman got it right when she noted, "The Superfund tax is on everybody including those with good environmental records" (Bruniga 2002, A1).

Unfortunately, some administration officials have indicated that their position on the tax may change. EPA Assistant Admin-

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istrator for Solid Waste and Emergency Response Marianne Lamont Horinko told a congressional committee that the administration “will look at that again in fiscal 2004 to see if we need to revisit our position” (Preston 2002, A-2). The Bush administration should not compromise on the Superfund tax. The law itself has not been reauthorized since 1995, and Superfund has never been an effective program. State-level programs have done much better.

The administration is correct in recognizing that reinstating the tax simply extends the life of a failed program. The goal should be to advance Superfund reform in a way that transfers this responsibility back to the local level. In that case, there will be no need for an unjust tax.

Budgeting

In addition to criticizing the administration for not reinstating the Superfund tax, environmentalists and congressional opponents claim that the administration is not moving quickly enough with Superfund cleanups. They claim that a lag in cleanup activity is a result of the administration opposition to the tax and expanded funding for the program. Senator Barbara Boxer (D-CA) complained during hearings that the EPA had estimated that it would reach “construction completion” on 75 sites in 2001 and 65 in 2002. (Construction completion is a term that the agency uses to describe the stage of cleanup at which all physical structures necessary to pursue cleanup are complete. It does not mean that the site has attained cleanup standards, and it does not qualify

the site for removal from the NPL.) But it only completed 47 in 2001 and has now estimated 40 completions in 2002. “No question, the slowdown is dramatic,” Senator Barbara Boxer commented (Preston 2002, A-2).

These criticisms are of questionable validity. Budgetary cutbacks and taxes don’t seem to explain the lower number of construction completions. The program’s funding has remained level, there are still millions of dollars in the Superfund, and the EPA continues to collect funds from “potentially responsible parties” under the Superfund law.

There are many possible explanations for why it is taking longer to clean sites today than during the Clinton years. For example, many of the sites that were first listed on the NPL simply happened to mature at the time the Clinton was in office. In addition, EPA assistant Administrator of Solid Waste and Emergency Response Marianne Lamont Horinko told Congress that the Clinton EPA focused on getting many of the smaller, less complicated sites off the list. The remaining sites on the NPL today include a higher percentage of “mega-sites”—those that exceed \$50 million in cleanup costs. “The size and complexity of these sites generally indicate longer project durations and increased costs required to complete cleanup construction,” Horinko told Congress (Senate Committee on Environment and Public Works 2002).

In any case, the rate of construction completions is not the ultimate free-market environmental measure for Superfund. As noted, it has been decades since the program began and only now are sites finally

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reaching this stage. The more important issue is: Why did it take so long to reach construction completion for these sites and is there a better way? States have shown that devolution is the better option.

National Priorities Listings

Given the tremendous waste produced by federal Superfund activities and the relative success at the state level, the EPA should stop listing new sites on the National Priorities List. Instead, federal policy should recognize how the free-market principle of keeping policy local does indeed work best. That is particularly true when it comes to contaminated property, which rarely if ever poses interstate issues.

An overview of sites listed and proposed by various administrations suggests that the Bush administration may be on a downward trend for listing, but this is not necessarily the case. For one thing, more listings would be expected in the early years of the program when it was not as clear how poorly it would perform.

A better measure might be to compare the rate of listing (proposed and final) in the Bush administration and Clinton administrations. We can consider listings within two-year intervals: four intervals for Clinton and one for Bush. During two intervals (1995–96 and 1997–98) Clinton had a lower listing and proposal rate than Bush. Clinton's listings in the other two intervals are considerable higher than that of Bush's first two years. Thus it is not clear that listing is slowing down much, if at all, during Bush's first two years.

We do not yet know if Bush's overall record will exhibit an overall reduction of listings. However, there doesn't appear to be a dramatic change in policy. Listing continues and the administration has taken no positive steps toward devolution.

In sum, the Bush administration was right to oppose reinstating of the unjust industrial tax that expired in 1995. There are some indications that the administration might reconsider its position and reimpose the tax, but optimism is in order given the administration's opposition to tax increases in general. The administration continues to add sites to the National Priorities List, which is a bad idea given the failure of the program. For this mixture of actions, the administration receives a B- grade on Superfund, mostly gaining credit for opposing the unjust Superfund tax.

Superfund B-

SUMMARY

The Bush administration's support for a faulty brownfields bill represents a lost opportunity to promote true reform through devolution to the states and adoption of a more just liability scheme. The administration took action, but its action moved in the wrong direction. On Superfund implementation, the administration continues the status quo with one exception—its wise opposition to maintaining the Superfund tax.

Brownfields and Superfund C-

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NOTE

1. *Small Business Liability Relief and Brownfields Revitalization Act*, Public Law 107-118, 107th Congress, Subtitle C, State Response Programs, sec. 231(b).

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CHEMICAL PLANT SECURITY

OVERALL GRADE: B

INTRODUCTION

Since September 11, 2001, Washington policy makers have been trying to shore up the nation's security. Among the many issues is how to prevent terrorist attacks on industrial facilities that would cause the release of chemicals.

These efforts raise two general areas of debate. The first has to do with existing environmental "right to know" laws, which require industrial facilities such as chemical plants to make specific information about their operations publicly available. Even before September 11, security officials were worried that much of this information should not be made public because it could assist terrorists in planning attacks on the nation's infrastructure.

The second area involves proposals to regulate the nation's chemical plants in the name of national security. This area is considered environmental because it repackages past environmental proposals that attempted to reduce and phase out chemical use at industrial facilities.

On the "right to know" question, the Bush administration should be evaluated on whether it recognized that forcing facilities to make this information widely available decreased public health and safety; whether it adopted a more flexible and more effective policy; and whether it improved risk management plan (RMP) policies. On regulation of chemical plants, the administration is evaluated on whether it recognized that local officials, owners, and operators have the best expertise and information to address risks in their communities.

As discussed below, the Bush administration has a mixed record. On balance, it has moved toward free market environmentalism principles, but is in danger of slipping.

RMPS AND "RIGHT TO KNOW"

The Clean Air Act requires industrial facilities to produce risk management plans (RMPs).¹ These plans detail what chemicals a facility uses, what amount of such chemicals are stored on

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site, how many people in the community could be affected by an accidental release of the chemical, facility mitigation measures, and other information. One section of the plan details the “worst-case scenario” of an accidental chemical release, assuming all chemicals possible were released and no mitigation measures employed. The plan details how many people could be hurt and whether schools, childcare centers, and other residential populations are present in the release area. The law directs the Environmental Protection Agency (EPA) to make data about the plan available to the public to educate them about risks in their communities.

Security officials expressed concern about releasing these data back in 1998, when the EPA said that it would post the data on the Internet. The officials said that knowledge of the data could assist terrorists in attacks on chemical plants and infrastructure.² Security officials particularly feared provision of this information in an electronic form because it would enable terrorists to rank facilities based on potentially exposed populations.

The Department of Justice reiterated many of these concerns in 2000. It noted that RMPs provide six out of nine pieces of information that the Department of Defense lists as critical in launching a successful terrorist attack on an industrial facility (Department of Justice 2000, 40–41). According to the Justice Department, the kinds of facilities that submit data to the EPA are “preferred targets,” such as plants located in high-population areas, military installations, and infrastructure.

Fifteen percent fall into the category of basic infrastructure; about 2,000 are water supply and irrigation facilities; 80 are military installations; 56 are related to electricity supply, transmission, and control; and 14 involve national gas distribution. “Disruption of even one of these facilities could wreak havoc on an entire region or locality,” said DOJ in 2000 (Department of Justice 2000, 20).

In 1999, Congress amended the act, directing the EPA to release the information to the public in a way that minimizes such security risks.³ The law provided a Freedom of Information Act (FOIA) exemption, preventing environmental groups from accessing the data under FOIA for Internet posting. The law also required that the EPA make the information available in full at public libraries and set up a policy for providing the data to “qualified researchers.” Instead, the EPA posted the bulk of the data online, including executive summaries that contain data that the FBI and others said should not be published online. In January 2001, the EPA began making full RMPs available at public libraries. Anyone who seeks to view the material must simply show an identification card.

Risk management plans do not provide information that helps the public reduce risks. They include fictitious scenarios of the most highly unlikely catastrophic chemical releases in which every mitigation measure fails and nothing is done to control a release. Nor do the plans provide information that could save lives should an accidental release occur. Nor do the plans tell individuals what to do to minimize

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risks in the case of an emergency.

If the goal is to improve public safety by educating the public about risks, a better approach would be to facilitate local information sharing about likely risks and response plans at the local level, providing the public with advice on what to do in the case of an emergency. Risk management plan information could be shared with local emergency responders who can hold public meetings and provide educational materials to the public. The public would then have better information without being needlessly frightened. Moreover, the information would not be distributed so widely that it assists terrorists.

THE BUSH RESPONSE

In March 2001, the Bush administration withdrew a last-minute Clinton regulatory proposal that would have granted public access to the complete RMP data at computers in libraries and granted “qualified researchers” access to paper and electronic copies of RMPs (EPA 2001a, 4102; 2001b, 15245). The administration should be given points for that move. Electronic access would have served as a very powerful weapon for those researching targets among U.S. facilities and planning attacks.

After September 11, the administration removed all RMP data from the EPA’s Web site, but left the data available for viewing in libraries. Arguably, the administration could claim that it must provide the information to the public because the law demands it. But the administration has not

petitioned Congress to change the law, even though Senator Christopher Bond (R-Mo) has introduced legislation to reform the law. Senator Bond’s legislation is a step in the right direction, but it does not fully solve the problem. Leadership from the administration could prompt Bond and other members of Congress to pursue a more complete solution.⁴

The “Chemical Security” Act

Before September 11, few Americans thought about security for the nation’s critical infrastructure (i.e., water treatment plants, energy utilities, and industrial facilities of all sorts). Accordingly, many industrial facilities—both public and private—have found themselves less prepared against terrorist attacks than they would like to be. Environmental activists capitalized on that fact, exposing past security lapses at some facilities to claim that companies don’t see the importance of security today. However, most of these lapses appear to have occurred before September 11 and before Americans fully recognized the need for security. For example, in March 2001, Greenpeace reported that it walked into a Dow Chemical plant and entered an area that included control panels (Greenpeace 2001).

September 11 increased the demand for security by the private sector. Those who own and operate chemical facilities, water treatment plants, and other facilities are responding by assessing their vulnerabilities and implementing policies and procedures to address weaknesses (American

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Chemistry Council 2001). After all, they have the greatest incentives protect their investments. In addition to that market demand, the government—particularly local government which would be the first to respond—clearly has an interest in improved security. Government policies should strive to enhance the existing market-based incentives and ongoing voluntary efforts to improve security.

However, members of Congress have proposed legislation that attempts to undermine private efforts and that could increase risks in other areas. Senator Jon Corzine (D-NJ) introduced the Chemical Security Act (S. 1602), which basically assumes that the source of the danger is not the terrorists, but the chemicals we use. S. 1602 would have required the EPA to direct industrial plants to assess their vulnerability to terrorist attacks and plan ways to reduce hazards. The EPA would approve the plans, which would allow it to set standards that greatly impact how plants operate. In particular, the EPA would decide if a facility should eliminate or reduce the use of certain chemicals, and what alternative processes and chemicals a facility must employ to be deemed safe. Senator Corzine attempted to attach this legislation to the bill creating a Department of Homeland Security in the fall of 2002.

The idea that the federal government could mandate a workable one-size-fits-all policy is farfetched. It ignores the fact that federal policy could mandate uniformly bad standards or misdirect resources away from the greatest concerns. Another problem is that a new federal program might discour-

age ongoing efforts to improve security because facilities may halt ongoing voluntary security planning and wait for the regulations, which could take years to implement. Security will be better served with a more flexible policy—one that promotes ongoing efforts.

In addition, the bill itself gives the EPA bad advice. Its main thrust is to encourage the reduction and elimination of man-made chemicals. Chlorine is one of the key targets. Yet the use of chlorine is one of the greatest public health achievements in history, saving millions of lives every year. Chlorine not only kills pathogens in our drinking water, we also use it to make most of our pharmaceuticals, disinfect medical equipment, and keep our hospitals sanitary.

The bill targets chemicals like chlorine by giving the EPA the authority to force facilities to severely reduce or eliminate use of certain chemicals. Under this bill, the EPA would require facilities that use chemicals to switch to “inherently safer technology,” a term which the EPA would largely define. The EPA would undoubtedly be pressured by activist groups to define inherently safer technology as “chlorine free” or at least with severely reduced use of chlorine—despite the fact that our water supply might end up carrying more deadly pathogens.

The Bush Position

During 2002, EPA officials began drafting regulations to implement Corzine-styled regulations without clear legal authority. The White House stopped the EPA from issuing these regulations, apparently out of

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concern that sensitive information collected by the agency could become public, increasing terrorist risks. And the Bush administration wisely opposed the Corzine bill.

Last fall, EPA Administrator Christine Todd Whitman told the Senate Environment and Public Works Committee that the agency is now working with a bipartisan group of senators on legislation (Preston 2002). A couple of days later, the *Washington Post* (2002, A17) reported that the administration has begun to move away from an EPA/regulatory approach and will likely seek to lodge authority for chemical plant security within the Department of Homeland Security.

However, Greenpeace USA's Rick Hind reports that he met with Christine Todd Whitman on October 3, 2002, and that she said the *Washington Post* story is wrong. He notes: "Whitman insisted that an October 2nd *Washington Post* headline, 'EPA Drops Chemical Security Effort,' was not accurate and that the administration was now trying to negotiate with Senators Inhofe (R-OK) and Corzine (D-NJ) for a "stand-alone" bill. She said that they could support many elements of the Corzine bill and that they were now committed to mandatory legislation for which the negotiations appeared to be 'very close'" (Hind 2002). According to Hind, Whitman and Homeland Security Director Tom Ridge followed up on the Greenpeace meeting by sending a letter to the *Washington Post* putting the administration on "record in favor of legislation to reduce the vulnerabilities of U.S. chemical plants to terrorism."

Hind may be exaggerating the

administration's support for his goals. Ridge's letter to the *Post* was very general. It simply stated: "Voluntary efforts alone are not sufficient to provide the level of assurance Americans deserve. We will continue to work with Congress to advance this important homeland security goal" (Ridge and Whitman 2002, B6). However, it appears that Whitman is working to advance an EPA-led regulatory approach, while others in the administration appear to want a more flexible Homeland Security-led program.

The Bush administration is also working on other ways to improve security at chemical plants. Various departments, such as energy, commerce, justice, and defense are working with industry and utilities on a cooperative basis to identify and address vulnerabilities. The legislation creating the Department of Homeland Security would move the leadership of this program to the new security department.

To enhance these efforts, the president included a provision in the Homeland Security law that exempts from the Freedom of Information Act information that parties voluntarily provide to the government for security planning. This policy makes good sense. Many private parties would be reluctant to provide information that could be useful for emergency planning if it could be released to anyone who asks under FOIA. A FOIA exemption will enhance emergency planning by encouraging more information sharing.

The Bush administration could improve its score by continuing to oppose any EPA-led chemical plant regulatory approach. In addition, it should focus on advancing

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needed FOIA exemptions. If any chemical security legislation moves forward in Congress, the administration should make sure that any authority is lodged in the new Department of Homeland Security.

SUMMARY

In summary, the Bush administration's actions are a mix of pluses and minuses. Regarding RMPs, it withdrew the Clinton administration standard expanding access and removed data from Internet after September 11. It continues, however, to allow viewing of RMPs at public libraries and has not actively worked with Congress to change the law.

As for regulation of chemical plants, the administration supported policies to protect sensitive information regarding the nation's water utilities as part of the bioterrorism bill. When EPA Administrator Christine Todd Whitman attempted to issue regulations along the lines of the Corzine bill, the White House wisely halted that action; in addition, the administration has opposed the Corzine bill. Greenpeace's claim, however, that Whitman assured the administration support for regulations on the chemical industry is worrisome. Finally, the administration has worked to encourage information sharing by supporting FOIA exemption for security-related information provided voluntarily to federal agencies.

Chemical Plant Security* B*NOTES**

1.42 U.S.C. § 7412(r); see Fumento (2001), Lash (1998), Logomasini (1999, 2002).

2. Letter to Carol Browner, January 1, from the International Association of Arson Investigators, International Association of Fire Chiefs, the National Fire Protection Association, and the National Volunteer Fire Council (copy on file with author); House Committee on Commerce (1999); Senate Committee on Environment and Public Works (1999).

3. Law and summary available at: www.epa.gov/swercepp/ap-99law.htm.

4. For an analysis, see Logomasini (2002).

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DRINKING WATER & ARSENIC

OVERALL GRADE: D

INTRODUCTION

Under the Safe Drinking Water Act, the Environmental Protection Agency sets standards that limit the amount of certain substances that the agency will allow in tap water. In the waning days of the Clinton administration, the EPA published a final standard for arsenic in drinking water, requiring facilities that provide water to ensure that the water contains no more than 10 parts per billion (ppb) of arsenic (EPA 2001a). The previous standard allowed 50 ppb of arsenic in drinking water.

In March 2001, the Bush administration announced that it would delay the effective date of the standard for 60 days, saying that it wanted to review the rule's scientific basis. In April 2001, the administration issued a notice announcing that it would delay the final rule until 2002, allowing time for further scientific review and a new cost analysis (EPA 2001b, 20580–584). But then, in October 2001, the administration set the final

standard at 10 ppb (the same figure issued by the previous administration).

The ultimate question in evaluating drinking water standards is whether the administration's policies are likely to improve public health and safety. Related questions are whether the lowest-cost alternative for achieving the goal of public health improvement has been chosen and whether the best science is used. This is important because the cost of regulation, which must ultimately be borne by consumers, can impair individuals' abilities to meet basic needs such as health care, nutrition, and shelter. Federal drinking water regulations can impose "welfare losses"—that is, reduce the overall public welfare (Congressional Budget Office 1997). This is another way of saying that the overall benefits of these regulations fall short of covering the overall costs.

This analysis assesses the arsenic rule in the light of whether the administration used the best science, whether it used a flexible, decentral-

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ized approach, and whether the rule was cost-effective. As discussed below, the Bush administration failed to achieve these goals. Thus, the Bush administration receives a D for this rule.

BACKGROUND ON ARSENIC

Arsenic appears naturally in the water of communities in many rural parts of the United States. A 10 ppb standard could affect 2,455 of these communities (EPA Science Advisory Board 2000, 18). Many of the people who will be affected either are low-income or live on tightly fixed incomes. For many of these families, higher costs for water may mean fewer resources for health care or other essential needs. Towns in rural areas may decide to help cover part of the cost of compliance by sacrificing essential social needs, such as the purchase of fire trucks, or giving up on addressing more serious drinking water concerns.

The EPA's own Science Advisory Board (SAB) highlighted these points, noting that an overly expensive arsenic rule "might force tradeoffs that do not maximize the gains to public health" (EPA Science Advisory Board 2000, 37). For example, the board said, "allocation of income to arsenic might preclude addressing nutritional factors" because the standard could make it difficult for low-income families to put food on the table. In addition, the Science Advisory Board noted that high treatment costs could lead communities to disconnect systems and access water from potentially more dangerous sources, such as from

poorly designed wells or untreated surface waters (EPA Science Advisory Board 2000, 38).

EPA cost estimates indicate that these welfare losses will be high. According to the EPA, per-household costs of this rule alone could add \$326 annually to water bills in systems with fewer than 100 connections, and up to \$162 in systems serving between 100 and 100,000 households. Even residents within larger systems serving up to a million homes might see water bills increase by \$20 per year (EPA 2001a, 7011). Some communities will suffer even more severe impacts. For example, Maryland's Calvert County may see its per-household water bills increase by \$70 per month just to meet the arsenic standard—a steep price for many living on modest incomes (see National Rural Water Association).

According to conservative EPA estimates, total annual costs of the rule could range from \$180 million to \$205 million (EPA 2001a 7010). Suppliers of drinking water estimate that the costs would be far higher—\$604 million over and above any estimated benefits each year, with an initial investment of \$5 billion (*Daily Environment Report* 2001). Independent researchers have found that the costs would exceed benefits by \$600 million annually (Raucher 2000).

UNCERTAIN SCIENCE

Because tightening the standard would force people to make serious sacrifices, one might assume that, before issuing its rule,

DRINKING WATER & ARSENIC

the EPA had clear science indicating that the 50 ppb standard was not safe. Yet science has not revealed any risks at that level. According to the National Research Council, “No human studies of sufficient statistical power or scope have examined whether consumption of arsenic in drinking water at the current MCL [the standard before the Clinton administration acted] results in the incidence of cancer or noncancer effects” (National Research Council 1999).

Most of what scientists do know relates to a handful of studies that reveal one thing: Relatively high-level exposure to arsenic for long periods of time can cause cancer and other ailments. The EPA based its risk assessment of arsenic on studies of Taiwanese populations in 42 villages that were exposed to relatively high levels of arsenic. From these studies, the EPA has extrapolated risks of low-level arsenic exposures in drinking water to the U.S. population.

But the Science Advisory Board and the National Research Council have pointed out serious flaws with the data. For example, although the Taiwanese studies found an association between high exposures and cancer, these data do not necessarily support any link between low-level exposures and cancer in the United States (EPA Science Advisory Board 1993). Similarly, the method for determining exposure levels among the Taiwanese likely led to exaggerated risk assessments. The researchers averaged arsenic levels from an incomplete sampling of drinking water wells within each village. As a result, those who may have contracted cancer at the highest levels in the village would be counted as hav-

ing become ill at the lower, averaged level assigned to that village. As one member of the NRC noted, “The problem[s] with the data are substantial. The lack of data linking individuals with specific wells is a very big deal. For a rule like this, you need a good dose-response. We just don’t have one.”¹

Another key problem with the science was the EPA’s reliance on the linear model for risk assessment. This model assumes that risks increase incrementally as dose increases. However, both the Science Advisory Board and the National Research Council have noted that it is more likely that the arsenic risk is “sublinear” (EPA Science Advisory Board 2000; National Research Council 1999). That means there is relatively little risk increase as the dose increases until exposure reaches a certain critical point at which risk increases more substantially. (The other possibility is that the substance follows a threshold model, which means there is zero risk until the exposure level reaches a “threshold level.” Either a sublinear risk or a threshold risk model would justify a much less stringent arsenic standard.)

To advance the rule, former EPA officials (Fox 2001, A25), politicians (Daschle 2001), and environmental activists (House Committee on Energy and Commerce 2001) have seriously misrepresented the data found in the National Research Council report. Citing the NRC report, some have made the claim that the “National Academy of Sciences” found that the current arsenic standard of 50 ppb in drinking water poses a 1-in-100 risk of cancer. In fact, equating the National Research Council with the

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National Academy of Sciences raises questions because the subcommittee does not apply the same scientific standards employed by the academy (Milloy 2001).

Furthermore, the report made no such finding. The 1-in-100 figure is found in a chapter analyzing various statistical methods for assessing risk. It does not assume that the data entered into these models are even close to correct or that any of the “findings” have a basis in reality. Instead, the entire chapter is provided for illustrative purposes, and the NRC warned against using the figures because the report did not constitute a risk assessment.

Within this chapter, the 1-in-100 figure was tossed out as speculation. The report did not even run a model to find this number. Rather, it says that assuming all speculated cancer risks were true (a very big assumption) and applying those speculations to a certain statistical model “could easily result in a combined cancer risk on the order of 1 in 100” (National Research Council 1999, 293, 8). If this figure tells us anything, it’s that the model and/or assumptions are incredibly flawed. Nonetheless, this figure was used in the political battle to justify the standard.

review the 1999 arsenic report; the NRC set up a panel consisting mostly of members who had produced the first report. In fact, the only members excluded were those who had expressed concerns about the conclusions found in the first report.² The review did not shed new light on the issue, and many critics expressed concern that the agency did not consider the full range of information.

In addition, the Small Business Administration pointed out serious flaws in the review process, including the fact that the NRC does not follow the same transparency rules required by government agencies (House Committee on Science 2001). Members of the committee were largely selected in secret and they deliberated in secret. To add insult to injury, the Bush EPA chose the day on which public comments on the rule were due to announce that it would keep the more stringent standard. Clearly, the agency did not even consider the information provided in the public comments. Ironically, the agency had justified its review partly on the grounds that the public had not had enough time to comment on the Clinton administration’s mid-night regulation.

SUMMARY

BUSH ADMINISTRATION ACTIONS

The Bush administration was right to place a hold on the standard and call for a scientific review. The Bush administration’s EPA, however, failed to conduct a serious scientific review. It called on the National Research Council to set up a committee and

In summary, the Bush administration waffled; although it decided to review the regulation, it did not make sure that the review was scientifically sound. It set the rule at 10 ppm despite adverse public health and economic impacts on the poor as well as insufficient science, and it did not con-

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sider public comments on the science; in fact, it finalized the rule the day that comments were due.

Drinking Water and Arsenic* D*NOTES**

1. This information came from transcripts of phone conversations between the EPA Office of Intergovernmental Relations and National Research Council. These transcripts were obtained through a Freedom of Information Act request.

2. Transcripts from phone conversations between the EPA Office of Intergovernmental Relations and the National Research Council drinking water panel members in 1999 revealed that several members did not support the report suggesting that the 50 ppb standard was not protective of public health.

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ENDANGERED SPECIES OVERALL GRADE: C

Candidate Conservation Program
Habitat Conservation Planning
Estate Tax

C
D
B

INTRODUCTION

For many years, the Endangered Species Act has been a battleground. By most objective measures, the Endangered Species Act is a failed piece of environmental legislation; it can show few successes. Yet it is fiercely defended by activist environmental groups who stress the intentions, not the results, of the law. Regrettably, the Bush administration has largely sat on the sidelines of this conflict.

BACKGROUND

The Endangered Species Act (ESA) was signed by President Nixon in 1973. Its goal is to prevent species from declining into extinction and to recover species whose populations have declined. Once a species is labeled endangered or threatened, it is placed on a

list and its habitat is protected to prevent its extinction and spur recovery.

Environmental activists hold up the Endangered Species Act as an important defining piece of environmental legislation. The National Audubon Society calls it an “Ark to the Future,” while the Sierra Club refers to it as “the crown jewel of our environmental laws” (National Audubon Society 1998; Sierra Club 2002). Yet it has produced few, if any, successes.

Since 1973, 1,283 species have been placed on the threatened and endangered animals and plants list. Only 29 have been removed from the list. And it is difficult to identify even a single species whose removal is the result of the ESA (National Wilderness Institute 1998).

Some species were removed from the list because they became extinct. Other presumed species turned out to be taxonomical errors—researchers deter-

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mined that they were not biologically different from related plants and animals with larger populations. Still other species were dropped from the list because of data errors—they were undercounted or the threat to them was overestimated. Some species did recover, but frequently, as in the case of the peregrine falcon, factors other than legal protection contributed the most to their recovery (Simmons 2002, 31–34, 67).

The Endangered Species Act has also caused turmoil for people—those who happen to have a threatened or endangered species on their property. The act unfairly requires a few people to bear the burden of the public goal of saving species. When a species is listed as endangered, property that can be construed as its “critical habitat” is also designated for protection. When property is designated critical habitat, its use becomes limited. Building houses and commercial facilities or cutting down trees or even farming can be prohibited. When property owners are forced to bear the burden of ESA enforcement they face costs that may range from the partial loss of the use of their property to the complete shutdown of family businesses and corporate facilities.

When private property owners are forced to bear a public burden, many will try to evade its costs. One way is to make sure that no endangered species is ever found on one’s property. Should a species be discovered, the owner’s incentive is to “shoot, shovel, and shut-up” rather than lose all or partial use of the property (Stroup 1995). Although the evidence is slim that landowners go to this extreme,

the incentive to get rid of an endangered species is strong. The penalties of the Endangered Species Act turn a potential asset—such as a rare or exotic animal—into a liability. A property owner may be tempted to eradicate an endangered plant or animal from its habitat even before government officials become aware of its existence. Of course, this incentive undermines the goals that motivated Congress when it passed the law.

ADMINISTRATIVE ACTIONS

The Endangered Species Act is implemented by the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS). To reverse the unfortunate perverse effects of the act, the president could appoint administrators—and federal judges—who understand the perverse incentives the act causes. Or he could persuade Congress to change the law. So far, little has been done. The two following programs illustrate the administration’s actions related to the Endangered Species Act.

The Candidate Conservation Program

The Bush administration has continued with a process, initiated in the first Bush administration, that aims at early identification of plants and animals heading toward threatened and endangered status. By identifying species before they decline severely, the Candidate Conservation Program (CCP) is designed to lower the costs of recovering

ENDANGERED SPECIES

species, increase the government's options for managing critical habitat, and reduce "the potential for restrictive land use policies in the future" (U.S. Fish & Wildlife Service 2000a). At present, 1,254 species are on the endangered species list.

A component of the CCP, called "Candidate Conservation Agreements with Assurances for Non-Federal Property Owners," is an attempt to soften the perverse incentives of the act. It sets up voluntary agreements between the Fish and Wildlife Service and nonfederal property owners. In addition to giving them a more precise idea of how much burden will be required of them, the program aims at getting landowners to "voluntarily commit to implementing specific actions that will remove or reduce the threats to [at risk] species" (U.S. Fish & Wildlife Service 2002a). And it assures property owners that the agency will not add more regulations in the future that exceed the terms of the agreement. In short, the development of this program is somewhat more cooperative and somewhat less "command-and-control" than the Endangered Species Act's traditional process.

Still, the overall effect of the CCP is harm to species and people. Its goal is to reduce costs and expand management options for the federal agencies, not private property owners. Its program for early candidate identification of endangered species is meant to reduce the costs to the Fish and Wildlife Service, not the costs to landowners. Because CCP only tinkers at the edges of public policy, endangered species remain more a liability than an asset for private property owners. For recognizing ESA's

perverse incentives but doing little to change them, the administration receives a C.

Candidate Conservation Program C

Habitat Conservation Planning

Created during the Clinton administration, Habitat Conservation Planning (HCP) is intended to allow economic development or other activities on private property that contains or may contain listed species (U.S. Fish & Wildlife Service 2002c). An HCP permit, granted by either the Fish and Wildlife Service or the National Marine Fisheries Service, allows property owners to use their land in normal ways. To receive this permission, they must uphold a conservation agreement that will protect and recover any endangered species on at least some portion of the land. Many property owners favor HCP because it frequently does allow for land development that otherwise would be prohibited.

Like the Candidate Conservation Agreements with Assurances, Habitat Conservation Planning informs property owners about the government regulations they will face if they decide to develop their land despite the presence of an endangered species. Neither program, however, eliminates the financial costs to these property owners. Government agencies still dictate private property land use so that landowners retain an incentive to eradicate species they discover or to make their property less attractive to endangered species.

HCP has another negative impact: The plans favor large landowners over small

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ones. Because many endangered species require large tracts of habitat, an HCP agreement often requires that large tracts of land be set aside. Only large landowners are likely to qualify for the HCP permit. Moreover, they are better able to absorb the costs of required conservation under the HCP than are small landowners. Not only is this policy unfair to small landowners, who may be financially crippled by Endangered Species Act pressures, but it generates another element of special interest support for maintaining the current provisions of the act. Because large and politically powerful companies can get around the worst impacts, they will tend to support the status quo. The HCP does not remove the negative incentives of the Endangered Species Act for most landowners. Thus the Bush administration receives a D for continuing a failed program without improvement.

Habitat Conservation Planning* D*Estate Tax**

The estate or inheritance tax (also called the “death tax”) has a detrimental effect on the habitat of endangered species. People who inherit ranches, farms, or other rural real estate are often “dirt rich and dollar poor.” Frequently, they must sell or commercially develop their property in order to pay the tax. Development may disturb or fragment the habitat of endangered species (Grewell 2002, 12–14; Saxton and Thornberry 1998, iii).

The Bush tax cut package, enacted in

2001, included changes to the estate tax. The new law gradually eliminates the estate tax by increasing the amount that is exempt from it while also reducing the top tax rate over several years. In 2010, the estate tax will be completely repealed. Due to arcane budgetary rules under current law, however, the exemption returns to \$1 million in 2011, and the top tax rate reverts to 55 percent.

The Bush administration reduced and ultimately will eliminate this tax on conservation, but the elimination is short-lived. The Bush administration receives a B for reducing and eliminating the tax; the grade would be higher if President Bush had persuaded Congress to make permanent the elimination of the tax.

Estate Tax* B*RECOMMENDATIONS**

To obtain a higher grade and to correct the problems posed by current endangered species management, the Bush administration could take a number of steps. It should support a bill that was approved by the House Resources Committee in July 2002. H.R. 4840 would have established a higher scientific threshold before a plant or animal is listed as threatened or endangered. It required that the Secretary of the Interior have a “firm belief” that the evidence is “clear and convincing” before a new species is listed. It also required the secretary to consider the economic impact of proposed agency actions that protect a species’ critical habitat. Such legislation would be

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a first step toward positive reform of the Endangered Species Act.

Another step is to move to incentive-based implementation of the act. The way to protect and recover species is to make them an asset, not a liability, for property owners. Most property owners will conserve habitat and the species that depend on it if they are not subject to costly and oppressive land-use controls. Among the changes the administration could make are offering tax credits to property owners who have endangered species on their property; providing “bounties” or “rewards” for conservation of endangered species; and allowing the government to rent private land designated as critical habitat for conservation purposes (Bourland and Stroup 1996). Each of these proposals could give an endangered species a value instead of representing a cost. They give property owners an incentive to conserve instead of an incentive to “shoot, shovel, and shut up.”

SUMMARY

The Bush administration is attempting to make tiny improvements in managing endangered species but is failing to attack the problem head on. That problem is the perverse incentives of the Endangered Species Act, which undermine the goals of the act. The administration must either take aggressive action within the Fish and Wildlife Service and the National Marine Fisheries Service or must push for congressional change. Because it has done neither, but has begun to recognize the act’s perverse incen-

tives and reduced the estate tax, the administration rates a C.

Endangered Species C

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GLOBAL CLIMATE
CHANG E
OVERALL GRADE: C

International Policy
Domestic Policy

A-
D

INTRODUCTION

Global climate change is one of the most contentious environmental issues facing policy makers and the public. Some scientists contend that rising greenhouse gas emissions—caused in part by the combustion of fossil fuels—will severely increase global temperatures by trapping heat in the earth’s atmosphere. Others doubt that the impact of increasing greenhouse gases in the atmosphere will be a serious problem. For the executive branch, global climate change policy involves deciding whether to control and reduce man-made greenhouse gas emissions, and, if so, how.

Upon entering office, President Bush immediately faced pressure on global warming. He was confronted with the question of whether or not to endorse the Kyoto

Protocol, an international agreement to require cutbacks on emissions of greenhouse gases. Activist environmental groups had spent hundreds of millions of dollars to elect office-holders and heighten public awareness about the importance of controlling emissions of carbon dioxide, the primary greenhouse gas. These groups hoped to leverage the political capital they had built up over the preceding decade to force the administration to accept their policies.

This review evaluates the Bush administration’s actions on global climate change. Free market environmentalism incorporates scientific issues into its analysis. In addition, it is inevitably cautious about sweeping claims and generalizations—such as those expressed by some on global warming—that are designed to give the federal

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government more control over people's lives without sufficient justification. Thus, free market environmentalism requires a careful response to claims of environmental catastrophe. In this light, the response of the Bush administration to concerns about climate change has been uneven.

BACKGROUND

Although many scientists think that global temperatures will rise, the scientific community is skeptical that it will be catastrophic. Over 17,000 scientists in the U.S. have signed the Global Warming Petition. It states, "There is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gasses is causing or will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere and disruption of the Earth's climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects upon the natural plant and animal environments of the Earth."¹

The benefits from reducing greenhouse gas emissions are uncertain. The Kyoto Protocol would require that the United States reduce production of carbon dioxide by 7 percent below 1990 levels. Yet this would have a negligible effect on mitigating projected global warming trends (Hoffert et al. 2002). While not disavowing human-induced climate change, National Aeronautics and Space Administration scientist James Hansen writes "that the Kyoto reductions will have little effect

in the twenty-first century" (Hansen et al. 2000, 1).

The Bush administration's actions fall into both international and domestic areas. Both are reviewed below.

INTERNATIONAL POLICY

In 1992, advocates of a binding global climate change policy made significant headway. The United Nations adopted a Framework Convention on Climate Change which provided a general plan for advancing an international climate change policy. A series of international meetings followed. One in Kyoto, Japan, in December 1997 produced the Kyoto Protocol, an agreement among participating countries to control greenhouse gas emissions.

In July 1997, prior to the Kyoto meeting, the U.S. Senate had passed a resolution stating that it would not ratify a climate change treaty if developing countries were not included in the agreement. And indeed, the Kyoto Protocol did apply more stringent standards to developed countries, making it unlikely that the U.S. Senate would ratify it. Recognizing that the Senate would reject it, President Clinton never submitted the Kyoto Protocol for ratification. Instead, he provided only his signature to the protocol.

Because President Clinton signed the protocol, however, the United States could still be bound to its agreements even without Senate approval, according to the Congressional Research Service (CRS). A CRS report states "signature by the U.S. does

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impose an obligation on the U.S. under international law to refrain from actions that would undermine the Protocol's object and purpose. That obligation continues to apply until such time as the U.S. ratifies the Protocol or makes clear its intent not to do so" (Ackerman 2001, 1).

In March 2001, President Bush announced that the Kyoto Protocol was "fatally flawed," indicating that he would not push for its ratification. The administration blew the whistle on Kyoto by exposing the fact that it won't solve global warming, the purported problem it is intended to fix (see Yandle and Buck 2002; Hansen et al. 2000).

The administration continues to perform well in international meetings. At a World Summit meeting in Johannesburg, South Africa, in August and September 2002, the Bush team redirected the agenda away from regulations and trade restrictions on economic development, human health, and the environment. In fact, the World Summit began on a positive note when President Bush refused the demands of global warming alarmists that he attend; and it had a constructive conclusion as the President's representative, Secretary of State Colin Powell, championed economic growth for the world's poor.

Still, the U.S. is exposed to Kyoto's consequences unless the administration in effect removes President Clinton's signature. Under certain interpretations of international law, the United States cannot undermine the protocol's purpose of reducing greenhouse gas emissions as long as the president's signature is still on the protocol.

By relying on these interpretations, the

European Union (EU) could petition the World Trade Organization (WTO) to require the United States to raise energy taxes. The EU could argue that the U.S. policy is promoting "eco-dumping"—by failing to meet the protocol's demands of controlling carbon dioxide emissions. Europe could claim that the United States has an unfair advantage over European firms because EU firms face higher energy costs due to the protocol's demands. The EU could then pressure the WTO to impose energy tax parity across countries. These developments are possible because the Bush administration failed to officially remove itself from Kyoto's constraints.

In sum, the Bush administration pronounced the Kyoto Protocol "fatally flawed" but did not fully remove U.S. obligations to the treaty. For its actions, it receives an A-

International Policy A-**DOMESTIC POLICY**

Although the Bush administration rejected the Kyoto Protocol—and incurred vocal criticism for its decision—the administration is moving forward behind the scenes with Kyoto-like programs that are sure to punish the U.S. economy. At least five climate change programs at the Environmental Protection Agency reflect Kyoto priorities. Some of the programs existed before this administration took office; others began with Bush. All attempt to reduce the emissions of greenhouse gases, and all are conducive to an environment that welcomes mandatory greenhouse gas emission controls.

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One of the newest White House climate change programs is the Credit for Early Reduction. President Bush directed the Department of Energy and other agencies to improve the voluntary reporting of greenhouse gas emissions. This program is set up to make sure that participating companies receive appropriate credit in any future program that mandates reductions in greenhouse gas emissions.

Any public policy that gives companies a potential financial benefit from reducing greenhouse gas emissions will create a political lobby in favor of making such emission reductions mandatory. Under the administration program, the credits hold no value right now, but Congress could pass legislation creating a system that credits a company's previous voluntary emission reductions against what is mandated by law. Alternatively, Congress could allow a company to sell its credits to other companies instead of using them. In either case, the firm holding an emission credit would gain a financial windfall relative to other firms that do not reduce greenhouse gas emissions. Thanks to the administration, companies have a big incentive to lobby for such a program.

***Domestic Policy* D**

POSSIBLE BUSH INITIATIVES

The administration should take several actions to improve its grade and to save the nation from excessive harm based on uncertain science. First, it should formally declare that it does not accept the Kyoto Pro-

ocol. Timing is a concern here. The European Union has already ratified the Kyoto Protocol. If Russia ratifies Kyoto, an important 55 percent threshold will have been met, and its provisions may become binding on the United States because President Clinton signed the protocol. The administration should "unsign" the protocol before this happens. There is precedent for this. In May 2002, the administration repudiated the Treaty of Rome, a negotiated framework for an international criminal court that President Clinton had signed in 1998. As with Kyoto, the U.S. Senate never ratified it. The Bush administration's action has removed any doubt that it will not be bound by the Treaty of Rome. The same action should be taken with respect to Kyoto.

Second, the administration should remove negative incentives for research and development and new capital investment. By itself, new investment is likely to reduce emissions of greenhouse gases, but current federal policies reduce the incentive to discover and implement new technologies. These policies include high capital gains taxes, unrealistic depreciation schedules buried in the tax code, and costly New Source Performance air quality standards and related EPA regulations.

Third, agricultural subsidies and high tariffs encourage energy-intensive production in the United States, thus increasing carbon emissions. If carbon emissions hurt human well-being, then human welfare can be improved by removing artificial constraints that increase carbon emissions. The Bush Administration should seek to re-

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move these incentives, both in the United States and with U.S. trading partners.

SUMMARY

The Bush administration recognized flaws in the Kyoto Protocol and took appropriate action, but it apparently has not understood why Kyoto is so dangerous. Thus, the administration has not fully repudiated the protocol and is aggressively initiating domestic global climate change programs. These domestic programs will set the stage for mandatory controls on fossil fuel use, harming the economy and reducing freedom unnecessarily. Neither science nor economics justifies these programs, and neither should the administration.

Global Climate Change C**NOTE**

1. See Oregon Institute of Science and Medicine (2002) for the petition, with a complete listing of all signatures according to scientific credentials.

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GRAZING ON PUBLIC LANDS

OVERALL GRADE: C-

INTRODUCTION

On taking office, the Bush administration faced a controversial set of western issues. Land and water in the West stir controversy simply because of the scope and magnitude of federal ownership and control of these resources. How the new administration has handled the issues is a gauge of how strongly the Bush team was committed to applying the principles of free market environmentalism (see Anderson and Leal 2001, 59–105). This evaluation focuses on grazing policy on federal land. Bush's handling of grazing policy does not send a positive signal to those who recognize the benefits of markets.

“CATTLE FREE” ?

When Bill Clinton entered the White House, environmentalists chanted, “No Moo in '92,” and in the

following year, “Cattle Free in '93,” hoping to eliminate cattle grazing on federal lands. Their efforts failed because grazing permits are valuable property rights that livestock owners are not going to relinquish without a fight.¹

In briefings during the presidential campaign, George W. Bush was presented with a way of resolving this conflict over federal land use. He should allow grazing permits to be sold on a willing buyer-willing seller basis to nongrazers—primarily, environmentalists. These new permittees would continue to pay the grazing fees, thus leaving the government whole; at the same time, they could pursue their goals of managing the lands for wildlife habitat.²

To receive a high grade on the grazing issue, the administration should have proposed new legislation. This legislation would require grazing permittees to post a bond holding them accountable for envi-

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ronmental consequences of their actions (whether grazing or nongrazing) and would allow the exchange of grazing permits between willing sellers holding existing permits and willing buyers—including environmental groups. Robert Nelson (1995, 265) notes that:

At present, if a rancher were to accept a payment to stop grazing in a particular area of public rangeland, the grazing rights might revert to the government. The government could then reissue the rights to another rancher for continued grazing. A private group . . . thus finds itself facing legal uncertainties with respect to its ability to buy out and retire the grazing rights in a wilderness area, even if ranchers were happy to sell.

Nelson further suggests that

long-term leases for public rangelands might be issued as well to conservation organizations for the purpose of managing and protecting rangeland areas possessing features of special environmental sensitivity. If a conservation organization bought out an existing livestock grazing permit or lease on public rangelands, this organization should have the option to convert the lease to nongrazing status (Nelson 1995, 269).

Short of these steps, the administration could facilitate such trades by administrative actions. One would be to amend resource management plans under existing grazing and environmental laws. These modifications would allow the federal

agency in charge to reduce or exclude livestock grazing, thus making it possible for nongrazers to hold permits.

RETIRING GRAZING IN UTAH

The Bush team had an opportunity to adopt a new grazing policy thanks to an innovative grazing retirement proposed in Utah by the Grand Canyon Trust. With private funding, the Grand Canyon Trust and grazing permit holders in Utah have struck a deal to reduce or retire grazing on approximately 300,000 acres in or around the Grand Staircase-Escalante National Monument. In this transaction, the trust spent almost \$600,000 contracting with permit holders. The trust will assume payment of ranch debt and also lease or purchase other private grazing lands in return for the permit holders' relinquishing the grazing permits. For the transactions to be consummated, the Interior Department must amend the grazing plans so they are consistent with grazing and environmental laws. If it does not, the trust must repay the private donors, and grazing will continue.

With the appropriate environmental assessments complete, the Department of Interior is in a position to act on the amendments. The Grand Canyon Trust believes that there is adequate documentation for reducing or removing grazing from the affected lands, but the administration is delaying a decision. Interior officials are trying to determine if the allotment is "chiefly valuable for grazing," a determination that

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was to have been made on all federal lands under the Taylor Grazing Act in the 1930s, but was not.

Given this history, there is a good chance that many allotments would not be “chiefly valuable for grazing.” If so, numerous allotments could be retired administratively by the federal government, and environmental groups such as the Grand Canyon Trust would not have to purchase the permits. The ranchers would be out of luck—unable to graze on the lands and unable to obtain compensation for the value of their permits.

Given that there is room for interpretation as to what constitutes “chiefly valuable for grazing” as well as differences over the environmental impacts of grazing versus not grazing, the administration should consider the fact that all directly affected parties agreed to the trades and that the government would be left whole. Under these conditions, amending the resource management plans in question would indicate that the administration favors free market environmentalism approaches. Not acting on this opportunity indicates that it does not.

The Bush administration receives a C for its grazing policy. It has endorsed the concept of willing buyer-willing seller trades of grazing permits, but has not vigorously pursued the administrative action necessary to allow trades to be fully consummated.

***Grazing on Public Lands* C**

NOTES

1. For an excellent discussion of “public lands and private rights,” see Nelson (1995).

2. For discussion of a similar proposal, see Watts and LaFrance (2001).

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O C E A N
F I S H E R I E S
O V E R A L L G R A D E : D

Individual Transferable Quotas	C-
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INTRODUCTION

Overfishing—which destroys valuable natural resources, reduces fishers’ incomes, and causes fishing communities to decline—has become a perennial problem in the coastal fishing areas around the United States. Ways to solve this problem are at hand, but the Bush administration has so far done a poor job of bringing such policies to fruition.

BACKGROUND

More than a quarter of a century ago, the United States and other coastal nations agreed to extend national juris-

diction over ocean resources from three miles to 200 miles from the shore. One aim was to reduce excessive inroads by foreign fishing fleets. Since then, however, overfishing by foreign fleets has been replaced by overfishing by domestic fleets.

During the 1980s and 1990s, domestic fishing fleets underwent massive expansion, partly due to government programs (Leal 2002b). In addition, government fishing regulations failed to sustain fishing populations and contributed to rising costs, poor product quality, lower revenues, and hazardous fishing. Today, many ocean fisheries here and abroad face tough economic times. Some, such as the New England groundfish fishery and Atlantic Canada’s cod

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fishery, have suffered major stock collapses (Leal 2002b).

These problems can be reduced by policies that clarify and strengthen property rights in ocean fisheries, along with the elimination of policies that foster excessive fishing capacity. Below are discussions of three key fishing policy areas and the role that the Bush administration has played. So far that role has not been consistent with free market environmentalism.

INDIVIDUAL TRANSFERABLE QUOTAS

Evidence abounds that workable fishing policies can prevent overfishing, both protecting fish populations and providing long-run income to fishers. During the 1980s, New Zealand and Iceland adopted individual transferable quotas (ITQs) in their major ocean fisheries. These programs entitle individual fishers to take a specific percentage of the total allowable catch. This means that fishers do not have to “race for the fish.” Because they are assured of a specific quantity, they can go after it when they wish. Because ITQs are transferable, a fisher who wants a larger catch can buy additional ITQs; those who want to retire from fishing can sell them.

One result of ITQs in New Zealand and Iceland was an end to the costly overcapacity of fishing fleets. More efficient fishers tend to buy out less efficient fishers (Leal 2002a, 16). ITQs have been more effective in preventing overfishing than have traditional regulations (Leal 2002a, 17–18). Moreover, ITQs have allowed managers to

extend fishing seasons; longer seasons have allowed fishers to respond to more profitable opportunities in the marketplace for fish (Wilén and Homans 2000).

Only a few U.S. fisheries have been able to experience the benefits enjoyed in New Zealand’s and Iceland’s fisheries, however. Congress imposed a moratorium on ITQs in federally managed fisheries in 1995.¹ George W. Bush favored lifting the moratorium, even when he was governor of Texas, and his 2003 administration budget recommended lifting it. Key Bush officials who have direct influence on ocean fisheries policy have all voiced their support for lifting the moratorium on ITQs in various venues.² Congress allowed the moratorium to expire in October 2002, but new legislation is needed to formulate national guidelines for ITQs.

In spite of its support of ITQs, the Bush administration does not support ITQs as property rights. ITQs are being proposed as “privileges,” revocable at any time without compensation. As one Bush official explained in congressional testimony, limiting ITQs to privileges is one of the “useful boundaries” to their implementation (House Committee on Resources 2002c, 2).

Such an interpretation of ITQs will weaken the stake fishers have in the long-run future of their fishery. In New Zealand, ITQs are property rights and fishers can reap long-term benefits from investing in fish conservation. Indeed, many New Zealand fishers have formed management companies that regulate harvests and invest in ways to improve fishing stocks. In contrast, debate rages in Iceland over

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whether ITQs are privileges or property rights. Holders of ITQs in Iceland have less certainty that down the road they will be able to capture the value of current investments in improving fisheries. This would appear to be the case in the United States.

The Bush administration was right to support lifting the moratorium but it maintains a misguided interpretation of ITQs as privileges and not property rights, which will limit the benefits of the transferable quotas.

*Individual Transferable Quotas C-***FISHING SUBSIDIES**

When the United States extended its fishing boundaries in 1976, the domestic fishing fleet was not big enough to harvest all commercially valuable fish stocks within the zone. Today, however, the United States faces significant overcapacity in many domestic fisheries. The expansion is due in large part to government programs.

Federal loans, loan guarantees, and tax deferral programs stimulated purchase, repair, and refitting of current vessels. Salton-Kennedy Fishery Development grants aided new product development, increasing the ability of fishers to race for the fish. (Until 1986, investment tax credits in the tax code spurred spending in new vessel construction.)

To its credit, the Bush administration agrees with the assessment that significant overcapacity exists in many U.S. fisheries and that the federal programs that remain in effect contribute to the problem (House

Committee on Resources 2001). But the administration has yet to come up with a specific proposal to eliminate them.

*Fishing Subsidies D***MARINE PROTECTED AREAS**

On June 4, 2001, the Bush administration announced that it would retain former President Clinton's Executive Order 13158. The purpose of this order is "to strengthen the management, protection, and conservation of existing marine protected areas and establish new and expanded" marine protected areas (MPAs) (Evans 2001). These are water bodies where commercial activities, including commercial fishing, are usually prohibited. The 317 MPAs range dramatically in size. For example, there is the 14-acre Farnsworth Bank Ecological Reserve and the 173,000-acre Biscayne National (marine) Park.

If used judiciously, marine protected areas have the potential to restore depleted fish stocks that are not very mobile. Such was the case in the New England scallop fishery. When groundfish areas were closed in the late 1990s, scallop populations showed signs of strong recovery. But without specific guidance on how they are to be used, MPAs also hold the potential for being misused.

Advocacy groups such as the Ocean Conservancy, which promotes nonuse of marine environments, want little flexibility in the use of MPAs. In this group's view, massive expanses of U.S. ocean areas should be set aside as marine protected areas and all fishing in these regions should be permanently

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banned. Such an unrealistic approach holds severe consequences for people who depend on fish for their livelihoods. And even when MPAs are limited in scope, they are not necessarily the most effective way to protect highly mobile fish or species such as shrimp that are affected by environmental conditions more than by fishing pressure.

Many variables should be considered when determining which areas are suitable for MPA designation and which are not. But the Bush administration has not provided any criteria for designating MPAs. Nor has it considered suitable market alternatives to enhance stock recovery.

One market alternative is the one taken by the Atlantic Salmon Federation. Under the direction of Orri Vigfússon and using mostly private donations, the Atlantic Salmon Federation bought and temporarily retired commercial netting rights for Atlantic salmon in coastal waters off Greenland and the Faroe Islands (Anderson and Leal 1997, 134–46). This relieved fishing pressure on the salmon.

Another market alternative is to allow private entities to profit from enhancing stock recovery. Ocean Farming, Inc. has demonstrated the feasibility of ocean fertilization to enhance fish production and has entered into an agreement with the Republic of the Marshall Islands (Hurst 2001; Yandle 1999). Under the agreement, the company has an option for exclusive fishing rights in up to 800,000 square miles of deep ocean in return for fertilizing the area for enhanced stock production. Ocean Farming can charge other companies to fish the waters, and the company has agreed to al-

low previous small-scale fishing operations to continue.

By endorsing MPAs without guidance for their use and by not considering market alternatives, the Bush administration may have left us with a Pandora's box of future abuses. This decision caters to groups interested only in draconian bans on human activities in massive expanses of the ocean.

Marine Protected Areas F

SUMMARY

The Bush administration has missed opportunities to solve the problem of overfishing. Although it recommended lifting the moratorium on individual transferable quotas, it favors treating ITQs as “privileges,” not property rights—a decision that is likely to keep ITQs from being fully successful. The Bush team has failed to prod Congress to remove subsidies for fishing equipment, and it has accepted wholesale the Clinton administration's expansion of marine protected areas, without requiring federal officials to adhere to a reasonable balance between use and nonuse.

Ocean Fisheries D

NOTES

1. Prior to the moratorium, four U.S. federally managed fisheries had adopted ITQs. The success these fisheries have enjoyed as a result of ITQs is covered in a number of studies. For a summary, see Leal (2002a).

2. For example, see House Committee on

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Resources (2002a, 2002b, 2002c) and President's Commission on Ocean Policy (2002).

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PERSISTENT ORGANIC POLLUTANTS

OVERALL GRADE: D

INTRODUCTION

In 2001 the United Nations Environment Program's Global Convention on Persistent Organic Pollutants (POPs) completed an international treaty that bans twelve chemicals—DDT, aldrin, dieldrin, endrin, chlordane, heptachlor, hexachlorobenzene, mirex, toxaphene, polychlorinated biphenyls, dioxins, and furans (United Nations Environment Program 2003). Most of the chemicals have already been banned in the United States.

The treaty includes limited exemptions for some of the chemicals. In particular, it allows for limited public health uses of DDT to control malaria. This exemption, however, is temporary, extending only until alternative malaria control measures are found, and it carries with it regulations that can make obtaining DDT difficult.

The Bush administration signed the treaty in 2001. This re-

port card section assesses the wisdom of that decision.

DDT-ON THE LIST

In order to grade the administration for its support of the treaty, it is important to understand the impact of the treaty provision on DDT. This famous pesticide was banned in the United States in 1972. The ban encouraged other nations to follow suit.

DDT was once hailed as a major public health achievement. Its discoverer, scientist Paul Herman Muller, was awarded the 1948 Nobel Prize because DDT provided an affordable way to manage major public health risks carried by mosquitoes, lice, and other insects. DDT protected Allied troops against disease-carrying pests and typhus, helped cleanse Nazi war victims of disease-ridden lice, and became a key tool in fighting malaria around the

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world—saving millions of lives.

DDT is still the best available tool for controlling the spread of malaria-carrying mosquitoes. Public health authorities spray DDT on the interior walls of buildings, deterring mosquitoes from entering the homes. In addition, DDT is much more affordable than other pesticides, a fact that is critically important for poor people in developing nations (Meiners and Morriss 2001, 15–19).

Such limited use of DDT does not affect wildlife, and DDT has not been shown to have any adverse impacts on human health. According to A. G. Smith (2000, 267–68), writing in the scientific journal *Lancet*: “If the huge amounts of DDT used are taken into account, the safety record for human beings is extremely good. In the 1940s many people were deliberately exposed to high concentrations of DDT through dusting programmes or impregnation of clothes, without any apparent ill effect.”

Yet ever since environmental activist Rachel Carson first attacked DDT in her 1962 book, *Silent Spring*, environmentalists have campaigned ceaselessly to ban the pesticide. The results of this effort have been devastating. In the absence of DDT use, malaria cases skyrocketed. According to the World Health Organization (1991, 135), malaria infects 300 to 400 million people a year. In Africa alone 1.5 to 2.7 million people—mostly children—die from mosquito-borne malaria.

For example, South Africa nearly eradicated malaria-carrying mosquitoes when it used DDT, but cases soared after the nation caved in to environmental activists who pressed the country to switch to another

pesticide. When DDT use ended, cases rose from 4,117 in 1995 to 27,238 by 1999 (or possibly as many as 120,000 if one considers pharmacy records), according to a study conducted by researchers Amir Attaran and Rajendra Maharaj. In response to this crisis, South Africa has decided to resume DDT use (Attaran and Maharaj 2000, 1403–05).

Tropical medicine specialist Donald Roberts and his colleagues reported in 1997 that “countries that have recently discontinued their spray programs are reporting large increases in malaria incidence.” In contrast, Ecuador, which increased use of DDT after 1993, “is the only country reporting a large reduction (61%) in malaria rates since 1993” (Roberts et al. 1997, 295–302).

Despite the rising death toll from malaria, environmentalists have been pushing for a worldwide ban on DDT. This led to its inclusion in the POPs treaty. During treaty negotiations, more than 350 public health officials—including three Nobel laureates—signed a 1999 letter supporting continued use of DDT to fight malaria.¹

The final treaty allows for limited use of DDT, but creates serious hurdles for those countries that want to use DDT. It will require developing nations to navigate an expensive, bureaucratic process before they can employ DDT to save lives. Simply listing DDT, even with an exemption, can imperil public health by making access more difficult due to accompanying regulations and because listing stigmatizes the substance further. We have already seen cases in the past where western nations have applied pressure to discourage DDT use. For example, researchers Roger Bate and Rich-

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ard Tren note the anti-DDT stance of the U.S. Agency for International Development. The agency favors and financially supports alternatives to DDT, even though these alternatives are not as effective. Tren and Bate note that in the past the agency's officials have threatened to deny development assistance to nations that use DDT. Fearing loss of such development assistance, public health agencies in Belize, Mozambique, and Bolivia reportedly stopped using DDT for malaria control (Tren and Bate 2000, 23–25).

OTHER POPS

For wealthy nations such as the United States, which have already banned most of the twelve listed POPs, the treaty will have little effect. Wealthy countries do not face the same severe problems as developing nations do, and they can afford alternatives, which developing nations cannot. In addition, there are still important uses for PCBs (polychlorinated bi-phenyls) in developing nations, and the alleged health risks of PCBs are unsubstantiated (see Flynn 1997).

Citizens in developed nations should be concerned about how this treaty will affect them in the future. The treaty allows for the addition of worldwide bans of other chemicals. Chemicals that have proven vital to public health and well-being may become targets for the POPs treaty in the future. Should some of these chemicals eventually be banned, American consumers could find themselves paying more for

certain consumer products or even facing adverse public health implications.

CURRENT RATIFICATION ISSUES

The Senate is considering whether the Environmental Protection Agency should be allowed to regulate—without congressional authorization—additional chemicals that international negotiators may add to the list of banned substances. Under a bill (S. 2118) offered by Senator James Jeffords (I-VT) in April 2002, the Toxics Substances and Control Act would have been amended to give the EPA automatic authority to regulate any chemical added to the POPs treaty by international negotiators. This is very dangerous policy because it allows international negotiators to set regulatory standards for the United States, bypassing our legislative and regulatory procedures.

The Bush administration proposed legislation, which Senator Bob Smith (R-NH) introduced in May 2002 (S. 2507), that would grant the EPA authority to regulate *only* the 12 chemicals listed in the treaty. Congress would have to pass a law before the EPA could regulate any additional chemicals added to the treaty.

ADMINISTRATION ACTIONS

By signing the treaty banning POPs, the Bush administration made a serious mistake. Bans not only deprive citizens of their freedom to buy and sell goods, but can also jeopardize basic needs. The assumption be-

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hind the POPs bans is that there are no valuable uses for the chemicals banned. Were that true, there would be no markets and no need for such prohibitions.

The administration could have withstood the criticism for not signing this treaty, particularly if its officials had highlighted how the ban on DDT has led to millions of deaths.

The administration did note the importance of a DDT exemption for public health purposes in the control of malaria-carrying mosquitoes. However, this exemption is limited, and the treaty includes regulations that can impede access to DDT. It does not appear that the administration has taken any steps to eliminate or minimize the public health risks that come with the DDT listing.

SUMMARY

The administration has taken an important stand by recognizing the value of DDT for control of malaria, a stand for which it deserves some credit. However, this credit is heavily offset by signing the treaty. Millions of people worldwide will continue to die if public health officials are denied access to DDT.

The administration could improve its score by doing several things. First, it needs to prevent the EPA from regulating additions to the POPs treaty without congressional authorization. Second, it should call on Congress to commission a study to investigate the potential pitfalls of the treaty's DDT regulations and to recommend ways to reform the treaty to increase access

to DDT. The administration could also begin an executive branch investigation of international aid agencies to discover if any agencies discourage DDT use, and if so, seek to change those policies.

Persistent Organic Pollutants D

NOTE

1. A similar petition is available at: www.fightingmalaria.org.

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PUBLIC LANDS MANAGEMENT

OVERALL GRADE: C-

“Midnight Regulations”	C	
Roadless Area Conservation		C+
Winter Use of Yellowstone		C
Sierra Nevada Forest		C
National Monuments		C
Interior Department Initiatives	C-	
Land Acquisition		D
National Monument Planning		C
Land & Water Conservation Fund		F
Incentive Programs		B
National Parks Legacy		C+
Federal Forest Management	D	
Healthy Forest Initiative		D
Charter Forests & Nonharvest Options		Incomplete

INTRODUCTION

The Bush administration has had little success converting federal land policy to an incentive-based system that reflects free markets. Faced with a number of “midnight regulations” from the Clinton administration, the Bush team made some effort to amend the new rules and soften the blow of command-and-con-

trol regulation. Yet, apparently afraid of looking anti-environmental, the Bush team shied away from bold actions that would alter existing environmental regulations and, in some cases, it has even strengthened centralized programs. In a few instances, however, there is still reason for optimism. The rhetoric has improved and a few programs emphasize market incentives.

MID-TERM REPORT CARD

MIDNIGHT REGULATIONS

Upon entering office, the Bush team faced numerous midnight regulations—rules adopted by the Clinton administration at the last minute. Ultimately, the Bush administration upheld the majority of midnight rules affecting federal lands policy.

Roadless Area Conservation

Published in the *Federal Register* on January 12, 2001, the Roadless Area Conservation Rule was a blanket prohibition on logging and road construction in all the inventoried roadless lands of the national forests. The rule was stayed by a court decision but this decision was overruled on December 12, 2002, by an appeals court. The Bush team supported neither the rule nor the injunction. Interim directives by the Bush administration do allow some leeway in implementation, however. Until a final plan is adopted by the administration, the chief of the Forest Service has authority to approve proposed construction and harvest in roadless areas.

Under the Wilderness Preservation Act, only Congress can designate a wilderness area, but the roadless rule administratively designated 58.5 million acres of national forest land virtually as wilderness. The rule was a top-down determination declaring that timberlands designated as roadless under the Forest Service's RARE II guidelines should remain roadless. The rule would supersede existing forest plans, which are designed to respond to individual forest conditions. It is a one-size-fits-all designation that among

other things ignores the fact that some forests should be harvested or thinned (Fretwell 2001, 9).

Reluctant to support the rule, the Bush administration postponed its effective date. Later, however, it supported implementation with some amendments. At the time of this writing (December 2002), an appeals court has struck down a court order that had blocked the rule for violating NEPA requirements, leaving the rule in an uncertain state. Because the administration allowed for some decentralized management of roadless areas, the administration receives a C+ grade. A better approach would be to scrap the roadless rule's command-and-control process and emphasize decentralization.

Roadless Area Conservation* C+*Winter Use of Yellowstone**

In January 2001, the Clinton administration signed a record of decision phasing out the use of snowmobiles in Yellowstone National Park, nearby Grand Teton National Park, and the John D. Rockefeller Jr. Memorial Parkway. Snowmobile use would end by the winter of 2003–2004. Because of debate over the issue, the incoming Bush administration hesitated to support or deny the rule. Instead, final use was determined under pressure from a lawsuit.

The National Park Service has been examining whether to ban snowmobiles in Yellowstone for over a decade, but it was forced into action by a 1997 lawsuit brought by the Fund for Animals, Biodiversity Legal Foundation, Predator Project, Ecology Center, and others. The service completed an

PUBLIC LANDS MANAGEMENT

Environmental Impact Statement and in early 2001 concluded that the preferred alternative was to eliminate snowmobile use. The Park Service argued that snowmobiles detract from the experience of other park visitors by impairing air quality, wildlife, and natural soundscapes. Snowmobiles were to be replaced by a mass-transit snow-coach system managed by the Park Service.

Initially, the Bush administration placed a hold on the snowmobile rule. By April 2001, however, the Department of Interior announced its support of the regulation that would ban snowmobiles from Yellowstone and surrounding parks.

That did not end the issue, however. The International Snowmobile Manufacturers Association, the state of Wyoming, and others brought a countersuit requesting removal of the new rule. The Department of Interior settled the suit by agreeing to a reexamination in the form of a supplemental environmental impact statement, with the potential to amend the existing rule. On November 12, 2002, the Park Service announced that it would limit the number of snowmobiles in the three park units to eleven hundred per day. This is 24 percent more than average daily use but below daily use in peak season. The regulations also require the use of four-cycle engines, which are quieter, cleaner machines.

There is little doubt that winter recreation in the Yellowstone region affects wildlife behavior and survival. Groomed snowmobile trails have been shown to change the migrational patterns of ungulates in Yellowstone, elk have been affected by cross-country skiers, and human presence causes

most trumpeter swans to fly away. Additional people can cause stress for wildlife, increasing their movement and hence their energy requirements.¹ Scientific research suggests, however, that changes in spatial and temporal use (such as protecting critical areas or avoiding migrational feeding times) would be more beneficial than outright elimination of any single form of recreation (Caslick 1997, A-10).

It is the park's responsibility to protect critical winter wildlife habitat, but there are many potential solutions to this challenge. Machines that emit less noise and air pollutants exist; reservations for day and time of entry would quickly resolve the problem of excessive carbon monoxide at given points in time; skiers or recreationists could ensure solitude in some areas by bidding use away, perhaps on an alternating day basis. In a market setting, such negotiations would be likely to occur.

Determining uses in the national parks, however, is political, a fact that remains unchanged under the Bush administration. The interest groups involved have no incentive to consider alternatives that might satisfy all parties. Wilderness advocates opposing all snowmobiles in the parks experience none of the burden of eliminating snowmobiles. Snowmobile interests, on the other hand, pay none of the costs for environmental harm that may result from excessive use. Political clout decides the issue, and command-and-control continues to reign. The Bush administration gets a C because it accomplished little on the snowmobile rule.

Winter Use of Yellowstone C

MID-TERM REPORT CARD

Sierra Nevada Forest Plan

This Forest Service plan amends management plans for 11 national forests covering more than 11 million acres spanning the Sierra Nevada mountain range. In essence, the plan sets tough restrictions on the number and size of trees that may be cut in the forests and restricts the ability of forest managers to manage landscapes. This plan is the result of 14 years of study and expenditures exceeding \$25 million and reflects the interests of environmental groups that have been trying to prevent logging in the Sierra Nevadas. One explicit result of this plan is that it makes infeasible the actions required under the Herger-Feinstein QLG Forest Recovery Act, an act passed in response to the concerns of the Quincy Library Group, a northern California coalition concerned about the danger of fire in national forests in the region.

The record of decision for this plan was signed in January 2001. Forest Service chief Dale Bosworth, a Bush appointee, has affirmed the plan, although he did say that he would review key aspects of the decision by January 2003. For maintaining the status quo, the Bush administration receives a C for this midnight regulation.

Sierra Nevada Forest C

National Monument Proclamations

The most sweeping Clinton administration actions affecting land use were the designations of 19 new national monuments covering more than five million acres. Nine were designated during Clinton's last month in

office. National monuments are areas protected under the Antiquities Act of 1906. Although they are often managed like national parks, they differ from national parks in that the president can set them aside without congressional approval.

Although it was reluctant about reconsidering the proclamations, the Bush administration is encouraging local input and partnerships for managing the new monuments. For example, Montana's Missouri Breaks National Monument and Washington's Hanford Reach are taking form with advisory and citizen group input. Only one final management plan is complete, and no innovative approaches have surfaced. Again, the Bush administration is continuing the status quo, for which it receives a C.

National Monuments C

SUMMARY

Although the administration at first indicated that it would reconsider the last-minute regulations of the Clinton administration, the rules were generally accepted with only slight modifications and hardly any new ideas. Thus, the overall grade for handling midnight regulations: C

Midnight Regulations C

NEW BUSH INITIATIVES

Although the Bush team adopted the rhetoric of local control and incentives, the administration has introduced few new programs to decentralize land policies. In fact,

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the Bush administration has added funds for land acquisition and other centralized approaches. On the positive side, at least a portion of these additional funds have been allocated to support innovative private stewardship incentives. The following discussion divides Bush's land-policy initiatives into Interior Department and Forest Service initiatives.

INTERIOR DEPARTMENT INITIATIVES

President Bush's appointment of Gale Norton as Secretary of the Interior brought a new effort to expand private decision-making and in the management of the nation's public estate. Norton's four Cs, "cooperation, consultation, and communication, all in the service of conservation," are efforts to introduce the carrot of free-market principles into the regulatory system of sticks. While the incentive programs have merit, the heavy hand of government is overwhelming these programs.

A large number of programs, new and old, are linked to the four Cs. Most are funded through the Land and Water Conservation Fund (LWCF). Initiated in 1965, the LWCF is funded mostly from oil and gas royalties. LWCF monies are then made available for annual appropriation for state and federal land recreation resources. Capped at \$900 million annually, the federal portion has historically been restricted to federal land acquisition through earmarked appropriations; funds are available to the states for planning, development, and acquisition.

Land Acquisition Program

This was a request for more than \$200 million for 2003 and for \$259 million in 2002—more than double the 1998 presidential request. The administration claims the monies will "promote cooperative alliances," as alternatives to federal land purchase. Although this is better than eminent domain takings that increase federal acreage, compensation through conservation easements, habitat conservation plans, and other agreements also boost federal control over private lands. The funds may also be used for outright government acquisition.

Land Acquisition D

National Monument Planning

National monument proclamations made by the Clinton administration confronted the Bush team with a host of land-use restrictions. The proclamations limited citizen input, restricted most new mineral leases and exploration activities, and subjected existing users to increased restrictions and environmental regulations.

Since taking office, the Bush administration has been encouraging local input and public/private partnerships to create management plans for these new monuments. This is beneficial, but innovative approaches that break with the status quo are yet to be seen. Trusts or self-sufficient boards could introduce better incentives for stewardship (see Anderson and Fretwell 1999).

National Monument Planning C

MID-TERM REPORT CARD

Land and Water Conservation Fund

Perhaps the most egregious initiative with respect to land policy was the Bush administration's decision to seek full funding for the Land and Water Conservation Fund. This fund, introduced in 1965, provides money for federal land acquisition and state grants for outdoor recreation purposes. Bush is the first president to request the full funding of \$900 million a year for the Land and Water Conservation Fund, of which nearly half—\$390 million—is earmarked for federal land acquisition. This \$390 million will lock up more land under federal ownership and subject the new public lands to the dim prospects offered by the current system of land management (see Fretwell 1998, 2000). Since these acquisitions add to the mismanaged federal state, George W. Bush gets a failing grade.

Land & Water Conservation Fund* F*Incentive Programs**

These Interior Department programs provide federal dollars for individuals and groups to protect and restore habitat for species at risk on private lands. They are matching-grant monies that offer some form of compensation for private owners hurt by the Endangered Species Act and the federal regulations that implement it. The programs represent a serious effort to provide relief, but the regulatory power of the act remains. The programs may encourage habitat protection and demonstrate the stewardship abilities of private landowners; at the same time, they make private landowner actions subject

to government measures and controls. Although private participation is voluntary through competitive application for the grants, one wonders how far the bureaucratic control will go. Carefully managed, these tools could be a great asset; mismanaged, they increase regulatory control on private land.

Incentive Programs* B*National Parks Legacy**

The National Park Service manages 385 units covering more than 84 million acres that include thousands of miles of roads and thousands of buildings and structures, many of which are historic. Yet a system of annual appropriations, backed by political influence, encourages the elevation of short-term management goals over long-term maintenance considerations. The consequence is a \$4.9 billion deferred maintenance list ranging from leaking sewer systems and roofs to crumbling roads and bridges.

To rectify the situation the Bush administration announced the National Parks Legacy Project and seeks \$4.9 billion for deferred maintenance expenditures over the next five years. The funds are to come from transportation funds, appropriations, and recreation fee demonstration revenues. In addition, the administration requested a moratorium on new park creation and new authorization studies. This is a positive idea, given the National Park Service's inability to manage the resources already under its care. However, its impact was diluted because the administration said it would consider new acquisitions on a case-by-case basis.

PUBLIC LANDS MANAGEMENT

A very real crisis exists in many national parks where deteriorating facilities pose grave risks to resources, health, and safety. While pouring more money into the system may solve some immediate concerns, it does nothing to alter the existing incentives and reduce future funding challenges. In fact, Congress has not been all that stingy with national park funding. Between 1980 and 2000 the total budget for the National Park Service more than doubled, giving an average annual increase that slightly exceeds the rate of inflation. While spending on the agency itself increased, spending for major park repairs and renovations fell at an inflation-adjusted annual rate of nearly two percent. As political incentives direct, the long-term investment in our national parks has played second fiddle to bureaucratic growth (Leal and Fretwell 1997).

To improve the conditions of parks, the incentives must change. Money provided from taxes encourages political meddling. In contrast, parks supported by park users will reflect user interests in the care and stewardship of resources and facilities. Here the administration has improved its overall grade by supporting efforts to make the Fee Demonstration Program a permanent feature of park management.

The Fee Demonstration Program, initiated in 1996, allows participating parks to retain the majority of user fees for on-site use. The funds have been returned historically to the U.S. Treasury's general fund. At managers' discretion, the Fee Demonstration funds are being used to inventory and protect resources, to upgrade and maintain facilities, and to improve park interpretation.

Allowing managers to retain fees on the site where they were collected demonstrates the beneficial use of market incentives in park recreation (Fretwell 1999b). Though limited to recreation, the project takes an important step toward realizing alternative values of federal land use. President Bush has encouraged permanence of the program, but Congress has not ratified it.

***National Parks Legacy* C+**

SUMMARY

Although Interior Department officials have used rhetoric that emphasizes decentralization, cooperation, and respect for private property rights, the initiatives themselves have largely failed to reflect this rhetoric. Thus, the Interior Department initiatives merit a grade significantly below average, a borderline C-.

***Interior Department Initiatives* C-**

FEDERAL FOREST MANAGEMENT

The wildfires that burned across the West last summer heated up the forest health debate and provided an opportunity to transform the centralized institutions of federal land management. The Bush administration, however, missed the opportunity to achieve major reform.

It is no secret that our federal forests are in trouble. Millions of acres of federal forest land await conflagration. Nearly one hundred years of mismanagement—fire suppression, overgrazing, excessive harvest, and

MID-TERM REPORT CARD

high-grading—added to years of drought and inactive management have changed the structure of many forest lands, leaving them susceptible to wildfire and insect infestation (Fretwell 1999a). Managed under a policy pendulum that shifts with political clout from the timber industry to environmental advocacy, there has been little action that could be described as a rational approach to forest management.

Rather than assess the many values of our public forest lands including wilderness, wildlife, recreation, water, and timber, the current administration has fallen prey to narrow interests. Fuel reduction is the topic *du jour* and forest restoration is the cure-all for reducing wildfires across the West.

Healthy Forest Initiative

The centerpiece of the president's actions involving the national forests is the Healthy Forest Initiative. This is a plan for timber removal to reduce wildfire risk. First proposed as a law to be enacted by Congress, the plan was reintroduced in slightly different form as an executive action. If fully carried out, the initiative would streamline environmental laws, protecting large-diameter trees in exchange for removing smaller ones and thus reducing fire risk.

Performance measures have not been outlined, however. Desired future forest conditions have not been defined. Forest Service accountability has not changed. Management incentives have not been reformed. Alternative forest values play no role. Put simply, there is little hope that

additional monies will be spent toward more effective risk reduction.

Healthy Forest Initiative D

Charter Forests and Nonharvest Options

The president has floated two other ideas that have tremendous potential but so far remain just notions. One is charter forests, an interesting idea that at present is barely defined. Put forward for consideration in the president's budget appropriations proposal, the idea is to create pilot forest sites where more management authority is delegated to the local level. The concept is to strengthen local responsibility through use of a trust or collaborative approach. The administration should discard the title—because it generated immediate protest from national environmental advocates—and pursue pilot projects. Doing so can help lead the way toward improved land management. If this is done, the charter forest idea will deserve an A, but not yet.

Another idea, nonharvest lease options, is an exciting alternative method of allocating land use. Introduced in the president's 2003 budget, this idea would allow bidders to lease commercial timber but not harvest the timber.

A forest stand requiring active management to restore healthy conditions could be opened for bid provided certain actions are met. A logger might bid for commercial harvest purposes, but harvesting trees no larger than some predefined limit. Wilderness advocates might compete for the bid. Desiring habitat enhancement, they might harvest only the minimum predefined amount. The

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winning bidder could alter management so long as it fits within the predefined parameters. The new plan would also allow wilderness advocates to pay a logger to reduce the size of the trees to be cut.

A market is created through the lease and sublet options, encouraging interested parties to cooperate. This concept has been successfully pursued on Montana Department of Natural Resources school trust lands. As long as the Forest Service provides proper parameters to ensure meeting stewardship goals, these lease and sublet options can move land use to the highest-valued use, which may not be for timber. Alternatively, reclamation bonds could be issued in place of parameters to encourage responsible stewardship. Floating this idea shows the good intentions of the Bush team, but so far, these options are not available and no grade is given.

Charter Forests & Nonharvest Options
INCOMPLETE

SUMMARY

The administration's bundle of forest policy initiatives earn a D because nothing significant has been accomplished, in spite of high hopes and promising rhetoric. Equally disappointing, the rhetoric has been limited to one politically "hot" topic: fuel reduction when many other issues are also compelling. This low grade could quickly be raised through the pursuit of the innovative pilot forest sites and lease/sublet options.

***Federal Forest Management* D**

NOTE

1. See Caslick (1997) for a review of the effects of winter recreation in Yellowstone.

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REGULATION OF LEAD RELEASES

OVERALL GRADE: F

INTRODUCTION

On January 17, 2001, the Clinton administration issued a rule that increased the requirements for companies to inform the Environmental Protection Agency (EPA) about their releases or discharges of lead. Upon taking office, the Bush administration placed a 60-day delay on this “midnight regulation” to review potential problems with the standard. This section of the report card evaluates the Bush administration’s treatment of the lead rule, which is part of the EPA’s Toxics Release Inventory.

BACKGROUND ON TRI

The Toxics Release Inventory (TRI) is a reporting program created under the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986. Firms with ten or more employees that annually manufacture or process more than 25,000 pounds or otherwise use 10,000 pounds of a TRI-listed chemical must report to the EPA any release or transfer of the

chemical to an off-site location.

The paperwork burden created by this program is significant. In 2000, more than 26,000 facilities submitted more than 91,000 TRI forms to the EPA (EPA 2002, ES-2). The regulation spawned by the statute requires reporting by individual plants, and the amounts of chemical releases are stated in pounds, unweighted for toxicity. All chemicals on the TRI list are treated as though they are equally toxic, while in reality, they range from substances that could pose severe human health risks to chemicals that are relatively benign.

Although the TRI does not weight chemicals on the basis of toxicity, it sets a more stringent standard for a class of chemicals that the agency labels “persistent, bioaccumulative, and toxic” or PBT. EPA classifies chemicals as PBT when they meet all the following criteria: They are labeled “toxic” by regulatory authorities; they do not break down easily (they are persistent); and they accumulate in the environment in animal and human tissue (bioaccumulative). For example, the pesticide DDT is considered bioaccumu-

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lative because as people are exposed to DDT directly or eat animals and plants that have been exposed, the substance accumulates in human fat. The EPA and others claim that these characteristics make these products dangerous. Yet the fact that chemicals accumulate in trace amounts in human tissue does not mean they pose a health problem (Juberg 1999). There have been many studies and claims about DDT risk, but DDT has never been shown to have any adverse human health impacts.¹

Under this PBT strategy, firms must report annual releases or transfers of PBT chemicals when they process or otherwise use 100 pounds or more. For “highly” persistent and “highly” bioaccumulative chemicals, the EPA requires that firms report releases if they use 10 pounds or more a year.

The last-minute regulation issued by the Clinton administration made lead a PBT under TRI’s regulatory structure. This brought its reporting threshold down to 100 pounds and brought thousands of new plants into the TRI regulatory regime.

EVALUATING THE LEAD RULE

Right-to-know programs like the Toxics Release Inventory are designed to promote pollution control by educating the public about releases. Allegedly, TRI provides information that the public can use to pressure firms to reduce toxic releases. An informed citizenry is a desirable goal, but there are many problems with TRI. The following discussion addresses the economic impact, the regulatory morass, and the im-

pact, if any, on public health.

Among TRI’s most serious flaws is that it creates the illusion that the mere release of a chemical is equivalent to risk, while, in fact, low-level releases and subsequent low-level exposures likely pose no significant risks.² Because of such problems with TRI data, the value of the entire program is questionable.³

The economic impact of the rule is also a consideration. Financial costs are passed along to consumers. These costs can impair individuals’ abilities to meet basic needs, which include health care, nutrition, and other quality-of-life factors. Administration officials should not ignore these tradeoffs. Thus, this assessment moves beyond simply listing a dollar amount for the costs. It considers whether the rule produces a net positive effect or whether it could cause more harm than good. If that is possible, then public health is better served when individuals in the marketplace or state and local governments are allowed to address the issue without federal government intervention.

Economic Impacts

TRI is often marketed as a low-cost program, but the burden placed on the private sector is substantial. For example, electric utilities have to report on 30 chemicals—with a separate TRI form for each chemical and each plant (Porter 1999, 2). Estimated total costs of TRI range up to nearly a billion dollars a year, and the costs of all EPA “right-to-know” regulations from TRI and various other programs may be as high

REGULATION OF LEAD RELEASES

as \$3.4 billion (Volkh, Green, and Scarlett 1998, 12). TRI generates an unrecognized social cost by giving firms the incentive to reduce all TRI releases, no matter how toxic, instead of encouraging larger reductions for those chemicals that pose the largest risk (Terry and Yandle 1997).

The cost of the new lead rule will be significant, and because the reporting threshold is so low, it places a heavy burden on many small businesses—bringing many into the TRI program for the first time. EPA Administrator Christine Todd Whitman said it would expand TRI lead reporting to 3,600 facilities. The EPA estimated the cost of the rule to be \$80 million in the first year.

An official with the General Accounting Office noted in congressional testimony that EPA had failed miserably in its earlier lead rule cost estimates—vastly underestimating the costs (Rezendes 2001, 3–6). The EPA has since changed the reporting level (originally it proposed reporting by firms that use more than 10 pounds of lead a year instead of the 100 pounds required in the final rule), and hence reassessed costs. The General Accounting Office has not evaluated the EPA’s calculations for the final rule, but past agency failures documented by GAO (Rezendes 2001) suggest that costs for the final rule could be much higher than EPA estimates.

Individual examples indicate that the regulatory burden will indeed be unreasonably high for some businesses. Nancy Klinefelter, who owns a ceramic decorating business with 15 employees, detailed the impacts on her business before a con-

gressional committee. Because her ceramics use lead paint, she has to track how much lead paint the firm uses on a daily basis. To do that, she must keep track of how much of each color of paint her business uses daily because each color contains a different level of lead. Then she must calculate how much lead was contained in those paints. The EPA’s estimate of 124 hours to track lead usage is a “gross underestimate,” according to Klinefelter. She notes:

I have personally spent 95 hours trying to understand the TRI forms and requirements and I am still nowhere near the point where I can complete the forms with confidence. In addition, I have spent 60 hours or more reconstructing retroactive color usage data [EPA required firms to calculate usage for the three and a half months prior to the time it finalized the rule]. We are now spending about 4 to 5 hours per week tracking lead usage to enable us to have confidence in our 2002 TRI filing (House Committee on Small Business 2002, 2).

Problems with the Regulatory Process

Opponents of the standard argued that it was not scientifically sound because lead does not bioaccumulate in the environment enough to be a concern and to justify classifying it as bioaccumulative. They note that the EPA’s Science Advisory Board (SAB) was slated to review those issues and the National Science Foundation had urged

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the EPA to finish the SAB review first (Preston 2001b, A-3). Instead, the agency finalized the rule and directed the SAB to assess whether lead is bioaccumulative after the fact. Small business advocates have requested that the review simply assess whether lead is bioaccumulative, and if not, they want the EPA to reverse the rule. However, the EPA may focus the SAB panel on the issue of whether lead is “highly” bioaccumulative. Hence, rather than using the review to assess whether the existing rule makes sense, EPA may use it to consider whether to make the rule even more stringent. One EPA official told the press that if the SAB finds that it is highly bioaccumulative, the agency may tighten the standard to require reporting from businesses that use as little as 10 pounds a year (Preston 2001a, AA-1).

In addition, small business groups raised concerns that the EPA did not meet the requirements of the Regulatory Flexibility Act (RFA). The agency chose not to convene a review panel to assess potential impacts on small business, which is required if the impact is deemed significant. EPA said the rule’s impact would not be significant because the agency finds that only five percent of the affected businesses would have costs exceeding one percent of their profits.

Another problem relates to the timeline for compliance. The EPA had delayed the rule until mid-April of 2001, but then demanded compliance for the entire year of 2001. Since the new rule requires reporting starting in January 2001, industry groups expressed dismay because the rule

was being retroactively applied. How could they report on releases for months before the rule became law? Accordingly, businesses have asked the EPA to delay the standard until year 2002, yet the EPA is still requiring reporting for the full 2001 year.

Public Health Issues

Thus, it is clear that the costs to many small businesses will be significant, even though they don’t fit the EPA’s regulatory definition of “significant.” It also appears that the EPA’s scientific analysis of the health impacts of lead is poor and fails to demonstrate that lead is truly bioaccumulative. But more importantly, the debate has paid little attention to whether this regulation will produce any net public health benefit. Do the lead releases and uses reported under the new standard pose any real health hazard? Will reporting improve public health?

Humans absorb lead into their bodies mostly by ingestion, but we can also absorb some via inhalation or absorption through the skin. Risks are higher for children, whose bodies tend to absorb a higher percent of ingested lead. At high lead exposure levels (80 micrograms per deciliter, expressed as 80 µg/dL), acute poisoning can result, producing comas, convulsions, and even death. However, such high exposures are not common within the general population and occur mostly among those who face unusually high occupational exposures. Exposures below levels that cause acute poisoning have also been associated

REGULATION OF LEAD RELEASES

with neurological impairment. The main concern regarding exposure for the general population has focused on the possibility that lead impairs children's neurological development and creates learning disabilities (Juberg 2000, 14–15).

Removal of lead from gasoline and the discontinuance of lead-based paint have greatly reduced lead exposure for most Americans. As a result, very few Americans are exposed to levels that cause any measurable health impacts. A report by the American Council on Science and Health notes:

Although the debate and discussion continue, meta-analyses of human epidemiological studies have generally observed a statistical association between blood lead and IQ that is small, most likely a 1–3 IQ-point deficit for a change in mean BLL [blood lead level] from 10 to 20 $\mu\text{g}/\text{dL}$. Not surprisingly, the association between an effect on IQ and blood lead is more apparent at moderate to high BLL values, typically in excess of 30 to 40 $\mu\text{g}/\text{dL}$. This is important from two perspectives. First, the vast majority of children have BLL values well below this level (mean for children ages 1–5 was 2.7 $\mu\text{g}/\text{dL}$, while only .4 percent have BLL values of 20 $\mu\text{g}/\text{dL}$) and thus, significant changes in intelligence/behavior are not expected in the U.S. population as a whole (Juberg 2000, 14).

Today, the main route for lead exposure among children is ingestion of lead-contain-

ing dusts and soil. Many of the exposures above 10 $\mu\text{g}/\text{dL}$ are among urban poor who live in homes with peeling lead-based paint. Children who consume dust or paint chips can have higher-than-average lead exposure. There is a debate regarding how to address this issue, but it is not relevant to the Toxic Release Inventory. In fact, it demonstrates that if there is a lead problem it is not caused by any of the releases reported under TRI.

TRI data indicate that many lead releases currently being reported under the program do not expose the public to much lead at all—certainly not enough to trigger any health concern. Most releases—98.32 percent—are safe, legal disposal into regulated landfills. Air and water emissions account for a tiny fraction—1.68 percent or a total of 274,619 pounds out of 16,245,736 pounds that the EPA reports are released. Yet news stories report that 16 billion pounds of lead have been released into the environment, when only 1.68 percent of that actually entered the air or water (EPA 2002, A-120).

Since the main route of human exposure is ingestion, releases to water would be most significant, since lead could potentially enter the drinking water supply. But less than one percent of releases reach water, and the Safe Drinking Water Act demands that potentially unsafe levels of lead be removed via water treatment. Hence, lead exposure from the TRI releases is so low as to have no real relevance to human health.

The levels that will be reported under the new rule will be even more insignificant than current reported releases and will con-

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vey even less valuable information than current lead release reports. The standard requires firms that *use* 100 pounds of lead a year to report releases and uses. That does not mean that they *release* anywhere near that amount. The U.S. Small Business Administration illustrates this point in a letter to Administrator Whitman:

Using EPA data, we estimate that approximately 900 printed circuit board manufacturers (almost entirely small businesses) would report an average of five pounds released into the air annually, at a reporting cost of approximately \$5 million in the first reporting year. In addition, 1,000 or more petroleum wholesalers would report virtually no releases of lead at their fuel depots at a cost of \$4 million in the first year, because lead is only incidentally released when fuel [is] combusted by homes, vehicles, and airplanes. Thus, all these reports involve no releases at the reporting depot (U.S. Small Business Administration 2001).

However, the lead debate continues. The administration could improve its score by working with affected parties in industry. Business groups and Congress continue to pressure the administration to revise the rule. The EPA published draft guidance on the rule in September 2001 and finalized that guidance in January 2002. Those attempting to comply with the rule have complained that the guidance was highly confusing, and that they were having a hard time estimating exposures

retroactively. In February 2002, a coalition of 43 industry groups asked the EPA to delay implementation of the rule until July 2003 (see American Amusement Machine Association, et al. February 21, 2002). In March 2002, Senator Bond asked the EPA to delay implementation a year. In June 2002, the House Small Business Subcommittee on Regulatory Reform and Oversight called on the EPA to delay the lead rule until the SAB review was complete. The EPA did not authorize a delay. It should consider reversing this standard. Perhaps the final report of the SAB will help the administration justify changing the rule.

SUMMARY

The lead rule was one of the Clinton administration's midnight regulations. The Bush administration did the right thing by placing a hold on the rule to allow further review. The science underlying the standard is obviously very weak; the rule does not appear to address a significant risk or produce any health benefit. The rule places onerous new mandates on small business and eliminates flexibilities found in the prior policy. The administration, nonetheless, decided to keep the Clinton standard. Thus, the administration's handling of the lead rule represents a considerable failure. The Bush administration should have reversed this standard. Because it did not, the Bush administration receives a failing grade.

Regulation of Lead Releases F

REGULATION OF LEAD RELEASES

NOTES

1. For more information, see Logomasini and Riggs (2002, 31–36).
2. For a discussion on TRI and risks, see Logomasini and Riggs (2002, 179–82).
3. For more information, see Dudley (2002).

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REGULATORY REVIEW OVERALL GRADE: B

Policy Guidance to Agencies	B
Organization of OIRA	B+
Review of Specific Rules	B

INTRODUCTION

Changing the direction of federal government policy is no simple task, even if you focus just on the executive branch, and even if you are the president, in whom all executive power is constitutionally vested. In addition to making wise appointments, the president must monitor and manage the departments and agencies.

Every president since Richard Nixon has had some central process within the Executive Office of the President to review federal regulations and to provide policy guidance and feedback to the agencies that issue them. By looking at President Bush's use of the regulatory review process, we can get an idea of how his administration is trying to change environmental policy and what principles it applies to resolve controversial questions.

Before they are published in the Federal Register, federal regulations are reviewed at the Office of Information and Regulatory Affairs (OIRA) within the Office of Management and Budget (part of the Executive Office of the President). This is where intramural debates about regulatory policy tend to be resolved, and they leave a record that we can review. This evaluation briefly discusses the disposition of the Clinton administration's "midnight regulations" and assesses the president's executive orders and other guidance to the agencies on regulatory policy, the organizational and operational changes at the Office of Information and Regulatory Affairs, and public actions by OIRA. This evaluation indicates that the president is making a more serious effort than his predecessor to monitor and manage the environmental actions of federal agencies.

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MIDNIGHT REGULATIONS

In the final weeks of the Clinton administration, federal regulatory agencies hastily issued a large number of controversial rules. On the afternoon of January 20, 2001, Bush Chief of Staff Andrew Card issued a memo freezing these midnight regulations pending review by Bush appointees.

One of the midnight regulations, OSHA's ergonomics standard, was repealed by Congress in a rare—indeed, the only—use of the Congressional Review Act. This law gives Congress a fast-track opportunity to overturn an administrative regulation before it becomes effective. Because the incumbent president typically would veto any such bill, the Congressional Review Act is likely to be effective only during a presidential transition, when both the new Congress and the new president may share a desire to repeal a specific regulation. The ergonomics standard had strong union support but was very costly and of doubtful effectiveness, and it had numerous opponents in Congress. The Environmental Protection Agency's Total Maximum Daily Load (TMDL) rule also had numerous congressional opponents, but a second attempt to use the Congressional Review Act was unsuccessful. The TMDL rule and other last-minute rules were left for the Bush administration to address.

The disposition of several of these regulations is assessed and graded elsewhere in this report card and will not be recapitulated here. But the quick action by the Bush administration to halt their implementation and to provide for future review represented a good start, giving his appointees an op-

portunity to assert control. After two years, Bush's appointees have made some notable progress in making administrative changes in the environmental regulatory initiatives of the outgoing Clinton administration, even if that progress has been slow and uneven. The terms of the political debate about environmental protections have not noticeably changed; although, with new concerns about security and budget deficits, opinions on environmental policy seem to be somewhat less absolute. It is probably true that, under Bush, some of the midnight regulations will be implemented with more deference to federalism and to private property than would have been the case under Clinton, but this is difficult to document.

POLICY GUIDANCE TO AGENCIES

All recent presidents have issued executive orders to establish the principles by which regulatory decisions will be made, as well as the procedures for reviewing regulations. Bush could have initiated his own, but he did not. The reason appears to be that President Clinton's Executive Order on Regulatory Planning and Review was a good one. Consider the following excerpt:

Federal agencies should promulgate only such regulations as are required by law, or are made necessary by compelling public need, such as material failures of private markets to protect or improve the health and safety of the public, the environment, or the well being of the American people. In deciding whether and how

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to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. (Clinton 1993, 51735)

Clinton's OMB later released more detailed guidance for agencies:

The analysis should determine whether there exists a market failure that is likely to be significant. . . . Even where a market failure exists, there may be no need for Federal regulatory intervention if other means of dealing with the market failure would resolve the problem adequately or better than the proposed federal regulation would. These alternatives may include the judicial system, antitrust enforcement, and workers' compensation systems. (Office of Management and Budget 1996)

The OMB guidance also recommended regulation at the state or local level when feasible, rather than at the federal level.

While there is some wiggle room in this language, overall it is a good description of how federal agencies should approach the task of writing regulations. It is not, however, an accurate description of how the Clinton administration actually practiced the art of regulation. The Clinton executive order and accompanying OMB guidance may simply have been window dressing, since they were never seriously enforced.

If Bush had issued a new order, it would not have sounded very different from what Clinton wrote, but nonetheless would have become a target for critics on the left ("gut-

ting regulations," "turning back the clock," etc.). By leaving the Clinton order in place, Bush made the point that the principles of good regulation are nonpartisan—they only need to be observed and enforced. To this grader, that seems the right call.

President Bush did amend the executive order slightly. The new order (Bush 2001) simply changed which officials carry out which functions. (See next section.)

The Bush administration also considered whether to write a new executive order on federalism, which would have been enforced by OIRA as it applies to federal regulatory policy. It abandoned the effort when it met with strong opposition from manufacturers and other businesses, who dislike differing state and local regulations (an attitude that has been dubbed "patchwork-phobia"). The end result is that, while the Bush administration may be more sincerely committed to the principles of federalism and sound regulatory policy, on paper the expressed policies have not significantly changed.

***Policy Guidance to Agencies* B**

ORGANIZATION OF OIRA

Previous presidents have found it convenient to delegate to their vice presidents the task of supervising regulatory policy. George W. Bush has found other tasks to occupy his vice president, however. Executive Order 13528 removes the vice president from the regulatory review process and instead vests responsibility in the director of OMB (currently Mitchell E. Daniels, Jr.) and in the administrator of OIRA (John D. Graham).

MID-TERM REPORT CARD

Administrator Graham has instituted several changes in the way OIRA operates. He places a great deal of emphasis on transparency. The office's activities may easily be reviewed on its Web site.¹ This is notable because previous presidents have frowned on the public disclosure of interagency policy disagreements. Within limits, President Bush appears to be more able to tolerate the public airing of intramural debates. For regulatory policy this is undoubtedly an improvement.

Graham has been much more active than his immediate predecessors in returning regulations to the agencies for revision, and has instituted "prompt" letters to make proactive suggestions to the agencies about what their regulatory priorities should be. (See the next section.)

Under Graham, the office has become much more assertive than it was during the Clinton years. Graham has reversed the decline in staffing and is adding scientists and engineers to the economists and statisticians who were already on board. This is intended to improve OIRA's ability to engage the agencies in a discussion of risk management strategies and the technical aspects of regulatory decisions.

Graham's own background is in public health, and his staffing strategy seems designed to help make better risk management decisions and generally to "regulate smarter." There is certainly much to be accomplished along these lines, although it does not herald a change in paradigm in the direction of free market environmentalism principles.

***Organization of OIRA* B+**

REVIEWS OF SPECIFIC RULES

It is the responsibility of the Office of Information and Regulatory Affairs to review proposed and final regulations before they are published. Traditionally, its response has fallen into two categories: return letters that ask an agency to make changes before publication and post-review letters that convey OMB's views but do not ask for immediate changes. John Graham has added a third instrument: "prompt" letters that are sent before an agency even sends a draft rule. The letters sent on environmental rules are assessed here.

Return Letters

During the eight years of the Clinton administration, a total of nine regulations were returned to federal agencies for reconsideration by the reviewers at OIRA, and none during its last three years. Through November 2002 in the Bush administration, 21 have been returned. One of those was an environmental regulation: "Federal Water Quality Standards for Indian Country and Other Provisions Regarding Federal Water Quality Standards" (Graham 2001c).

The main point of Graham's return letter is that the Environmental Protection Agency should engage in further consultation with Indian tribes and with states before finalizing its water standards. This language conveys a relatively "soft" version of federalism, in which state, local, and tribal governments are viewed as "interests to be consulted" in the course of federal

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policy making, rather than as competing levels of government whose interests may sometimes be superior to those of the federal agencies. While OIRA was right to return the rule to EPA, it did not use the opportunity to make a stronger statement about federalism.

This single return letter probably understates the effect of regulatory oversight on environmental rulemaking. It may be that OIRA's review is causing federal agencies to change their environmental rules before they are submitted or to change them by withdrawing and revising them before review is completed. "Recently we have witnessed some agencies simply withdrawing rules rather than face a public return letter," said Graham (2002b) in a speech to the Society of Automotive Engineers. But if that is how changes are being effected, they can't easily be documented here.

Post-Review Letters

Many regulations emerge from regulatory review as "approved with changes," and it is difficult to track exactly where the changes took place and at whose initiative. Occasionally, however, OIRA will approve a regulation but at the same time send a "post-review" letter to convey its views to the agency. This has happened five times to date in the Bush administration, twice with environmental rules. The first such letter relates to an EPA rule: "Control of Emissions from Nonroad Large Spark-Ignition Engines and Recreational Engines (Marine and Land-Based)" (Graham 2001a).

OIRA's letter pointed out particular

flaws in the EPA's benefit-cost analysis. In its cost estimates, the EPA had counted the increased engineering and manufacturing costs of small engines that would be subject to the rule. But it failed to consider the costs to the consumer. Many of these small recreational engines presumably have highly elastic demand. If they became more expensive, consumers would buy fewer of them. The resulting losses in what economists call consumer surplus could be quite significant.

This is a very important and general point that applies to more than just environmental rules. For example, Food and Drug Administration regulations can reduce "consumer surplus"—including consumers' lives—by holding beneficial drugs off the market. OIRA should continue to make this point—forcefully—about the unseen costs of regulation.

The second environmental rule to get a post-review letter is a Coast Guard regulation that requires leak detection systems on oil tankers. OIRA's Letter to the Department of Transportation on "Tank Level of Pressure Monitoring Devices" (Graham 2001b) states, in part:

We recognize that the Department is striving to meet a judicial deadline. . . . However, it appears that none of the options under the statute would result in net benefits to society. . . . Based on the rulemaking record, we would also appreciate Departmental views on whether the Administration should seek legislative relief in order to mitigate these adverse impacts . . .

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This, too, is an important general point often overlooked by regulatory agencies. If you are issuing a bad rule because the Congress or the courts are forcing you to, then at least you should explain that to the public and recommend that the law be changed.

Prompt Letters

The Office of Information and Regulatory Affairs has sent a total of eight “prompt” letters to federal regulatory agencies, including three on environmental issues. These are 1) “Particulate matter,” (Graham 2001d), which outlines OIRA’s view of what research the EPA should undertake on the health effects of particulate matter to support future rulemakings; 2) “TRI data” (Graham 2002a), which urges EPA to enhance its Toxics Release Inventory, an annual measure of chemical releases by facilities, particularly through better use of electronic reporting; and 3) “Nonroad Diesel Engines” (EPA 2002), a letter that is actually a joint announcement by OIRA and EPA outlining a collaborative effort to develop new regulations to protect public health from pollution from diesel engines.

Prompt letters are an innovation introduced by Graham, and they have caused some puzzlement among observers of regulatory policy. In the past, federal agencies have been the source of new regulatory initiatives, and OIRA has been the voice of restraint. This comports with OMB’s traditional role of setting limits on the budgetary aspirations of agencies. The appearance of prompt letters suggests that the old model

of checks and balances is being rethought. It is unclear at this point whether this new, proactive role for OIRA will produce better outcomes.

Taken as a whole, OIRA’s handling of the regulatory review function does not suggest a dramatic shift in environmental policy. It does, however, contrast sharply with the previous administration, in which OIRA rarely challenged an agency initiative on any grounds. It appears that the cop is back on the beat.

Review of Specific Rules* B*SUMMARY**

The Bush administration has clearly made an effort to take charge of federal rulemaking, investing both resources and political capital in the process of regulatory oversight. With the addition of science to its portfolio and the appearance of prompt letters that break new regulatory ground, OIRA seems to have shifted its mission: the primary emphasis is on cost-effectiveness and on advancing public health. While this strategy holds the potential for making large improvements in regulatory effectiveness, one result is that OIRA’s conversations with the agencies about regulatory policy tend to be either technical or procedural. What we don’t see is much evidence that OIRA advocates in favor of market solutions, property rights, individual choice and responsibility, or federalism. If OIRA is a champion of free market environmentalism principles, it is a rather quiet one.

Within the next few months the Bush

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administration has a chance to raise its grade and revive its commitment to principles of free markets and private property rights. It is expected to publish new draft guidelines on the application of benefit-cost analysis to regulations, including such controversial topics as “contingent valuation” methods for assigning value to environmental amenities. Free market environmentalists should watch for, and comment on, these guidelines.

Regulatory Review B**NOTE**

1. See: www.whitehouse.gov/omb/infoereg/regpol.html.

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W A T E R

ALLOCATION

OVERALL GRADE: C

Klamath Basin
CALFED

C+
C

INTRODUCTION

Federal policies affecting the allocation of surface water have always been a massive source of political pork, especially in the West. Irrigation projects in particular have provided subsidies to farmers. Many receive water at substantially below the cost of storing and delivering the water and below the value of the water in other uses, such as municipal drinking water or maintaining in-stream flows for environmental purposes.

The Bush administration has the opportunity to promote water use efficiency, fiscal prudence, and environmental quality by clarifying rights to water delivered from federal projects, by making those rights transferable, and by requiring that water users pay the full cost of any new

projects.¹ So far, the record has been mixed.

UNCLEAR WATER RIGHTS

In a November 21, 2002, speech to the Association of California Water Agencies, Secretary of Interior Gale Norton acknowledged that a constant in western water conflicts is “that lack of clarity about ownership and control of water leads to conflict.”² She noted that competing claims for agricultural, municipal, environmental uses represent a “legitimate value,” but “when the underlying rights to water are unclear, then future solutions are more challenging to negotiate.”

This statement was spoken like a true free market environmentalist. By helping to clarify water claims and promoting wa-

TERRY L. ANDERSON

MID-TERM REPORT CARD

ter marketing, the Bush administration could encourage a “conservationist-conservative alliance,” as Thomas Graff, legal counsel for Environmental Defense in California, suggested in 1982. Graff recognized that water subsidies and command-and-control water allocation harmed the environment and were fiscally imprudent. Secretary Norton’s remarks recognize the importance of clear and tradable water rights as a basis for forming such an alliance, and they deserves high marks for their rhetoric. Unfortunately the administration has not done what it could to clarify rights and promote water markets, as the two following examples illustrate.

KLAMATH BASIN

In the spring of 2001, the Bureau of Reclamation cut off water delivery from Upper Klamath Lake to irrigators in the Klamath Basin Project.³ The Bureau’s decision was based on the requirements of the Endangered Species Act, along with newly released biological opinions from the U.S. Fish and Wildlife Service concerning lake elevation requirements for the endangered sucker fish and Lower Klamath River instream flow requirements for the endangered Coho salmon.⁴

Secretary of Interior Gale Norton found herself in the line of fire between the defiant farmers who opened headgates and environmentalists who wanted the water for fish. Her immediate approach was to balance the competing demands rather than to clarify rights and encourage trades. Thus,

the summer of 2001 witnessed a number of water releases from the Upper Klamath Lake (U.S. Department of the Interior 2001a, 2001c).

To Norton’s credit, she brought sound science into the process by contracting with the National Academy of Sciences (NAS). A committee of the NAS reviewed scientific information related to endangered species in the Klamath Basin and evaluated how the Bureau of Reclamation, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service applied this information to reach their 2001 biological opinions regarding lake and instream flow requirements (U.S. Department of the Interior 2001b). The committee’s report concluded that there was “no sound scientific basis for cutting off water to farmers in 2001 in order to help the habitat of endangered fish” (National Research Council 2002, 4).

After a summer of heated battles over water use, the Department of Interior released its final biological assessment in February 2002 and moved in the direction of a water market by proposing to establish a Klamath Project water bank. The assessment said that the Bureau “also proposes to establish a ‘water bank’ through which willing buyers and sellers will provide additional water supplies for fish and wildlife purposes and to enhance tribal trust resources” (U.S. Department of the Interior 2002a, 13).

The water bank would allow farmers with contractual entitlements for irrigation water from the project to provide water to the bank, which the Bureau of Reclamation could use for endangered species and for the

WATER ALLOCATION

national wildlife refuge. Farmers would be compensated for their water. Bureau officials hope that the bank will provide as much as 100,000 acre-feet of water, with deposits coming from off-stream storage, reduced irrigation, and groundwater.

In April 2002, the Klamath Basin Federal Working Group announced water conservation plans from both the Nature Conservancy and the Klamath Basin Rangeland Trust as part of the water bank effort. The Nature Conservancy program would reduce diversions by as much as 13,000 acre-feet a year, and the Klamath Basin Rangeland Trust, a local nonprofit group, believes it can make as much as 20,000 acre-feet of water available for agriculture by sending water to farms downstream rather than upstream livestock pastures (Friant Water Users Authority 2002; Burke 2002).

The American Land Conservancy has also jumped on the water bank bandwagon. In October 2002 it dropped its controversial plan for governmental buyouts of farmland and offered in its place a plan for the government to pay \$2,500 per acre to farmers to stop irrigating, thus reducing water demand. The American Land Conservancy's plan would allow willing farmers to sell a permanent water easement on their land. According to news reports, farmers have proposed selling as much as 50,000 acre-feet (Milstein 2002).

The administration receives a C+ for its belated recognition of the importance of property rights and for making a move in the direction of a limited water market solution for Klamath.

***Klamath Basin* C+**

CALFED

CALFED, created in 1995, is a multi-agency state and federal partnership formed to make long-term improvements in California's water system and end decades of conflict over water in San Francisco's Bay-Delta area. Unfortunately, as currently proposed, CALFED would continue the federal pork barrel so prominent in the past. In 2000, CALFED released its record of decision, which included a 30-year plan to meet its goals. The plan outlines various projects aimed at restoring the Bay-Delta ecosystem and improving water quality, water supply reliability, and flood control. Multiple bills have been introduced in the House and Senate since President Bush took office, most of which not only reauthorize CALFED, but also promise massive federal subsidies (see Association of California Water Agencies 2001).

Historically, the federal government has provided most of its funding for CALFED through direct spending rather than reimbursements (see Legislative Analyst's Office 2002). Federal legislation authorizing continued funding, however, has yet to pass. This provides an opportunity for the Bush administration to influence the course of CALFED.

The bills facing Congress during the past two years differed in the amount of federal funding they would commit to the program. S. 1768, for instance, stated that the federal share of costs would not exceed 33 percent during Stage 1 of the project. This percentage is equal to approximately \$480 million annually (see Association of Califor-

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nia Water Agencies 2002). The Western Water Enhancement Security Act (H.R. 3208) promised “such sums as may be necessary” for implementation of Stage 1 of the CALFED program. Neither of these bills made provisions for water users to pay the cost of supplying the water they use, and neither bill encouraged water markets as a way to promote water conservation.

Recognizing that these bills open up the pork barrel, Secretary Norton took a skeptical position before the Senate Subcommittee on Water and Power on July 19, 2001 (Senate Committee on Energy and Resources 2001, 26). She emphasized the “beneficiary pays” component of CALFED, saying that “users who benefit from investments in the infrastructure should pay for those benefits.” If the administration can hold that line and make Congress hold it as well, it can provide the necessary leadership for the “conservationist-conservative alliance” described by Tom Graff. In her speech to the Association of California Water Agencies on November 21, 2002, Interior Secretary Norton expressed the administration’s “strong desire to see the Congress authorize the CALFED program,” but also noted the importance of clarifying water rights and “harnessing market forces.”

The Bush team gets a C on this part of western water policy. Although Secretary Norton recognizes the importance of “beneficiary pays,” the Bush team has not backed that principle firmly. The administration could improve its grade by promoting legislation that allows recipients of federal water (even if it is subsidized water) to

sell it to higher valued uses and that requires all beneficiaries to pay the full cost of water they receive.

Water Allocation C**NOTES**

1. For a complete discussion of how rights can be clarified and how water markets can encourage conservation and environmental quality, see Anderson and Snyder (1997).

2. A copy of Secretary Norton’s speech to the Association of California Water Agencies is available at: www.doi.gov/news/021121b.htm.

3. See Meiners and Kosnik (2003) for a comprehensive discussion of the conflicts over rights in the Klamath River basin.

4. See U.S. Department of the Interior and U.S. Bureau of Reclamation Mid-Pacific Region Klamath Project Web page at: www.mp.usbr.gov/Mp140/klamath/klamath_water_crisis.html.

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W A T E R
Q U A L I T Y
O V E R A L L G R A D E : B

Trading for Water Quality	A+
Watershed Initiative	A+
Cooling Water Intake Rule	B
Confined Animal Feed Operations	C+
Corps of Engineers Permits	D

INTRODUCTION

The Bush administration inherited a massive water quality regulatory process that had evolved over some thirty years. Lodged primarily in the Environmental Protection Agency, but also affected by the Army Corps of Engineers and the Department of Agriculture, the regulatory edifice is built on command-and-control, end-of-pipe, technology-based controls. The emphasis is on controlling inputs more than outcomes. While previous administrations have given lip service to and in some cases experimented with more decentralized, market-based approaches for addressing water pollution control, the fact remains that in January 2001 the system was a

top-down, highly centralized command-and-control regulatory process.

The Bush administration had several options for bringing free market environmentalism into water quality regulation. It could tinker at the margin, introducing greater use of incentives, decentralization, and property rights protection as new regulations were spawned; or it could fashion entirely different approaches through experiments, changes in legislation, and regulatory proposals—even though these would invite litigation from opponents. In addition, it could work to change the content and tone of the environmental policy dialogue by emphasizing common-sense, outcome-based, management approaches.

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As it turns out, the administration did some of all three—it tinkered, experimented a bit, and introduced some new concepts and dialogue. Initially, the administration did not take on the political risks associated with adventuresome regulatory proposals. Indeed, proposals and rhetoric that seemed quite promising when offered in the administration’s first year became rather bland in the second year. But the administration became bolder after the November 2002 elections. Indeed, the final word on the administration’s Water Quality Trading Policy (2003), announced in January 2003, laid a foundation for significant improvements in the nation’s efforts to enhance water quality and reflected free market environmentalism principles. This weighs heavily in this report. In contrast, the earlier water quality actions seemed more like old times. Review of major actions follows.

TRADING FOR WATER QUALITY

The new administration was handed one pending water quality regulation that offered—and finally delivered—the prospect of significant change to the status quo. This was the regulation prescribing the Total Maximum Daily Loads (TMDL) that would be allowed for pollutants in threatened segments of the nation’s rivers and streams. These standards are a component of command-and-control regulation, not a replacement for it, and they have played a minor role in federal water pollution control for years. At the same time, they offered potential for market approaches. Instead of

counting pipes and permits, as the Environmental Protection Agency typically does, a policy based on TMDLs would address the contribution made by individual sources of pollution to stream quality and then focus on outcomes—the impact on a stream or other body of water. Under a TMDL approach, each body of water is allowed a maximum daily influx of pollutants. With the EPA giving the final approval, the states set the amounts based on an inventory and assessment of water quality conditions.

By addressing actual stream monitoring data and establishing linkages between water quality and the amounts of pollutants emitted from specific sources, TMDLs can provide opportunities for communities and watershed groups to take charge of water quality management. (The term watershed covers the region around a river and its tributaries.) They also offer the prospect of market-based trading of discharge rights. Yet the TMDL rule finalized by the Clinton administration in July 2000—and delayed by congressional action—was burdened down with centralized control and other requirements (Franz 2002). With that rule, the prospects for significant change were small.

The Bush administration placed the Clinton TMDL proposal on hold while signaling that major modifications were in store. On August 9, 2001, the Bush administration EPA indicated that TMDL would be delayed—not withdrawn—and that the final effective date for TMDL rules would be extended to April 30, 2003. The agency argued that the extension allowed time to develop ways to promote local action, to add

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flexibility to the rules, and to include greater use of nutrient trading. Indeed, the administration, in an attempt to show that an integrated water quality approach might be evolving, indicated that the TMDL rule would be renamed the Watershed Rule (*Environment Reporter* 2002a). However, as recently as October, 2002, there were indications that EPA would sharply limit the prospects for trading in the forthcoming TMDL rule (*Environmental Policy Alert* 2002d). There were also indications that the agency faced pressure from some environmental organizations to keep command and control regulation as the TMDL centerpiece (*Environmental Policy Alert* 2002a).

On December 20, 2002, the Bush EPA announced that the July 2000 TMDL proposed rule was simply unworkable and was being withdrawn (*Environmental News* 2002b). No longer a matter of just tinkering and revising the Clinton rule, it was back to the drawing boards. Then, on January 13, 2003, the Bush EPA announced its new Water Quality Trading Policy (EPA 2003). This was new policy in its own right and provided a substantial institutional wrapper for TMDLs. The idea that TMDLs might become the foundation of decentralized market-based regulation had been floated since the EPA first announced a new water trading policy in May, 2002 (*Environmental News* 2002a). The January 2003 announcement confirmed that the emphasis will be on water quality markets, watersheds, contracting, and outcomes, not just on TMDLs (EPA 2003).

The EPA had taken a step forward with its water quality trading policy announced

in May 2002. Under this and the January 2003 policies, once two dischargers have met an approved level of treatment, one discharger may purchase additional treatment from the other, instead of itself increasing treatment. Such trading facilitates expansion of industrial and municipal operations, for example, without compromising water quality. In addition to enabling water quality trading among industrial dischargers and municipal treatment works, the policy can include farmers who operate in a managed watershed. For example, a discharger might pay farmers to change their practices in ways that reduce nitrogen runoff into a stream.

The likelihood of such trades has now increased because of the new importance that the EPA is giving to TMDLs. Because the EPA is emphasizing the total amount of pollutants going into a stream or body of water, then all dischargers in a watershed have an interest in working together to reduce emissions, and trading becomes a valuable tool.

But the new TMDL-based Water Quality Trading Policy goes further. It allows outsiders to purchase treatment credits, too. The Friends of the Ocmulgee River, say, can approach a sewage treatment plant and purchase additional cleanup. This exchange is not a trade of one discharger's treatment for another's; rather, the group has purchased a contract to cleanup and put it in a lock box.

In addition to this innovation, the EPA made a major improvement. Instead of requiring EPA approval of TMDL designation and monitoring plans, the 2003 policy leaves

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the responsibility with the states. This should spur creativity, and now the EPA has given the states the tools they needed to be creative.

With this policy, the importance of improved monitoring and measurement of stream quality is crucial. At present, the state-determined inventories are based on multiple systems and definitions of water quality, making it highly likely, according to EPA, that there is over-counting of streams that are impaired (*Environmental Policy Alert* 2002b). The new policy seems to offer as much flexibility to states and watershed communities as constraining federal statutes allow. To go beyond this will require that changes be made in fundamental federal water quality statutes.

The Bush administration deserves high credit for replacing the Clinton TMDL rule with a water quality trading policy that encompasses principles of free market environmentalism.

***Trading for Water Quality* A+**

WATERSHED INITIATIVE

The EPA's Watershed Initiative forms yet another part of a potentially interesting approach to managing water quality around watersheds. Announced in President Bush's 2002 State of the Union address, the initiative establishes an EPA-directed contest that will allow up to twenty watershed groups to experiment with new approaches to watershed protection (EPA 2002c). This complements the water quality trading policy and is perhaps the most

innovative and unconstrained water quality proposal yet to come from the administration. It calls for innovation outside the boundaries of the federal rules. It will provide organizations that demonstrate the ability to outperform command-and-control some resources to support the cost of running their innovative programs. The administration earns an A+ for this initiative.

***Watershed Initiative* A+**

COOLING WATER INTAKE RULE

EPA's proposed regulation on the intake of cooling water for industrial facilities and power plants was announced in February 2002 (EPA 2002a), well before the new water quality trading policy was unveiled. The rule provides some evidence of a new focus on performance and results rather than process as well as a softening of the technology-based, command-and-control approach of the past. Approved by EPA administrator Christine Whitman on February 28, 2002 (EPA 2002a), the regulation addresses damages done to flora and fauna when large volumes of water are taken into and discharged from industrial plants. While still focusing on specific technologies, the regulation provides for exceptions based on the high costs of meeting the regulations or the lack of benefits from the regulation. It also offers companies the option of achieving improvements through wetlands enhancement and other nontechnology approaches. Finally, the agency allows states to set aside the intake regulation entirely in cases where a facility participates in a watershed

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management group that collectively reduces offsetting environmental harms.

These cracks in the traditional regulatory concrete have both symbolic and substantive importance. If the agency opens the door for alternative approaches in all of its newly issued command-and-control regulations, then alternatives will become a norm, and norms affect subsequent regulations. When keyed to TMDLs and watershed management, the exceptions illustrated here could be substantive. Dischargers affected by the rules can now become active participants in a trading community, if one is allowed to emerge. Thus the administration has taken some real steps toward decentralizing and offering flexibility with the cooling water intake rule.

Cooling Water Intake Rule B

CONFINED ANIMAL FEED OPERATIONS

EPA's proposed Confined Animal Feed Operations (CAFO) rule, which could apply to some 39,000 large feedlots across the country, was published in the *Federal Register* on January 12, 2001 (EPA 2001b), just before President Bush took office. A final regulation was announced by EPA on December 16, 2002 (EPA 2002b). The regulation was the result of a court order from a suit brought against the EPA by the Natural Resources Defense Council. The court mandated the EPA to develop new rules that would target large feed lots, poultry operations, and other agricultural activities that concentrate a large number of animals in a relatively small area.

The January 2001 proposed regulation, developed by the Clinton administration, was loaded with technology-based regulation patterned after the old-fashioned, one-suit-fits-all, command-and-control approach. Indeed, some states with successful CAFO programs faced the possibility of having to dismantle their programs (*E & E Daily* 2001). The rule violated the Clinton administration's announced support of watershed and river basin water quality management. It contained no market mechanisms and was not compatible with TMDL regulations that were in the pipeline.

On March 26, 2001, EPA Administrator Christine Whitman announced an extension of the comment period on the rule (Environmental Protection Agency 2001a). One purpose of the extension was to receive comments on the use of performance standards instead of the technology-based standards originally proposed. In addition, the agency now offered to consider other definitions by which it would distinguish between a CAFO (requiring EPA regulation) and an operation that might be managed by state pollution control authorities. This idea of allowing an alternative performance standard received considerable opposition from some environmental organizations (*Environmental Policy Alert* 2002c).

When the final rule was announced in December 2002, allowances were included for performance standards as well as provisions for states to have some flexibility in designing watershed-based solutions (Environmental Protection Agency 2002b). This was an improvement. On the other hand, the final rule included a heavy dose of coopera-

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tion with the U.S. Department of Agriculture's Environmental Quality Incentives Program, which provides tax-funded incentives for farmers to improve their management practices. The resulting combination of regulation and subsidies will likely leave farmers in the position of expecting to receive more money each time water quality goals are ratcheted up. In sum, the EPA deserves credit for providing exceptions to top-down, one-suit-fits-all regulation, all in the context of satisfying a court-ordered regulation. But it loses credit for failing to make CAFOs an integral part of TMDL-based watershed management systems or offering the option of applying common law remedies for damages caused by CAFOs.

Confined Animal Feed Operations C+

CORPS OF ENGINEERS PERMITS

Under the Bush administration, the Army Corps of Engineers had a chance to make changes to regulations that were initiated in 2000 under the previous administration. The Bush team failed, however, to use this opportunity to move toward free market environmentalism.

Regulations built upon Section 404 of the Clean Water Act require the Corps of Engineers to issue permits for construction and other activities that could have harmful environmental effects on wetlands. There are two kinds of Corps of Engineers permits, individual and nationwide. Individual permits, which relate to unique specific projects, require preparation of elaborate environmental impact statements and

public hearings prior to the issuance of permits. Nationwide permits (NWP) are for actions that are relatively routine (U.S. Army Corps of Engineers 2001). These include activities such as home building and construction of road crossings, which may have little or no significant environmental impact, as well as more controversial activities, such as surface coal mining and flood control facilities.

Those who think that the federal government is the best protector of environmental assets want to limit the use of nationwide permits and lower the definition of minimum impact in order to force more individual permits. On the other side of the question are home builders, farmers, and construction companies who seek to reduce the bureaucratic burden they shoulder when seeking to undertake activities that could affect wetlands.

The Corps had tightened its regulations in March 2000. The new regulations required builders of homes that disturbed one-half acre of a wetland to obtain a nationwide permit (instead of three acres previously), and the established procedure required prohibition of wetland impacts exceeding 300 linear feet. Permit holders who disturbed an acre of wetland had to mitigate their actions by preserving at least one acre in the region. These permit limitations might be exceeded through the pursuit of an individual permit, but that would require an environmental impact analysis and public hearings.

The Bush administration's proposed modifications allowed the Corps to waive the 300-foot limitation and to accept less

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than one-to-one wetland mitigation in the same general location by substituting, for example, the purchase of banked mitigation acreage in other locations. The new rules, however, imposed even greater federal restrictions on the mitigation of coal mining activities than those imposed by state law.

Furthermore, opposition from environmental organizations led the Corps to alter some of these provisions in the final rule. The “no net loss” rule prevailed; there would be one-for-one mitigation in the region of the construction activity (U.S. Army Corps of Engineers 2002). The one-half-acre minimum impact rule remained in place, as did the stiffer rules for mining mitigation. In short, the Corps strengthened the hand of federal regulators, as opposed to state regulators, and weakened incentives for the development of stronger markets in mitigation activities.

Corps of Engineers Permits D

SUMMARY

The EPA’s tortured but refreshing movement toward state- and community-managed watersheds to improve water quality represents an evolutionary change that started with the Clinton administration. Ultimately, community-based watershed management could displace centralized command-and-control as the default system for improving water quality. The Bush administration has done more than tinker with concepts and language. The administration has offered a new policy that embraces principles of free market environ-

mentalism. The agency’s deputy assistant administrator for water, Benjamin Grumbles, indicates there is a new focus on performance and results, not regulatory process, and that a new outcome-focused approach will be taken to water quality management, instead of the piecemeal approach that characterizes past regulation (*Environment Reporter* 2002b). Recent policy initiatives indicate the administration is moving in the right direction. Implementation is the next challenge to be met.

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