I. Introduction

The successful Republican campaign for control of the House of Representatives in the 1994 congressional elections concentrated on the Contract With America. Before the elections, neither the Contract nor its chief proponent, Newt Gingrich, announced how the Contract would affect environmental regulation.1 Shortly after the 104th Congress convened, however, it became clear that the Contract’s supporters were intent upon enacting a sweeping set of revisions to the nation’s environmental and natural resources legislation. Some of these revisions took the form of proposals for regulatory reform, which would require that federal agencies engaged in regulation designed to protect the public health and safety and the environment comply with rigorous new cost-benefit and risk assessment analytical requirements.2 Other proposals sought to transform substantive environmental legislation or to redirect agency resources through the appropriations process.

This article analyzes the vision of environmental regulation reflected in the reform proposals backed by supporters of the Contract With America. After summarizing the justifications underlying and the traditional techniques employed in existing environmental regulation, part II of the article describes how, according to its critics, traditional environmental regulation has failed to achieve its objectives. As a backdrop for analysis of the reforms proposed in the 104th Congress, part II also describes the status of efforts to redress such regulatory failures before the 1994 elections. The next part considers both the professed goals of the environmental reforms backed by Contract supporters and the principal tools of reform contained in the legislation they have introduced.

Part IV inquires whether the proposals to transform environmental regulation supported by the Republican majorities in the 104th Congress are best characterized as deregulation or regulatory reform, concluding that these proposals are more consistent with a deregulatory than a reform agenda. This part also suggests that, even assuming that Contract supporters prefer regulatory reform to deregulation, the tools of regulatory reform they seek to enact into law are not better and may be less well suited to achieving the goals of environmental regulation than traditional regulatory techniques. The concluding section urges the adoption of regulatory reforms that are less likely to be counterproductive than the proposals that have monopolized the debate since the inception of the Contract With America. It also advocates a renewed recognition that the goals of environmental regulation extend beyond efficient resource allocation.

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II. Traditional Regulation to Protect Natural Resources and the Environment
   A. The Regulatory Life Cycle

   Government regulation proceeds through a six-step "life cycle." During Stage 1, the government does not intervene in the free market’s application to an industry or activity. Stage 2 is characterized by market failure, such as the failure to internalize spillover costs generated by pollution. But the market’s inability to achieve efficient resource allocation is not necessarily the sole test of market failure because regulation also can be defended on the basis of noneconomic, or social, values:

   This approach is the mirror image of the economist’s approach to regulation. The noneconomic analysis starts with the premise that society uses its political system to establish a set of values that defines how society wishes to be organized. Once these values are established, the government permits the market system to function without interference, to the extent that it does so without conflicting with society’s value choices. If markets operate in a manner that is inconsistent with social values, however, the government’s role is to conform the market’s operation to those values. In this view of regulation, law can legitimately constrain, rather than merely perfect, market outcomes.

   At Stage 3, the government imposes regulation to correct the identified economic or social market failure, which requires the choice of tools appropriate for correcting that failure. If the government misdiagnoses the reason for market failure, it may apply a regulatory tool that is not capable of correcting the defect responsible for that failure. Even if the diagnosis is correct, the tool chosen may be less effective or more expensive than other available tools. Indeed, selection of the wrong regulatory tool, a mismatch of regulatory goals and tools, may actually worsen the situation attributable to the economic or social market failure rather than improve it. In either event, the result is apt to be regulatory failure, Stage 4 of the regulatory life cycle. Regulatory failure occurs, for example, if the costs of regulation exceed its benefits. Stages 5 and 6 represent the two possible responses to regulatory failure: regulatory reform and deregulation. The former represents a return to Stage 3 (although the regulation obviously will have been modified from its original form), while the latter moves the cycle all the way back to Stage 1.

   It may be difficult to distinguish between reform and deregulation in a particular instance; the difference may be more one of degree than of kind. For purposes of this article, we regard a response to perceived regulatory failure as regulatory reform if the response involves modification of the tools used to achieve the original regulatory goals. A response that reflects a denial that market failure exists or a rejection of the original justification for regulation may more accurately be characterized as deregulation. We believe that, although they have framed their environmental proposals in the language of regulatory reform, many proponents of the Contract With America seek deregulation of the activities currently subject to environmental regulation. Even if they do not, the tools reflected in pending regulatory reform legislation are not likely to achieve the reformers’ goals. Instead, they represent at least as great a mismatch of regulatory goals and tools as the ones deemed responsible for creating the regulatory failure that is the object of regulatory reform under the Contract.

   B. The Life Cycle of Environmental Regulation
      1. Market Failure and the Justifications for Environmental Regulation
         a. The Goals of Environmental Regulation

         Under the conception of the regulatory life cycle described in section IIA above, regulation is a response to economic or social market failure. The desire to achieve an economically efficient allocation of resources has long been an important justification for environmental regulation, at least among economists. An unregulated market may not produce the degree of environmental quality desired by consumers because the costs of pollution tend to be external to the polluter. As a result, polluters fail to take these externalities into account in pricing the goods they produce and the services they supply. Because these prices do not reflect the true social costs of production, output rises beyond the "socially optimum point." Furthermore, if a legal regime based on the operation of the free market does not require the internalization of spillover costs, polluters have no incentive to curtail polluting activities. Environmental regulation, by requiring such internalization, will result in an increase in the polluter’s costs, an increase in the prices it charges for the output of the activities producing the spillover costs, and a decline in the level of sale of that output. Thus, regulation will "discourage the flow of undesirable spillovers" and "bring to the provision of social amenities all of the responsiveness to consumer demands and all of the pressures for efficiency in the use of resources that the price mechanism enforces in the production of ordinary consumer goods." The goals specified in the federal laws designed to reduce pollution and govern the management of public natural resources occasionally reveal a desire to prevent waste and promote economically efficient resource allocation.

         As with most other kinds of regulation, however, the case for environmental regulation in this country has never been premised exclusively or even principally on economic justifications.
Congress has enacted laws to protect the environment as a means of enhancing human welfare, even when it is difficult to justify regulation on a quantifiable cost-benefit scale. The Endangered Species Act (ESA) of 1973, for example, seeks to promote human welfare by preventing degradation of resources or disruption of ecosystems whose adverse effects cannot currently be predicted and whose costs, therefore, cannot accurately be assessed. Economic considerations are irrelevant to species listing decisions, although not to critical habitat designations. Such laws reflect "science's claim that there are important practical reasons for society to worry about the magnitude of human-caused ecosystem disturbance and to develop protection strategies that are scientifically-driven."

Perhaps the most frequently stated objective of the federal pollution control statutes is protection of the public health. In some instances, Congress has prohibited or limited the extent to which the administering agency may take economic impact into account in establishing the regulatory mechanisms designed to achieve that objective. These restrictions may in part be attributable to the conviction that quantification runs the risk of undervaluing public health protection and that, to the extent undervaluation occurs, regulatory decisions will be biased against the imposition of controls. They also reflect the view, however, that protection of the public health is such a sufficiently important goal that it is worth pursuing even if it is not economically efficient.

To the extent the environmental laws are based on a sense of moral responsibility or grounded in the quest for spiritual fulfillment, they transcend the desire to achieve efficient resource allocation even more clearly. Indeed, these laws at times consciously eschew efficient resource use. For example, many of this country's environmental laws are intended to prevent the pursuit of short-term economic advantage from squandering our national heritage. They reflect a sense of responsibility to protect the ability of future generations, who are not directly represented in the political process, first, to enjoy environmental amenities (such as aesthetic natural assets) and, second, to experience a quality of life comparable to that enjoyed and experienced by the present generation. The federal laws that govern management of the national parks and provide for preservation of wilderness areas represent the first aspect of promoting intergenerational equity, while pollution control laws have been justified in part by a desire to establish a sustainable quality of life. Laws that aim to preserve aspects of our natural, cultural, and historic heritage are the product of efforts to protect certain resources "because they provide the context and catalyst for contemporary revelation and self-understanding," or because they "enrich the lives of the American people."

Finally, a few environmental statutes appear to strive toward resource preservation on the basis of the inherent value of the targeted resources, apart from their usefulness to humans.

Thus, environmental legislation, while it may seek to achieve efficient resource allocation, has always been broader in conception. Because markets reflect commodity values, the allocation of resources that result from their operation may fail to reflect other important social values. The political process is capable of incorporating these other values in legislation when legislators perceive that their constituents support attempts to "satisfy altruistic or other-regarding desires, which diverge from the self-interested preferences characteristic of other markets." In other words, environmental legislation reflects public policy, and that policy is often a desire to promote values that may require some sacrifice of economically efficient resource allocation. The laws that control pollution and govern management of the nation's public natural resources have sought to prevent resource degradation whose costs cannot be predicted or measured accurately, to protect the public health without regard to or at least without the necessity of cost-justification, to promote intergenerational equity through sustainable development and the preservation of access to important natural resources, to provide continued opportunities for individual fulfillment through exposure to these same resources, and to preserve resources that are perceived as being valuable in their own right.

b. The Traditional Tools of Environmental Regulation

The federal pollution control statutes seek to achieve their goals through a variety of mechanisms. Some, such as the Clean Air Act, require the Environmental Protection Agency (EPA) to adopt nationally uniform ambient quality standards, which establish maximum concentrations of pollution above which adverse effects on health or welfare may occur. Others, such as the Clean Water Act, require EPA to issue regulations that limit the effluents that may be discharged into the environmental medium concerned. These regulations are sometimes called performance standards because they limit the permissible discharges by individual pollution sources without dictating the
means of complying with those limitations. Design standards, which appear less frequently in the federal pollution control laws, specify the manner in which plants and equipment must be engineered, constructed, or operated. All of these pollution control mechanisms fall under the rubric of what has become known as "command-and-control" regulation.

Justifications for command-and-control regulation have included administrative practicability, equity, democratic accountability, and efficacy. The use of command-and-control regulatory techniques such as technology-based performance standards was initially attributable, at least in part, to dissatisfaction with earlier regulatory mechanisms. Congress decided to require point sources of surface water pollution to comply with nationally uniform, technology-based performance standards, for example, because of the practical difficulties of demonstrating a cause-and-effect link between discharge and environmental damage in efforts to enforce predecessors to the Federal Water Pollution Control Act of 1972. Proponents of command-and-control regulation continue to cite administrative simplicity and enforceability as advantages of the traditional techniques. The difficulty of proving that a particular substance or activity is the cause of environmental injury also resulted in the adoption of precautionary legislation, which reflected Congress's unwillingness to defer regulation until the receipt of definitive proof of causation of harm. Instead, the presence of significant risk of harm would justify regulation.

The uniform character of some of the regulatory tools in the command-and-control arsenal would help to insure an equitable distribution of regulatory burdens. Uniform federal standards, applicable regardless of geographic location, for example, would impose similar obligations on all dischargers within a particular industry. Uniform controls also would remove incentives for states to try and attract industry by adopting less stringent controls than their neighbors. Command-and-control regulation would promote accountability in agency decision making by providing opportunities for public participation and judicial review and reducing the susceptibility of agencies to political or bureaucratic pressures.

Finally, command-and-control regulation would be effective in reducing pollution. Technology-based standards, for example, would have the potential to force the development of better pollution control technology. Using hindsight, defenders of the traditional approach to regulation have claimed that, "[d]espite its imperfections, command-and-control regulation has fostered significant improvements in environmental quality at a societal cost that has not proved prohibitive."

It is harder to generalize about the regulatory techniques that govern management of the federal public lands and natural resources, and any attempt at brief description such as that attempted here risks vast oversimplification. Nevertheless, generalizations are possible. "Traditional" public land law dealt with the statutes that governed alienation of public land. The tradition of disposing of federally owned lands and resources had all but disappeared by 1934, and in 1970, the Public Land Law Review Commission urged retention as the guiding principle of public resource management, unless maximization of net public benefits could be achieved only through disposition. The Federal Land Policy and Management Act (FLPMA) of 1976 codified into law the policy of retaining the public lands and resources in federal ownership. Although the legislature could have stated its objectives more clearly, it appears to have favored an efficient and equitable distribution of the benefits of these resources.

Congress did not provide clear guidance to the federal land management agencies on how to achieve such an allocation. The 1897 Forest Service Organic Act, for example, authorized the establishment of national forests to improve and protect the forest, secure favorable conditions of water flows, and furnish a continuous supply of timber. These objectives are not necessarily reconcilable, however, and the statute contained no criteria for prioritization in the event of a conflict. The Multiple-Use, Sustained-Yield Act of 1960 was not much clearer. It enunciated a policy of establishing the national forests for the highly diverse resources of "outdoor recreation, range, timber, watershed, and wildlife and fish purposes," and directed the Secretary of Agriculture to administer the system for "multiple use and sustained yield" of available products and services. Sustained yield meant the regular periodic output of the renewable resources of the forest, without impairing the productivity of the land. Multiple use meant management of forest resources so that they are utilized in the combination that will best meet the needs of the American people," giving consideration "to the relative values of the various resources," but the statute stated explicitly that the combination that best met these needs was not necessarily the one that would provide "the greatest dollar return or the greatest unit output."

The open-endedness of these and other land management laws afforded the Forest Service and its sister multiple use agency, the BLM, virtually unlimited discretion to allocate the resources under their control among a variety of competing uses. For decades, these agencies exercised this discretion by tending to favor extractive and consumptive uses over competing uses such as recreation, wildlife protection, and preservation. This tradition, too, came under heavy attack beginning in the 1960's. Congress adopted legislation that designated portions of the federal lands and resources as deserving of preservation, subjected the land management agencies to procedural constraints designed to insure adequate consideration of environmental values previously given short shrift, and required the adoption and implementation of land use plans whose provisions would channel
agency discretion and subject resource allocation decisions to meaningful judicial review.

The first category of legislation is exemplified by the Wilderness Act of 1964, which requires agencies such as the Forest Service and the BLM to administer designated portions of their holdings "in such manner as will leave them unimpaired for future use and enjoyment as wilderness," and by the National Wildlife Refuge Administration Act of 1966, which authorized the establishment of refuges for the protection and conservation of fish and wildlife threatened with extinction. In 1969, Congress adopted the National Environmental Policy Act (NEPA), which requires all federal agencies contemplating major actions with the potential to impose significant adverse effects on the environment to consider that potential and prepare and disseminate to the public documents that describe the agencies’ decision making processes. The ESA, "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation," imposes both substantive and procedural obligations on the federal land management agencies in pursuit of the preservation of the ecosystems upon which endangered and threatened species depend. Finally, FLPMA and the National Forest Management Act (NFMA) of 1976 require the BLM and the Forest Service to adopt land use plans and conform subsequent resource allocation decisions to them. By making judicial review of plans and implementing decisions available, Congress presumably intended to reign in the discretion of both agencies.

2. Regulatory Failure: Mismatch of Tools to Goals

By the late 1970’s, many observers charged that at least some aspects of the traditional system of environmental regulation characterized by command-and-control regulation had experienced regulatory failure in that the costs of regulation exceeded regulatory benefits. The arguments are by now familiar. The inefficiencies allegedly generated by command-and-control regulation took several forms. First, uniform, technology-based pollution controls ignore the fact that some dischargers can reduce pollution more cheaply than others and that some areas have more serious pollution problems than others. By requiring equivalent levels of discharge reduction by all entities within a single industry, regardless of location, size of exposed population, or importance of resources at risk, uniform controls forfeit the opportunity to concentrate reduction efforts on plants and in areas with the lowest marginal cost of control. Second, regulations that take the form of design standards, which specify the means of achieving emission limitations, are even more offensive because they tend to ignore cheaper alternatives for compliance (presumably because regulators are not as familiar with production processes and control techniques as regulated entities are). Third, technology-based standards tend to impose more stringent controls on new plants than on existing ones. This dichotomy creates incentives to keep older, less efficient, higher-polluting plants in service for longer than would be the case in the absence of regulation, a counterproductive result from both a pollution control and industrial growth perspective.

Fourth, critics charged that, at least as practiced to date, command-and-control regulation causes a serious misallocation of resources in that environmental regulations are directed at trivial risks while more significant risks remain unaddressed. In 1987, EPA itself published a study which revealed a startling divergence of opinion between the public and scientific experts on which environmental problems posed the most serious risks. The study also concluded that EPA’s regulations tended to track public opinion more closely than the views of the agency’s own experts. In 1990, another report by EPA’s Science Advisory Board urged the agency to reorder its priorities to redress this misallocation of resources. A 1993 book by Justice Stephen Breyer added fuel to the critical fire. Breyer attributed the problem to a combination of factors: public misperceptions of risk (aggravated by the tendency of scientists to use overly conservative risk assessment methodology), Congress’s practice of addressing risks on an ad hoc basis, and an agency decision making process characterized by distorting assumptions, susceptibility to political pressures, failures of communication, and procedural rigidities. Critics of existing EPA processes for allocating agency resources urged increased reliance on comparative risk assessment to achieve a greater “bang” for the pollution reduction buck.

Finally, critics of command-and-control regulation argued that nationally centralized environmental regulation tends to inhibit governmental accountability because it diminishes opportunities for public participation in the decision making process, entails relatively little effort to educate the public, and focuses debate on questions of the appropriate means rather than on crucial questions such as the degree of environmental risk that society is willing to bear. Command-and-control regulation, according to the critics, also creates incentives for interest groups

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to engage in obstructive behavior and enhances the power of bureaucracies, which are often under the sway of these same interest groups. This is precisely the opposite result from the one predicted by adherents to traditional methods of environmental regulation.

The charge that command-and-control regulation of polluting activities had generated regulatory failure was thus vociferous and sustained. Analogous charges were leveled against the public natural resource management laws. Environmental groups complained that the agencies paid lip service to environmental assessment responsibilities but continued to make resource allocation decisions using the same pro-development criteria as previously. Ranchers, miners, and loggers whose access to federal public resources was not as obstacle-free as it once was was bristled at the new environmental constraints. At one level, these criticisms amounted to little more than the sour grapes of competing users who wanted a bigger slice of the public resource pie. Economists and legal academics, however, enunciated themes similar to those that characterized the attacks on the pollution control laws. The federal land laws, these critics claimed, resulted in management of the nation’s public natural resources that is inefficient, unaccountable, and insufficiently protective of private property rights.

The most vocal critics of the efficiency and efficacy of implementation of the federal land laws have been the so-called “free market environmentalists.” Taking as their starting point the premise that an essential purpose of these laws is to maximize the value to society of public resources, the free marketeers contend that, “left to choose, individuals will allocate significant resources to environmental protection. Indeed, they contend that we will get more environmental protection from the market than from [traditional] regulation.” Government regulation is unlikely to result in optimizing social welfare through efficient resource allocation because agency decision makers are not dispassionate experts capable of accurately comparing the costs and benefits of alternative allocations. Instead, professional managers, like everyone else, make decisions in response to the incentives they face, and they may personally benefit more from an inefficient than an efficient resource allocation. In addition, an efficient resource allocation depends on accurate information concerning the relative values of competing allocations. Public decision makers must either make their decisions in the absence of such information, which creates an obvious risk of inefficient results, or incur significant costs in gathering the information necessary to make allocation choices. If natural resources were allocated through markets, “prices [would] provide the necessary information for making tradeoffs.” Reliance on markets does not necessarily require complete divestiture of federal ownership; federal retention “does not preclude effective private management of resources on federally owned lands.”

Although efficient resource allocation did not depend on wholesale disposal of federal lands, accountable decision making arguably did. The Sagebrush Rebellion of the 1970’s probably represented the most widely publicized attack on the federal land management laws as an unaccountable mechanism for allocating public natural resources. The Rebels argued first that the federal government lacked the constitutional authority to support long-term, extensive land ownership, and second that, legalities aside, state ownership was superior to federal ownership as a matter of policy because it would vest decision making authority in the hands of government officials who were closer to the people. The Rebels’ arguments never got very far, even though Interior Secretary Watt represented an ideological bedfellow with the Rebels. This lack of success notwithstanding, the Wise Use and County Supremacy Movements of the 1990’s represented subsequent refinements of the Rebels’ attacks on continued federal land ownership and management.

Finally, the critics charged that the failure of the federal public land laws to protect private property rights is both inequitable and inefficient. Statutes such as the ESA, by restricting development of private land that contains critical habitat of listed species, unfairly concentrate the economic burdens of species preservation on private landowners, while the public at large derives the benefits of these efforts. The inadequacy of the protection afforded private property by federal land laws also exacerbates the inefficiencies attributable to resource allocation by bureaucracy rather than the free market. According to property rights advocates, agency decision makers often regulate even if the net costs of regulation exceed its net benefits. This is because current law does not require the government to compensate the holders of private property whenever regulation results in a decline in value of their interests. If the private property holders bear the costs of regulation while the public derives the benefits, decision makers need not be concerned about justifying to the public the cost efficiency of regulation. If, however, all regulations that diminished the value of property were regarded as compensable takings, the government would internalize the cost of regulation and would be more reluctant to promulgate inefficient regulations.

3. Pollution Control and the Initial Regulatory Reform Efforts

Critics of command-and-control regulation advocated a variety of techniques for responding to regulatory failure. They argued that the substitution of economic incentives for command-and-control regulation would result in more efficient pollution control. These incentives could take the form of marketable permits, effluent taxes or charges, or subsidies. The disclosure of information, which could take the form of
government provision of information or regulations requiring disclosure by private entities, is another mechanism for achieving efficient resource allocation by eliminating inappropriate consumer choices attributable to a lack of information about the true costs that a product or service imposes on society. It also could promote democratic accountability by facilitating increased involvement by a well informed citizenry and reducing the backroom influence wielded by interest groups.

The regulatory reforms adopted before the "execution" of the Contract With America in 1994 tended to use economic incentives and information disclosure as supplements rather than as substitutes for command-and-control regulation. As early as 1981, President Reagan signed an Executive Order requiring federal agencies to justify certain regulations on the basis of cost-benefit analysis, although the Order’s requirements did not override statutory provisions which mandated that regulatory decisions be governed by some other calculus. The Council on Competitiveness under the Bush Administration subsequently addressed the charge that command-and-control regulation misallocated resources by addressing insignificant risks when it required that federal environmental and safety regulation be "based upon scientific risk-assessment procedures, and . . . address risks that are real and significant rather than hypothetical or remote." President Clinton rescinded Executive Order 12,291 and replaced it with another that modified some of the particulars but did not alter the basic thrust of the Reagan order.

The most prominent example of the economic-incentive based approach to pollution control appeared in the acid deposition control provisions of the 1990 Clean Air Act Amendments, which require electric utilities to comply with emission limitations on sulfur dioxide but authorize regulated firms to purchase unused emission allowances from other firms in lieu of reducing their own emission levels. EPA has authorized emissions trading on a smaller scale as a means of complying with other provisions of the Clean Air and Clean Water Acts and has endorsed efforts by the states to incorporate emissions trading components into delegated state programs. These examples notwithstanding, experimentation with economic incentive-based regulatory schemes is still in its infancy, and no major federal command-and-control regulatory program for reducing pollution has been replaced with a scheme that relies wholly on the use of economic incentives to prompt desired behavior.

Congress resorted to information disclosure in response to the accidental release of methyl isocyanate at the Union Carbide plant in Bhopal, India, which killed more than 3000 people. In 1986, Congress adopted the Emergency Planning and Community Right-to-Know Act (EPCRTKA), which requires facility owners to notify state and local officials of releases of listed hazardous substances and to file annual reports on amounts of hazardous chemicals used at facilities. According to some observers, EPCRTKA has assisted EPA in formulating its pollution prevention strategy and improving the effectiveness of traditional agency regulatory programs, and has prompted firms to reduce releases to avoid adverse publicity.

4. The Status of Environmental Regulation Before the Contract With America

Modern federal pollution control regulation commenced in earnest in 1970. By 1994, supporters of the regulatory edifice constructed in the intervening years claimed that considerable progress had been made in achieving the goals staked out a quarter century before, especially in connection with the nation’s efforts to clean up its surface waters. No one could legitimately claim, however, that total victory had been achieved. Indeed, the shortcomings of the command-and-control system were apparent to many. Critics charged that the federal pollution control programs were inefficient because they frequently failed to permit the adoption of the least-cost means of regulation and tended to squander resources on insignificant problems while leaving more serious risks unaddressed. The ability of the traditional regulatory approach to hold policymakers accountable for their decisions was also called into question. The most common prescriptions for reform included increased resort to cost-benefit analysis and comparative risk assessment and supplementation or substitution of economic incentives for command-and-control techniques. Significantly, none of these critiques involved attacks on the goals of environmental regulation.

On the public lands management front, the traditional body of law governing disposition of federally owned resources was dramatically altered beginning in the 1960’s with statutes that pronounced a norm of continued federal ownership, recognized the value and required the preservation of wilderness areas, wild and scenic rivers, and other unique resources, and constrained the broad discretion of agencies such as the BLM and the Forest Service by requiring documentation of adequate consideration of environmental values and implementation of rational land use planning procedures. Notwithstanding (indeed, perhaps as a result of) these reforms, criticisms of federal land and resource
management struck the same kinds of theoretical chords that characterized the descriptions of regulatory failure in the pollution control arena. A radical fringe that included the Sagebrush Rebels argued that federal land ownership was unconstitutional, and Secretary Watt floated privatization proposals in the early 1980's. Such efforts to divest the federal government of significant portions of its holdings never came close to fruition. Nevertheless, charges that resource allocation by the federal land management agencies was inefficient, ineffective, and lacking in accountability persisted.

The 1994 congressional elections resulted in the election of a Republican majority in both houses. The leadership of the new majority party in the House of Representatives had centered its campaign on the Contract With America. The remainder of this article addresses whether the application of the Contract to environmental regulation represents a continuation of the criticisms and regulatory reform efforts described above or an effort to turn back the clock on environmental regulation, to the federal law of pollution control as it existed before 1970 and to a set of federal land management laws whose primary object was resource disposition.

III. The Contract With America and the Environment: Agenda for Regulatory Reform

A. The Goals of Regulatory Reform Under the Contract With America

The focal point of national press coverage of the 1994 campaign by Republicans running for election to the House of Representatives was the Contract With America devised and announced by soon-to-be Speaker of the House Newt Gingrich. The Contract, which served as a policy blueprint for the first 100 days of the Republican-controlled House of Representatives of the 104th Congress, concentrated on three "core principles:" increased government accountability to the electorate, restoration of personal responsibility, and restoration of opportunity through regulatory and tax relief.

The common theme behind these three principles was the notion that the federal government was too big and that its regulatory apparatus was too intrusive. As the measures introduced to implement the Contract later made clear, the supporters of the Contract believed that federal environmental regulation in particular was creating a drag on the national economy, that the costs of this regulation often outweighed its benefits, that biased, overly conservative, and inaccurate information about the risks posed by regulated activities often resulted in overregulation, that commitment of environmental policy decisions to federal bureaucrats interfered with governmental accountability, and that environmental regulation caused unjustifiable if not unconstitutional invasions of private property rights. As a result, Contract proponents declared that their goals were to eliminate the inefficiencies in resource allocation attributable to regulation that was not cost-justified or that was based on "bad science," to devolve decision making responsibility to the states to restore accountable government, and to buttress the protections afforded to private property rights against regulatory intrusions.

Many of these goals echoed the long-standing charges that federal environmental regulation had engendered regulatory failure. Supporters of increased reliance on economic incentives instead of command-and-control regulation had long claimed that federal environmental regulation was not cost-efficient or accountable. Advocates of comparative risk assessment, such as Justice Breyer, detected misallocation of resources due to regulation of insignificant risks. Opponents of the increased focus of the federal land management laws on resource preservation had laid against the infringement on private property rights caused by provisions such as the ESA's prohibition on taking listed species. The purported goals of the Contract With America as it applied to environmental regulation thus had direct links to previous criticisms of environmental regulation and to previous regulatory reform proposals. The tools recommended to achieve these goals, however, in some instances represented significant extensions of or radical departures from both the traditional forms of environmental regulation and the prescriptions for regulatory reform recommended by those responsible for the original diagnosis of regulatory failure.

B. The Tools of Regulatory Reform Under the Contract With America


a. Cost-Benefit Analysis

The legislators' intent upon transforming the Contract With America into law proposed to increase the efficiency of environmental regulation primarily by requiring the use of cost-benefit analysis and comparative risk assessment. H.R. 1022, part of the Job Creation and Wage Enhancement Act passed by the House in 1995, would require that federal agencies engage in cost-benefit analysis to prevent major environmental rules from imposing costs out of proportion to the problems the regulations are designed to address. The cost-benefit provisions of H.R. 1022, which would lower the threshold for regulatory impact analysis previously contained in President Reagan's Executive Order 12,291, would prohibit an agency from issuing a major regulation without certifying that its incremental benefits are likely to justify and are reasonably related to its incremental costs. A later incarnation of the bill, the Comprehensive Regulatory Reform Act of 1995, would require the adoption of the regulatory alternative that would provide the greatest net benefits or impose the least net cost. Through a provision that became known as the "supermandate," H.R. 1022 would supersede the
The need to protect private property rights against the depredations of a runaway federal bureaucracy is an oft-repeated theme of Contract adherents.

b. Comparative Risk Assessment and Good Science

The regulatory reform legislation introduced by supporters of the Contract With America in the 104th Congress reflected the conviction that federal environmental regulation is based on an inappropriate setting of priorities. Although risk assessment had "proven to be a useful decision making tool," the agencies' reliance on biased information and overly conservative assumptions had prevented costs incurred to reduce environmental risks from being directed at the most serious problems. To redress this situation and insure more efficient risk reduction expenditures, the Contract's supporters sponsored legislation which would force federal agencies to follow prescribed risk assessment, characterization, and communication principles, including the establishment of best estimates or estimates of expected value. Agency risk assessments (as well as cost-benefit analyses) conducted on rules likely to result in significant increases in costs would be subject to peer review by panels of outside experts and to judicial reversal in challenges by interested persons.

2. Tools for Enhanced Governmental Accountability

One of the core principles of the Contract With America is the restoration of governmental accountability. As a general matter, Contract proponents and many other members of the Republican majority support the transfer of authority from the federal government to the states and localities as a means of achieving this objective. The Unfunded Mandates Reform Act of 1995, one of the first pieces of legislation to emerge from the 104th Congress, sought to increase accountability by preventing the federal government from foisting on state and local governments monetary obligations over which they had no control and for which they therefore could not fairly be held accountable to the voters. The Act, among other things, bars Congress from considering any legislation that would increase by more than a certain amount the costs for state or local governments of complying with federal mandates, unless the legislation also provides new budget or direct spending authority for the mandates or includes an authorization for appropriations to cover the increased costs. It also requires federal agencies promulgating rules that may result in the expenditure of $100 million or more to select the regulatory alternative that is least costly, most cost-effective, or least burdensome for state and local governments. Republican members of both Houses of Congress also introduced legislation that would transfer title to lands administered by the BLM to the states in which those lands are located, subject water rights acquired by the United States or any permit applicant under the ESA to state law, defer to state environmental standards for mining on federal lands, enable state and local governments to claim rights-of-way over federal lands, and prohibit the acquisition or transfer of water rights in connection with livestock grazing management unless authorized by state law. Each of these measures would enhance state and local authority at the expense of the federal government.

3. Tools for Increased Protection of Private Property Rights

The need to protect private property rights against the depredations of a runaway federal bureaucracy is an oft-repeated theme of Contract adherents, especially in connection with environmental regulation. Pending legislation would require that the federal government compensate private property owners out of existing appropriations when certain kinds of regulation, such as those designed to preserve wetlands or endangered species, result in a reduction in the fair market value of the regulated property by a relatively small percentage. This attempt to establish "clear guidance for property owners and government officials as to when agency actions go too far and infringe on property rights" is meant to force agencies to conclude that the public benefits of regulation outweigh the costs before proceeding with regulation and to make environmental regulatory agencies more accountable to Congress.
Glicksman

IV. Environmental Policy Under the Contract With America: Regulatory Reform or Deregulation?

For the most part, Republican legislators in the 104th Congress have couched their efforts to revise the nation’s environmental laws as regulatory reform – a response to regulatory failure – rather than as deregulation. Proponents of codifying the regulatory and environmental agenda based on the Contract With America generally have not publicly questioned the value of continued regulation to prevent pollution from posing threats to the public health. Indeed, Republican legislators have acknowledged the worth of the legislation they are seeking to revise. A principal House vehicle for regulatory reform, for example, recognized that “[e]nvironmental, health, and safety regulations have led to dramatic improvements in the environment and have significantly reduced human health risk.” Similarly, Speaker Gingrich’s professed goal upon enactment of the House regulatory reform package was to “find a common ground which will create more respect for private property while still maintaining the vast bulk of the Government’s powers to save the environment and to insure public safety and public health.”

According to Contract supporters, it is the means used to protect the public health against the risks posed by exposure to pollution that have proven to be flawed and that are in need of dramatic revision.

Support for the objectives of the federal land management laws among Contract proponents is decidedly more lukewarm. The bills to divest the federal government of ownership of lands currently managed by the BLM can hardly be reconciled with the overriding sentiment reflected in FLPMA in favor of retention of federally owned public resources. Likewise, the scorn occasionally heaped by legislators upon federal efforts to save species such as the spotted owl do not appear to be a ringing endorsement of preservation-oriented laws such as the ESA. Nevertheless, at least some legislators who support the Republican environmental reform agenda seem reluctant to whole-heartedly endorse an abandonment of the objectives of the federal land management laws. Protection of endangered species is not inappropriate per se; it is only ill-advised if it causes adverse economic impacts, such as job losses, whose value exceeds the benefits provided by species preservation.

The federal government should not liquidate all of the national parks. It should only divest itself of units that lack national significance or that cannot feasibly be managed. In this view, the failures of the federal land management laws are attributable at least as much to the inability of the regulatory tools chosen to achieve regulatory objectives as to the choice of inappropriate goals.

We believe that these attacks on means rather than goals are disingenuous. The numerous inconsistencies between the professed goals of regulatory reform and the legislative proposals introduced by the reformers have convinced us that, protestations to the contrary notwithstanding, a considerable portion of the environmental regulatory agenda of the supporters of the Contract With America is designed to deregulate rather than reform. It is an agenda that reeks of hostility to the goals of environmental regulation during the past quarter century.

To the extent, however, that the reform proposals of Contract proponents and other Republican legislators represent genuine efforts to alter the tools of environmental regulation so that accepted regulatory objectives can be achieved in a manner that allocates resources more efficiently and with greater governmental accountability, the regulatory reform agenda of the Republican majorities in the 104th Congress is not likely to succeed. In some instances, there appears to be no rational connection between the goals of regulatory reform and the means chosen to achieve them. In others, reform proposals are overly simplistic. As a result, the divergence between the tools and goals of regulatory reform appears to be just as great as the gap to which reformers attribute the regulatory failures of traditional environmental regulation.

A. The Contract as Deregulation

1. The Purported Goals of Regulatory Reform Under the Contract With America

a. More Efficient Resource Allocation

(1) Cost-Benefit Analysis

The prescriptive and detailed cost-benefit and risk assessment requirements that would be imposed on environmental regulatory agencies by the regulatory reform packages introduced by Republicans in both Houses of Congress in 1995 would increase the costs of regulatory evaluation rather than streamline the process. Yet, the reformers claim that the costs imposed on the economy by lengthy environmental regulatory evaluative processes in other areas are excessive. The counsel to the Senate Natural Resources Committee has complained, for example, that when EPA designates a hazardous waste disposal site for cleanup under CERCLA, the agency requires tests by site owners that are “too detailed and too expensive . . . . It’s like the overdiagnosis that doctors do now.” Similarly, Republican legislators have criticized the Interior Department’s reform of regulations governing rangeland management because they entail “a process weighed down with increased review and scrutiny. The final proposed [sic] regulations would have the effect of making day to day operation on Federal land so cumbersome and costly that we might as well be talking about the arbitrary grazing fee from two years ago.” The proponents of regulatory reform have not demonstrated that the compliance cost savings attributable to the proposed new analytical procedures will outweigh the resulting increased costs of regulatory evaluation. Moreover, it is not at all clear why environmental evaluation is excessive and wasteful if the cost is borne by industry but not if it is borne by federal regulators. The inconsistency is understandable, however, if the
The real objective of reform is not to eliminate unproductive and wasteful evaluation but instead to bury agencies under a mountain of paperwork as a means of reducing regulatory output. The advocates of reform also protest that regulation often has a devastating effect on industries such as mining and timber harvesting, which contribute to the national welfare, without providing offsetting benefits. Far less attention seems to be paid to the adverse impact of the failure to regulate on more environmentally benign industries such as tourism and fishing. If efficient resource allocation were the real objective, rather than elimination of costly regulation of powerful constituencies (regardless of the value of the benefits provided by such regulation), a comparison of the costs and benefits of regulation on all aspects of the economy would seem to be a sensible undertaking. We are not aware of any attempt by the current advocates of reform to sponsor this kind of analysis.

The critics of command-and-control regulation, who often support the adoption of the kinds of economic incentives for resource preservation allegedly provided by the free market, also seem curiously unwilling to eliminate federal subsidies for extractive industries. Indeed, far from eliminating these subsidies, Republican-sponsored legislation might elevate them to the status of property rights, deprivation of which would entitle their holders to compensation. If federal intervention in the free market is apt to result in inefficient resource allocation, then perhaps perpetuation of an industry that is unable to survive without federal monetary support is not cost efficient.

(2) Comparative Risk Assessment and Good Science

The discrepancy between the rhetoric of regulatory reform and the reality of legislative action is even more striking in connection with the support of Contract adherents for comparative risk assessment as a means of improving the efficiency of environmental regulation. The leaders of the Republican push for regulatory reform argue that the current regulatory system is inefficient because it is based on skewed priorities which result in regulation of trivial risks. Reforms that insure that agency regulatory decisions are based on "good science" rather than biased and overly conservative assumptions will redress that tendency and make it more likely that the targets of regulation are truly worthy of risk reduction efforts.

Contract advocates seem inclined to ignore the recommendations of scientific experts who disagree with their particular reform proposals. The legitimacy of this effort to premise environmental regulation on good science as a means of effectuating a more efficient allocation of regulatory expenditures is belied on several counts. First, by eliminating several well-regarded information-gathering arms of the federal bureaucracy, Republican supporters of regulatory reform have made it more difficult to premise environmental policy decisions on any science, much less "good science." The first session of the 104th Congress voted to shut down the Office of Technology Assessment, a research arm of Congress which was established during the Nixon Administration contemporaneously with the birth of much of the current federal environmental regulatory edifice, and which has been widely praised for its impartial advice to members of Congress of both parties. It voted to eliminate the National Biological Survey, which gathered information that contributed to an understanding of the nature and extent of the nation's biological resources, and the Administrative Conference of the United States, which, for nearly thirty years, has analyzed how to make regulation more efficient and effective. It slashed funds for an assessment of the regional ecology of the Columbia River basin, thus sharply limiting studies of how logging would affect endangered species. It also dismantled the Interior Department's Bureau of Mines, a leader in research and development programs relating to restoration of abandoned mines and prevention of pollution at mine sites. These actions seem more consistent with a desire to bury information that might support current or future protective regulation than with the profession of tracking down the best scientific information available to facilitate more efficient regulatory decisions.

Second, Contract advocates seem inclined to ignore the recommendations of scientific experts who disagree with their particular reform proposals (which would invariably result in reduced or less protective regulation). In the spring of 1995, the House passed H.R. 961, a Republican-sponsored rewrite of the Clean Water Act. The bill would redefine wetlands for purposes of the dredge and fill permit program as areas saturated to a depth of one foot for at least 21 days during the growing season. In May 1995, the National Academy of Sciences (NAS) issued a report endorsing as scientifically sound and effective the current regulatory definition based on fourteen days of saturation. The NAS Report also found no scientific basis for the classification scheme for wetlands (according to their ecological value) included in H.R. 961, concluding, for example, that isolated wetlands are not necessarily less valuable.
than other wetlands. Instead of questioning the scientific legitimacy of their recently enacted reform bill, the reaction of Republican backers of H.R. 961 was characterized by the remarks of one legislator, who stated that “[t]he report does not change the fact that the wetlands program is cumbersome, unfair to property owners and in need of a major overhaul. These are policy considerations.” Remarkably, this response made no effort to challenge the validity of the NAS’s scientific analysis. Instead, it shifted the underlying rationale for the reform proposal from “good science” to promotion of equity for property owners. Good science is good policy, in other words, only until it flies in the face of the Contract’s deregulatory design.

The wetlands controversy is not an isolated example of the willingness of Contract proponents to dispense with “good science” when it fails to support their attacks on environmental regulation as unwarranted or inefficient. In the same month that the NAS report appeared, the National Research Council issued a report supporting enhanced enforcement to achieve the objectives of the ESA. The chairman of the panel that prepared the report summarized its findings as supporting the view that “[i]n general, there has been a good match between science and the act.” The report had no discernible effects on efforts by Republican legislators to revise the ESA dramatically by preventing the Fish and Wildlife Service, for example, from defining a prohibited taking of listed species to include harm to critical habitat and to bar the Interior Department from spending appropriated funds to implement the statute.

The approach to air pollution control supported by House Republicans also demonstrates the tendency to abandon any commitment to “good science” when the weight of scientific opinion appears to support continued regulation. Within days of the issuance of a report by the World Meteorological Organization (WMO) indicating that the hole in the ozone layer over Antarctica had doubled in size (and was now as large as Europe and getting bigger), Representative Doolittle, a Republican from California, introduced a bill to postpone the Clean Air Act’s ban on CFCs for five years on the ground that “there has not been a sufficient showing of scientific evidence to justify” the existing deadline. The WMO report was not the work of an isolated fringe of the scientific community. The 1995 Nobel Prize for chemistry was awarded to two Americans and one Dutch scientist for their work on the processes by which CFCs destroy the stratospheric ozone layer. The citation indicated that the recipients “have contributed to our salvation from a global environmental problem that could have catastrophic consequences.” A prudent response to the accumulated evidence on ozone depletion would be to leave the deadline for banning CFCs in place until the production of evidence clearly indicating that the use of CFCs is not a problem. Their professed commitment to “good science” notwithstanding, at least some advocates of the Contract With America find such a response to be unacceptable. Similarly, in the same month that the United Nation’s International Panel on Climate Change reported that the balance of the evidence supports the conclusion that human activity has had a “discernible” influence on global warming, leading House Republicans dismissed global warming as a hoax.

Third, some of the risk assessment methodologies that would be mandated by the Republican regulatory reform packages cast doubt on the authenticity of the reformers’ quest for the best available information upon which to base regulatory decisions. The principal House and Senate regulatory reform proposals, for example, both express a preference for identification of a single “best estimate” of risk, even though it is often impossible to designate a single number within a broad range of equally likely possibilities. Cancer risk assessment models, for example, often produce estimates, based on the same experimental data, that vary by as much as ten orders of magnitude, a variation that approximates the difference between the price of a cup of coffee and the size of the national debt. Under current law, Congress frequently has responded to the presence of this kind of scientific uncertainty by adopting a precautionary approach to regulation. While the methodologies endorsed by some of the sponsors of regulatory reform pay lip service to the need to take these uncertainties into account, the reformers’ attacks on current regulation often appear to gloss over them. Skeptics within EPA have concluded that these mandates to adopt what appear to be overly simplistic scientific models are intended to cast doubt on the scientific support for regulation derived from more traditional approaches.

Likewise, Contract supporters have sought to subject all kinds of environmental regulatory decisions to a uniform set of analytical procedures and to a single, overriding set of substantive criteria, despite the differences posed by risk reduction and resource allocation decisions raised in a variety of contexts. Evaluation of some environmental problems through the use of pre-ordained cost-benefit and risk assessment methodologies may be more appropriate than for others. It may not be helpful to subject all decisions to each aspect of the rigid, multi-step process characteristic of the current crop of reform proposals. Substantively, some of the Republicans’ regulatory reform proposals in the 104th Congress contain a “super-mandate” which subordinates decision making criteria under all environmental statutes to the cost-benefit requirements and risk assessment principles dictated by those proposals. Republican legislators are fond of decrying a “one-size-fits-all” approach to regulation, yet that is exactly what proposals such as H.R. 1022 and S. 343 envision. Do the reformers really want to adopt analytical techniques that enhance the ability of the agencies to focus risk reduction efforts on the most serious risks, or are they
intent upon codifying techniques that make the adoption of any new regulation more difficult, regardless of its efficiency? Their opposition to unifying principles that support regulation but not to those that may hamper it suggests that deregulation rather than allocative efficiency is the principal goal.

b. Enhanced Governmental Accountability

(1) Federalism Concerns

Another main thrust of the regulatory reform proposals inspired by the Contract With America is the reallocation of decision making authority and the alteration of decision making processes to enhance the accountability of environmental policymakers to the people. Many Republican legislators tend to view state government as more accountable than the federal government because state authorities are closer to and more familiar with local conditions. Proposals to divest the federal government of lands managed by the BLM are consistent with this preference for shifting the locus of decision making authority to the state and local levels. Proposals to preempt traditional state tort law, which provided the first real environmental law, to the extent it is more stringent than federal tort liability principles is harder to reconcile with this preference, as is legislation that would bar the states from imposing cleanup standards at hazardous waste disposal sites that are more stringent than those promulgated under federal law. These reforms suggest that the degree of support provided by Republican regulatory reformers for reallocation of federal authority to the state level varies according to whether such reallocation will likely produce more or less regulation.

On balance, a shift of the locus of authority from the federal to the state level probably will result in less protective regulation. According to Professor Dan Tarlock, "the tradition of local resistance to national conservation is well into its second century." That pattern is unlikely to change. State and local regulators may be more susceptible to pressure applied by potential regulatory targets important to the local economy than the federal government would be, states may compete for industry by ratcheting down the levels of potentially costly regulation, and the proponents of regulation, such as public interest groups, may not have the resources to lobby successfully in fifty jurisdictions rather than one. Finally, states may lack the wherewithal to provide effective protection for public natural resources. Perhaps for these reasons, Professor Michael Blumm has predicted that a transfer of the BLM lands to the states will result in "destruction of de facto wilderness, loss of public access, a decline in science-based management, fragmented jurisdiction, increased environmental costs, a reduction in public participation, and an irretrievable loss of national heritage lands."

(2) Reallocation of Federal Decision Making Authority

Republican reformers also claim to seek greater accountability through the reallocation of power within the federal government, such as by transferring decision making authority from bureaucrats to elected officials. But the processes by which the Republican Congress has sought to transform the Contract’s principles into law seem designed to do anything but increase the legislature’s accountability to the electorate. It has been widely reported that many of the environmental bills introduced by the Republicans in the 104th Congress were drafted by lobbyists rather than by elected officials and their staffs. Instead of soliciting public input on the environmental legislation introduced to implement the Contract With America, Republican committee chairs have canceled or moved the location of hearings to prevent witnesses opposed to that legislation from testifying.

The tactic that perhaps best reveals the lack of concern demonstrated by some Contract supporters with enhancing accountable government relates to the use of appropriations bills to implement changes in environmental policy. On the one hand, Republican legislators have decried as an abdication of legislative responsibility the use of appropriations bills to impose environmental constraints on development. These same legislators, however, have introduced a plethora of appropriations riders designed to prevent the implementation of or the expenditure of funds to enforce existing environmental legislation, as well as to remove environmental constraints on development and the use of public resources. Senate Republicans, for example, proposed a moratorium in the form of an appropriations rider on further listings or critical habitat designations under the ESA, which was approved by the Conference Committee on the fiscal year 1996 appropriations bill for the Interior Department. They also supported a moratorium on the effective date of the Interior Department’s rangeland reform regulations. The first session of the 104th Congress enacted an appropriations bill that exempted certain timber sales in the Pacific Northwest from all existing environmental legislation, including NEPA, the ESA, and the federal pollution control laws.

It is difficult to escape the conclusion that this less than evenhanded stance on the legitimacy of using appropriations bills to implement environmental policy has nothing whatsoever to do
with an effort to enhance the accountability of governmental decision making at the federal level. Indeed, the conclusion seems virtually inescapable that, given an irreconcilable conflict between the use of accountable legislative processes and the ability to adopt favored environmental legislative changes, Contract proponents are willing to sacrifice accountability. Republicans in the 104th Congress have often seemed determined to rush through environmental “reforms” as quickly as possible to eliminate the possibility of informed debate and public disclosure. If Contract advocates cannot muster enough support to adopt substantive legislation that weakens pollution control laws, or that restrikes the existing balance in favor of more development of public natural resources, they apparently will not hesitate to seek those changes through the appropriations process, where full and informed debate is less likely.239 William Reilly, EPA Administrator under President Bush, described the use of appropriations bills to redefine EPA’s role by preventing it from enforcing the law as “a guaranteed recipe for disillusionment on the part of the public.”240

(3) Increased Protection of Private Property Rights

A third plank in the platform of the supporters of the Contract With America is increased protection of private property rights, which they seek to accomplish through the adoption of legislation that would require the federal government to compensate property owners for the diminution in value of their holdings attributable to regulation. Justice Stevens, dissenting in the 1992 Lucas decision,241 predicted that a broad interpretation of the Fifth Amendment’s takings clause would have a chilling effect on the adoption of regulation to protect the environment.242 The property rights legislation, such as H.R. 961, introduced by Republicans in the 104th Congress would require compensation on a much wider scale than under prevailing constitutional standards.243 While there can be little doubt as to the sincerity of the Republicans’ desire to protect the sanctity of private property from intrusive regulation,244 an important impetus for the property rights protection legislation inspired by the Contract With America may be the prospect of less environmental regulation, regardless of its impact on regulated property owners.245

If protection of private property rights were the sole objective of the sponsors of bills such as H.R. 961, one might expect that they would express concern about the interests of those adversely affected by development as well as those responsible for it. Such is not the case. The focus of much of the ire of those who support expanded compensation requirements is the Clean Water Act’s dredge and fill permit program, as it applies to development of wetlands. H.R. 961, according to its sponsors, is designed to bring “sanity to a troubled program in which overzealous wetlands regulations threaten to turn every puddle into wetland regulated by the federal government.”246 The bill’s supporters pointed to the case of John Chaconis, a Louisiana landowner said to be on the brink of losing his home because it was built on wetlands without the necessary federal permit, as an egregious example of overzealous and unfair regulation. Chaconis himself, however, exclaimed that “[w]hat is wrong here is not wetlands policy gone awry, but the arrogant belief that some can do whatever they want with their property and all others be damned.”247 Chaconis attributed the problem to the builder of the house for going ahead with construction after being told that filling in the marshy site might lead to flooding of adjacent lots, which did occur.248 What mattered to the supporters of H.R. 961 was not that the value of neighboring land had been adversely affected by flooding attributable to development, but that federal regulation had impaired unconstrained development.

Similarly, the sponsors of H.R. 961 lionized John Pozsgai, whom they described as a landowner sent to prison “because he cleaned the lot behind his small business and spread two inches of topsoil on his property,”249 as a victim of “dictatorial” and “self-important bureaucrats” using “Gestapo-like tactics.”250 In fact, court records demonstrate that Pozsgai purchased his land with knowledge that it contained wetlands under the regulatory definition, negotiated a substantial reduction in the purchase price in exchange for accepting the property as is instead of making the transaction contingent on his ability to obtain a permit, and continued to fill the site without a permit despite receiving repeated warnings from the Corps of Engineers that by doing so he would be violating the law.251

The kind of rhetoric displayed in defense of H.R. 961 is hardly indicative of an attempt to engender serious debate over the proper balance between private property rights and protection of the environment. Instead, it seems designed to stir up an anti-regulatory fervor wholly apart from the degree to which environmental regulation intrudes on private property rights and the benefits provided by such regulation. Furthermore, the sponsors of H.R. 961 again ignored the damage caused by Mr. Pozsgai’s activities to neighboring landowners.252 Such selective defense of property rights is consistent with the conclusion that property rights legislation like H.R. 961 has as much to do with a desire to deregulate as it does with a desire to redress inequities attributable to the implementation of environmental regulations.

2. The Neglected Social Goals of Environmental Regulation

The proponents of legislative proposals consistent with the principles enunciated in the Contract With America accept efficient resource allocation as a legitimate goal of environmental regulation. They adhere to the long-standing view, however, that command-and-control regulation has not succeeded in redressing the inefficiencies attributable to an uncontrolled free market, and
their proposals for reform are designed to remedy that deficiency, as well as to achieve additional goals such as enhanced accountability and increased protection of private property against intrusive regulation. In the preceding sections, we have described why we doubt that Contract supporters have been completely candid in describing their environmental reform agenda.

Advocates of reform in accordance with the principles reflected in the Contract also profess to respect another of the primary justifications for environmental regulation of the past quarter century, the protection of public health from risks posed by development and pollution. Provisions such as the super-mandate cast doubt on the degree of this professed commitment. Bills such as H.R. 1022 would restrict the ability of agencies such as EPA to issue regulations in the absence of a rigorous demonstration that the costs of regulation justify its benefits, even though the benefits are much more difficult to quantify than the costs. By doing so, these bills would override provisions such as the Clean Air Act’s mandate that EPA adopt national ambient air quality standards that protect the public health with an adequate margin of safety.

The risk assessment provisions of the Republicans’ regulatory reform proposals illustrate a lack of commitment to achieving an equitable distribution of the risks posed by developmental activities. The provisions of H.R. 1022 and S. 343 that require formulation of a single best estimate of risk threaten to leave unprotected the segment of the population that is most susceptible to the risks posed by exposure to pollution. Even if risk assessors and environmental policy makers are able to reach a consensus about exactly what the bill envisions by referring to a best estimate of risk, the concept may hamper EPA’s ability to continue protecting groups experiencing disproportionately high risks, such as young, inner city, black children with blood lead levels above the level of concern identified by the Centers for Disease Control and Prevention. EPA Administrator Carol Browner testified before Congress in 1995 that the agency is concerned that use of the phrase “statistical best estimate” would “result in substantial percentages of the population — in some instances, perhaps as much as 50 percent of the population — not being protected” against environmental risks. In short, regulatory reform based on the principles of the Contract With America would elevate efficient resource allocation to a place of predominance in the hierarchy of environmental legislative objectives that it does not currently hold.

Supporters of proposals to implement the Contract by transforming environmental regulation at least pay lip service to the health protection goals of environmental law. They appear to be either unaware of, or willing to repudiate, the other non-economic justifications for environmental regulation. If the regulatory reform proposals of the Republican majority of the 104th Congress aspire to dispense with efforts to protect the environment to benefit future generations, to provide continued opportunities for individual fulfillment, and to avoid destroying resources that have value apart from their usefulness to humans, then these proposals are indeed largely deregulatory in nature. The proposals of Republican legislators concerning public land management provide the clearest indication that the advocates of these proposals are oblivious to non-economic justifications for environmental regulation such as promoting intergenerational equity. Legislative proposals to authorize drilling in the Arctic National Wildlife Refuge and clearcutting in the Tongass National Forest to sell off the national parks and monuments, to transfer up to 270 million acres of lands administered by the BLM to the states, to transfer responsibility for managing livestock on the federal lands to private ranchers, and to weaken the ESA are all of a piece. They represent the antithesis of many of the environmental laws currently on the books in that they seem to glorify the pursuit of short-term economic advantage regardless of its impact on the long-term value of the country’s natural resource base. These proposals may be couched in the language of regulatory reform, but their deregulatory bent is unmistakable.

B. The Contract as Regulatory Reform: Mismatch of Tools to Goals

We obviously cannot read the minds of those sponsoring the proposals for environmental regulatory reform introduced in the 104th Congress. As a result, we may have misread the intentions of those who advocate applying the Contract With America to environmental regulation. Their objectives may be exactly as they have stated them to be: to reform existing environmental regulation to make it a mechanism for pursuing the goals of existing law in a manner that is more efficient, accountable, and solicitous of private property rights. Assuming such to be the case, we explain in the remainder of this part why we believe that the reforms placed on the table by Contract supporters during the 104th Congress are unlikely to accomplish the professed goals of
the regulatory reformers. We believe that the tools favored by Contract adherents are just as ill-suited to the goals of regulatory reform as the tools of traditional environmental regulation allegedly responsible for regulatory failure have been in pursuing the original goals of environmental regulation.

1. More Efficient Resource Allocation
   a. Cost-Benefit Analysis

   Cost-benefit analysis is designed to increase the efficiency of environmental regulation in allocating resources by insuring that the benefits provided by regulation exceed its costs. But regulatory reformers appear loathe to concede that deficiencies of cost-benefit analysis as an analytical technique may limit its usefulness as a mechanism for increasing efficiency. According to one critic of recent regulatory reform efforts, “[n]ot only is our knowledge of likely effects imperfect and our measurement tools imprecise, but questions remain how to measure unquantifiable costs and benefits.” The difficulties in assigning monetary values to protection of the public health and environment are partially responsible for current legislative restrictions on the authority of agencies to consider the economic impact of regulation in designing environmental policy.

   The cost-benefit requirements that would be imposed on environmental regulators by pending reform legislation may be worse than ineffective in increasing regulatory efficiency; they also may be counterproductive. The principal vehicle for regulatory reform considered in the Senate in 1995, S. 343, would prohibit agencies from regulating unless the benefits of regulation justify its costs. In certain circumstances, S. 343 also would compel agencies to adopt the least cost regulatory alternative and insure that regulation results in a significant reduction of risk. The least cost alternative requirement may defeat the goal of increasing efficiency of resource allocation because it may prevent an agency such as EPA from selecting a slightly more costly regulatory mechanism even if it would yield a significantly higher environmental payoffs. The significant risk reduction requirement may sacrifice efficiency by precluding regulation that would produce cost-justified but small reductions in risk.

   b. Comparative Risk Assessment and Good Science

   The detailed risk assessment principles and procedures prescribed by the Republicans’ regulatory reform bills are designed to shift the focus of regulatory expenditures from trivial to significant risks so that each dollar spent on risk reduction is put to optimal use. Several aspects of these risk assessment proposals, however, appear to represent unlikely prospects for redressing existing misallocations of regulatory and compliance expenditures. The science of risk assessment is of relatively recent vintage, and it is, by most accounts, still a flawed analytical technique. Both H.R. 1022 and S. 343, by prescribing detailed risk assessment methodology, would codify existing techniques into law and might prevent environmental policymakers from adapting this methodology in response to scientific advances. A reasonable definition of “good science” is a dynamic methodology that adapts to the results of observation and experimental investigation. Although regulatory reformers have crusaded for measures that insure the use of “good science,” the departure from that ideal reflected in the freezing in place of current risk assessment methodologies creates the potential for serious misallocations of regulatory effort.

   The provisions of regulatory reform bills such as S. 343 that would authorize industry to file petitions to re-examine the validity of existing rules on cost-benefit or risk assessment grounds, and that would automatically terminate existing regulations not reviewed within statutory deadlines also could prevent environmental regulatory agencies from concentrating on the most serious risks. Faced with the prospect of termination of regulations which have not been reviewed and justified under the new cost-benefit and risk assessment principles, agencies are likely to divert ever scarcer resources from formulating regulatory responses to unaddressed risks they deem serious to defending existing regulations that, although they address significant risks and yield greater benefits to society than the costs they generate, impose costly compliance burdens on industry petitioners. The result may be a skewing of priorities that interferes with the goal of more efficient risk reduction efforts.

2. Enhanced Governmental Accountability

   Regulatory reform proposals such as H.R. 1022 and S. 343 may be no more effective at enhancing governmental accountability than they are at increasing the efficiency of environmental regulation. These proposals may impair accountability in several ways. First, the requirement that all risk assessments be cleared by peer review panels is a questionable means of enhancing accountability. Although peer reviewers would in theory be independent experts, it is likely that some would have personal axes to grind because of the manner in which the relevant research is funded. Such biases could slant environmental policy decisions toward preconceived results rather than toward implementation of congressional intent. The risk assessment process that would result from the adoption of H.R. 1022 or S. 343, therefore, arguably would shift at least some policy making responsibility to persons even less accountable than agency officials.

   Second, the technical nature of the risk assessment evaluation process might make it more difficult for interested members of the public to play a meaningful role in the regulatory process. Implementation of regulatory statutes designed to achieve social goals involves the trade-off of incommensurable values. Public participation in the rulemaking process can assist the agency in
making these trade-offs, which are essentially political in nature. Regulators basing decisions on the kind of prescriptive risk assessment methodology contained in H.R. 1022 and S. 343 will value public participation in the form of the technical studies that inform risk assessment decisions, but will “have little use for broad, non-technical comments directed toward the policy implications of the agency’s actions.” Only well organized and well-financed interest groups will be capable of the first kind of input. Increased reliance on the input of these groups will not necessarily translate into more accountable environmental policy.286

Third, the expanded opportunities for judicial review of agency risk assessments that would emanate from adoption of these regulatory reform proposals would increase the participation of the judiciary in environmental policy decisions.287 According to an EPA Assistant Administrator:

[the prescriptive nature of [the House regulatory reform bill] may invite courts to decide complex scientific issues, such as how to determine a central estimate of risk for the endangerment of a fishery, or whether an alternative model is appropriate for consideration. There is a real danger that if we are not careful, changes in risk assessment science and views of appropriate models, assumptions and interpretation of empirical data may soon be judged by case law, not by scientists.288

The availability of judicial review obviously promotes the rule of law by providing a safeguard against arbitrary governmental actions and thus can promote accountable agency decision making.289 But as the Supreme Court recognized in the Chevron case,290 the judiciary itself is the least accountable branch of the federal government,291 and the exercise of judicial activism can interfere with the achievement of legislative goals by substituting the judges’ policy preferences for those endorsed by Congress.292 It is possible that, on balance, regulatory reform proposals that immerse the judiciary in review of agency risk assessments will promote accountable environmental decision making, but it is also possible that these proposals will impair accountability.293 Regulatory reformers assert that the judicial involvement that will result from their proposals will foster increased accountability, but they have not demonstrated by careful analysis why this is so.

V. Conclusion

Despite billing its environmental agenda as regulatory reform, the Republican majority in the 104th Congress seems bent on eliminating as much environmental regulation as it can, rather than on endeavoring to promote the goals of such regulation through mechanisms that are more efficient, are the product of more accountable decision making processes, and are more protective of private property rights than current regulatory techniques. If, however, the advocates of change genuinely seek to transform the tools of environmental protection legislation to achieve its aspirations more effectively, much of the legislation they have sponsored is unlikely to succeed. The analytical processes to which agencies would be subjected under pending regulatory reform legislation would significantly increase the cost of issuing regulations. The rigid risk assessment methodology characteristic of the Republicans’ reform proposals, by codifying immature and imperfect analytical techniques, could very well aggravate resource misallocations.294 Pending reforms could impair accountable environmental policy making by vesting significant authority in peer reviewers whose impartiality cannot be guaranteed and in the courts and by minimizing meaningful public input.295

Legislators convinced that implementation of the environmental legislation of the last 25 years has generated regulatory failure do not face the Hobson’s choice suggested by the current crop of Republican reform proposals. The alternatives are not limited to leaving things the way they are, abandoning all of the goals of environmental regulation other than efficient resource allocation, and adopting reform techniques that are at least as ill-suited to achieving environmental protection goals as the ones to which past regulatory failures have been attributed. Both pending reform proposals and current laws provide models for more measured responses to perceived regulatory failures than the ones inspired by the rhetoric of the Contract With America.

Despite their nominal quest for more efficient environmental regulation, the Republican regulatory reform proposals contain cost-benefit requirements that will be expensive to implement and that may prevent the adoption of cost-justified regulations. The much simpler cost-benefit provisions of the Safe Drinking Water Act (SDWA) Amendments adopted by the Senate in 1995 appear to avoid these pitfalls. Instead of prescribing that each regulation represent the least cost alternative and requiring
elaborate and easily challenged justifications, S. 1316 would require that EPA publish in connection with SDWA rulemakings an analysis that includes discussion of a series of health risk reduction and cost-benefit provisions, but would leave the agency with considerable flexibility to adopt the regulatory approach it deems most cost effective. The bill provides that if EPA determines that the benefits of a maximum contaminant level (MCL) promulgated in accordance with these provisions would not justify the costs of complying with that MCL, the agency may issue an MCL that maximizes health risk reduction benefits at a cost that is justified by the benefits. 297

Likewise, the approach to risk assessment reflected in the SDWA bill avoids some of the self-defeating obstacles to efficient resource allocation contained within the principal Republican regulatory reform vehicles. The SDWA bill, unlike H.R. 1022 and S. 343, does not dictate a mandatory set of risk assessment and risk characterization principles with which each regulation must comply 298 and subject regulations to judicial review for substantial compliance with these requirements. 299 Instead, the bill requires that EPA use “the best available, peer-reviewed science and supporting studies” and reliable data in regulating under the SDWA and that, to the extent practicable, it furnish to the public a document that describes the population to be protected by the regulation, the expected risks experienced by that population, appropriate upper and lower-bound risk estimates, identified uncertainties, and relevant peer-reviewed studies. 300 The bill appears to leave more room than the Republicans’ regulatory reform proposals for EPA to factor into its decision making processes improvements in risk assessment methodologies.

The SDWA reform bill also seeks to assure that EPA chooses to regulate the most serious risks. Instead of doing so by requiring elaborate and expensive justifications in the context of each individual rulemaking, the bill would require EPA to submit periodic reports to Congress in which it ranks sources of pollution with respect to the relative degree of risk of adverse effects on health, welfare, and the environment. 301 To the extent practicable, each report would include an evaluation of risk management decisions under the federal environmental laws that present inherent and unavoidable choices between competing risks. 302 This requirement would force the agency to engage in the kind of comparative risk assessment recommended in EPA’s 1987 Unfinished Business report 303 and supported by Justice Breyer in Breaking the Vicious Circle. 304 It also would give Congress the opportunity to redirect the agency’s efforts in the event it detected a misallocation of regulatory resources or decided that a reordering of priorities was appropriate. Because S. 1316 does not include the “look back” 305 and sunset provisions 306 characteristic of reform proposals such as S. 343, it would avoid the opportunities for misallocation of agency resources that may be attributable to agency compliance with those provisions. 307

Some environmental laws already call for the kind of risk prioritization that would emanate from S. 1316, without hamstringing agencies with burdensome and potentially counterproductive analytical procedures. The Occupational Safety and Health (OSH) Act, for example, requires that, “[i]n determining the priority for establishing [occupational safety and health standards],” the Occupational Safety and Health Administration “give due regard to the urgency of the need for mandatory safety and health standards for particular industries, trades, crafts, occupations, businesses, workplaces or work environments.” 308 The ESA authorizes the Interior Department to defer action on a petition for species listing, even if the Secretary concurs that listing is appropriate, if deferral is necessary to enable the agency to complete action on pending proposals for the listing of other species on which expeditious progress is being made. 309 A federal district court recently described this provision as one which “gives the agency discretion to direct its energy and resources to those species most in need of listing, recategorization or delisting.” 310 Congress directed the Department to use a “scientifically based priority system” in implementing this comparative risk assessment provision and to “proceed in an efficient manner.” 311 Legislators who seek to achieve efficient resource allocation by directing regulators to address the most serious risks first, without tying the hands of decision makers with onerous and costly procedural requirements and without prescribing the use of soon-to-be-obsolete scientific methodologies, might profitably turn to these provisions of the OSH Act and the ESA as models for reform.

Finally, S. 1316 provides checks on agency discretion without vesting undue authority in peer review panels that include representatives of the regulated industries or in the courts. The bill would require that EPA use the best available, objective, peer-reviewed science and studies and support regulations in publicly available documents with references to peer-reviewed studies known to EPA to be directly relevant to the subject of regulation. 312 It would not require that the agency convene a peer review that may include persons who represent entities with a direct interest in the outcome or authorize the Office of Management and Budget to require such a review for major regulations. 313 S. 1316 would authorize judicial review of compliance with the bill’s cost-benefit mandates, but only as part of review of the final regulations and subject to the well-established arbitrary and capricious test. 314 This set of review provisions seem less likely to invite judicial second-guessing of agency decisions on technical matters or fly-specking of compliance with procedural obligations than does H.R. 1022’s provision authorizing judicial review of each risk assessment or risk characterization document for “substantial compliance” with
both the procedural and substantive requirements of the bill's risk assessment provisions.\textsuperscript{315}

It is not the purpose of this concluding section to design a comprehensive regulatory reform package that avoids all of the pitfalls of the principal legislative vehicles supported by the Republicans during the 104th Congress. Rather, the preceding comparisons are meant to induce legislators on both sides of the political aisle who support the objectives of environmental regulation, but wish to make it more effective, to engage in the same kind of scrutiny with respect to the fit between the ends and means of regulatory reform as the critics of regulation have applied to the fit between the ends and means of traditional environmental regulation. This kind of scrutiny is unlikely to emerge from the kind of "one-size-fits-all" regulatory reform that characterizes both H.R. 1022 and S. 343. A cost-benefit requirement that is rationally related to the achievement of efficient regulation in the context of one regulatory program may be counterproductive in another context.

Further, any attempt to assess accurately the correlation of regulatory tools and goals must be based on the recognition that the objectives of environmental regulation in the United States during the past twenty-five years have extended beyond efficient resource allocation. We believe that it is possible to address any defects in existing environmental regulation in a manner that promotes efficiency, accountability, and protection of private property without discarding the non-economic justifications for such regulation. If the supporters of the Contract With America are intent upon reforming rather than eliminating environmental regulation, they will begin to factor these noneconomic considerations into the reform equation.

\begin{notes}
\textsuperscript{*}The authors thank Sidney Shapiro for his helpful comments on a draft of this article.


2. The regulatory reform proposals discussed in this article apply to agencies that are not engaged in regulation to protect health and the environment, but the article's analysis is limited to the impact of regulatory reform on environmental regulation.

3. SIDNEY A. SHAPIRO & JOSEPH P. TO MAIN, REGULATORY LAW AND POLICY 56 (1993) (citing M. BERNSTEIN, REGULATING BUSINESS BY INDEPENDENT COMMISSION (1955)). The six stages are free market, market failure, government regulation, regulatory failure, regulatory reform, and deregulation. \textit{Id.}

4. \textit{Id.} at 46.

5. As Professors Shapiro and To main point out, the justification for regulation may be either economic or noneconomic in nature, although "[m]ore often than not, these two justifications are mixed." \textit{Id.} Traditionally, environmental regulation has been justified on both economic and noneconomic grounds. \textit{See infra} part II.B.1.a.

6. SHAPIRO & TOMAIN, supra note 3, at 46; Sidney A. Shapiro, \textit{Keeping the Baby and Throwing Out the Bathwater: Justice Breyer's Critique of Regulation}, 8 ADMIN. L. J. AM. U. 721, 727 (1995); STEPHEN BREYER, REGULATION AND ITS REFORM 191 (1982) ("regulatory failure sometimes means a failure to correctly match the tool to the problem at hand. Classical regulation may represent the wrong governmental response to the perceived market defect.").

7. SHAPIRO & TOMAIN, supra note 3, at 57.

8. \textit{See infra} part IV.A. We do not contend that all members of the Republican majorities in Congress, or even all those who support the regulatory reform proposals discussed in this article, are of an ideological piece. When we refer in this article to supporters of the approach to regulation reflected in the Contract With America, we mean the most enthusiastic proponents of the kinds of reform that dominated the debate in the first session of the 104th Congress, at least in the House of Representatives.

9. Economic market failure occurs when the unfettered forces of supply and demand fail to operate in a manner that maximizes consumer welfare because it does not result in the delivery of the exact mix of goods and services desired by consumers. Market failure may be attributable to a variety of factors, such as inadequate information about goods and services or the failure of the free market to internalize spillover costs. One purpose of regulation is to remedy that failure by permitting the market to reflect more accurately the true costs of goods and services so that supply and demand match better than they did in the unregulated market place. SHAPIRO & TOMAIN, supra note 3, at 41.

10. ROYAL COMM'N ON ENVIRONMENTAL POLLUTION, FIRST REPORT 4-6 (1971), reprinted in ROGER W. FINDLEY & DANIEL A. FARBER, CASES AND MATERIALS ON ENVIRONMENTAL LAW 32 (4th ed. 1995). See also ENVIRONMENTAL LAW INST., ENVIRONMENTAL LAW: FROM RESOURCES TO RECOVERY 115 (Celia Campbell-Moehn et al., eds., 1993) [hereinafter ENVIRONMENTAL LAW: FROM RESOURCES TO RECOVERY]:

\begin{quote}
Pollution beyond the assimilative capacity of a natural system is a result of inefficiency because the polluting activity used common resources, such as the air or water, to dispose of its waste without reflecting the social costs of the pollution in the price of the product. Where pollution is unregulated, activities have an economic incentive to shed as much of their costs as possible, creating waste.
\end{quote}

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11. W. BAUMOL & W. OATES, ENVIRONMENTAL POLICY AND THE QUALITY OF LIFE 76 (1979) ("Fresh air, clean water, and attractiveness of the neighborhood are all available for the taking, and that is precisely where the difficulty lies, for a zero price is an invitation to the user to waste the resources for which he pays nothing.").

12. BREYER, supra note 6, at 192:

     A spillover cost problem results when the price of a product does not adequately reflect all the costs that its creation imposes. Thus, its solution rarely involves suppressing the product entirely. Rather, it requires more accurate balancing by producers and consumers in choosing among products and production processes (say, among polluting and nonpolluting processes or between products that create pollution and those that do not). It also requires increased incentives for consumers to avoid products that create the cost and for producers to look for methods to reduce those costs.

13. W. BAUMOL & W. OATES, supra note 11, at 76. See also Mark Sagoff, Economic Theory and Environmental Law, 79 Mich. L. Rev. 1393, 1393 (1979) (economists urge the correction of market failure, which causes a divergence of private and social costs and inefficient resource allocation, by requiring private decision makers to internalize externalities, "mak[ing] the prices of goods reflect all the economic and social costs of producing them, including the pollution costs"). Ideally, environmental regulation will result in a resource allocation that is optimal in the sense that any further increase in environmental protection would cost more than it is worth, while any decrease would reduce benefits whose value exceeds the cost of reduction. Id. at 1393-94 (citing Ruff, The Economic Common Sense of Pollution, in MICROECONOMICS: SELECTED READINGS 500-01 (2d ed. E. Mansfield ed., 1975)).


15. Indeed, given the emphasis in the literature placed on the economic underpinnings of environmental regulation during the last 25 years, the number of references in the federal environmental statutes to economic efficiency goals or corrections of market failure is surprisingly small. See, e.g., Daniel A. Farber, From Plastic Trees to Arrow's Theorem, 1986 U. Ill. L. Rev. 337, 337 ("Environmental statutes rarely invoke the cost-benefit analysis favored by economists. Instead, they require the maximum feasible commitment to achieving environmental values, without much regard for the costs involved."). Cf. Sagoff, supra note 13, at 1396 (environmental protection legislation "goes beyond the mere correction of market deficiencies").

16. The purposes of the ESA include "provid[ing] a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved." 16 U.S.C. § 1531(b) (1994). While the ESA (as well as other wildlife protection laws, see infra note 34 and accompanying text) may be defended as a means of protecting species which have a right to exist in their own right, the statute is often justified on the basis of the benefits which protected species may ultimately provide to humans. Obliteration of plant species, for example, precludes their use for medicinal purposes. See, e.g., 141 Cong. Rec. S12007 (daily ed. Aug. 9, 1995) (statement of Sen. Reid) (taxol produced by the Pacific yew tree is used to treat ovarian and breast cancer, but clear cutting of forests in the Pacific Northwest "has really squandered the natural yew supply . . . . [A]bout 50 percent of the medicine and treatments used today can be traced directly to plants."). See also id. at S12008 (statement of Sen. Reid) ("[T]he desert pup fish, one of the tiniest invertebrates on the Earth, is helping researchers to learn more about kidney disease" and "[r]esearching the mechanisms of how bears survive hibernation may result in treatment for osteoporosis in the elderly and, again, for kidney failure . . . . Of the 220,000 worldwide types of plants, only 5000 have been examined for medical compounds.").

17. Efforts to prevent destruction of the stratospheric ozone layer and to prevent global warming are good illustrations of similar objectives in the pollution control context.


20. A. Dan Tarlock, Biodiversity Federalism, 54 Md. L. Rev. 1315, 1323 (1995). Professor Tarlock thus stakes out a clear position "in the debate over whether environmentalism is morally or spiritually based versus scientifically based." Id. See also id. at 1323 n.31 (citing Holmes Rolston, III, Science-Based Versus Traditional Ethics, in ETHICS OF ENVIRONMENT AND DEVELOPMENT: GLOBAL CHALLENGE, INTERNATIONAL RESPONSE (J. Ronald Engle & Joan G. Engle eds., 1993)).


22. E.g., Lead Indus'. Ass'n v. EPA, 647 F.2d 1130, 1150 (D.C. Cir.), cert. denied, 449 U.S. 1042 (1980) (the Clean Air Act prohibits EPA from taking cost into account in establishing national ambient air quality standards). Senator Muskie, one of the chief sponsors of the Clean Air Act, argued in favor of the adoption of technology-forcing legislation as follows: "[O]ur responsibility is to establish what the public interest requires to protect the health of persons. This may mean that the people and industries will be asked to do what seems to be impossible at the
present time. But if health is to be protected, these challenges must be met." 136 CONG. REC. S2835 (daily ed. Mar. 21, 1990). This statement appears to regard protection of the public health as a goal that should not be compromised by economic considerations.


24. Mark Sagoff, The Principles of Federal Pollution Control Law, 71 MINN. L. REV. 19, 79-80 (1986) ("Environmental statutes, in short, stand squarely in the tradition of legislation that seeks to control and eliminate moral evils. The Clean Air Act, for example, puts an ethical concern with public health and safety ahead of economic and commercial interests. It ‘does not allow economic growth to be accommodated at the expense of the public health.’").

25. See Sagoff, supra note 13, at 1397-98 (The Clean Air Act’s provisions for protecting pristine air quality in the national parks and similar areas “is justified . . . by a national sense of responsibility. What kind of nation would turn magnificent wilderness into polluted fens in order to make energy cheaper and therefore easier to waste? Questions like this have led many Americans to believe that the preservation of wilderness from pollution is what national dignity and self-respect minimally require.”). Environmentalists such as Aldo Leopold have traced the environmental problems of the late 20th century to the belief that “good land use decisions can arise from an unregulated market and the countless selfish decisions that compose it.” Eric T. Freyfogle, The Owning and Taking of Sensitive Lands, 43 UCLA L. REV. 77, 112 (1995).

26. See, e.g., Daniel A. Farber & Paul A. Hemmingsbaugh, The Shadow of the Future: Discount Rates, Later Generations, and the Environment, 46 VAND. L. REV. 267, 291 (1993) (“it is probably safe to assume that most people agree we have at least some responsibilities to consider and provide for the welfare of future generations”).

27. ENVIRONMENTAL LAW: FROM RESOURCES TO RECOVERY, supra note 10, identifies two aspects of intergenerational equity reflected in the environmental laws:

First is preserving natural systems for future generations so that the human species can perpetuate itself at the same quality of life and standard of living as present generations. This objective is different from efficiency and sustainability, because it considers the quality of life in the future, not just the amount of yield. Second is preserving areas of national significance due to their aesthetic appeal, historic attributes, or ecological significance for the use and enjoyment of future generations.

Id. at 122.

28. See, e.g., 16 U.S.C. § 1 (1994) (stating that the purposes of the national parks are “to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by means as will leave them unimpaired for the enjoyment of future generations”). See also 16 U.S.C. § 460l-4 (1994) (Land and Water Conservation Fund Act is meant to assure accessibility of future generations to outdoor recreational resources).


30. See GEORGE CAMERON COGGINS & ROBERT L. GLICKSMAN, PUBLIC NATURAL RESOURCES LAW § 2.03[3] (1990, updated semi-annually) (“The early conservationist impulses to safeguard scenery, forests, and wildlife for future generations largely account for the present existence of the park, forest, and wildlife refuge systems.”).

31. See, e.g., PA. CONST. art. 1, § 27 (“The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania’s public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.”). Cf. 42 U.S.C. § 4331(b)(1) (1988) (recognizing the federal government’s continuing responsibility to “fulfill the responsibilities of each generation as trustee of the environment for succeeding generations”). But see L. Summers, Summers on Sustainable Growth, THE ECONOMIST, May 30, 1992, at 65 (“The argument that a moral obligation to future generations demands special treatment of environmental investments is fatuous. We can help our descendants as much by improving infrastructure as by preserving rain forests, as much by educating children as by leaving oil in the ground, as much by enlarging our scientific knowledge as by reducing carbon dioxide in the air.”).

32. ROBERT V. PERCIVAL, ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 19 (1992). Accordingly, a recurring argument in favor of wilderness preservation is that it will enhance “our lives and our conception of ourselves . . . - in a spiritual sense - if we learn to appreciate [nature] for what it is and we learn how to live in harmony with it.” Id. (quoting J. Thompson, Preservation of Wilderness and the Good Life, in ENVIRONMENTAL PHILOSOPHY (R. Elliott & A. Gare eds., 1983)). The Wilderness Act defines wilderness in part as land that provides “outstanding opportunities for solitude.” 16 U.S.C. § 1131(c)(2) (1994). Because it is hard to quantify the
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value of solitude, wilderness preservation in order to preserve opportunities for solitude makes no sense if the only objective is the promotion of economically efficient resource allocation. See also Carol M. Rose, Given-Ness and Gift: Property and the Quest for Environmental Ethics, 24 ENVTL. L. 1, 12 (1994) (laws such as the Endangered Species Act and the National Wild and Scenic Rivers Act reflect "a certain effort to recognize spiritual values, most notably in our laws about wilderness and wild creatures."). These laws "seem to be animated by a much more emotional sense of the 'gift' of our wild areas, and a sympathetic concern for their loss.").


34. 16 U.S.C. § 1331 (1994) (justifying efforts to preserve wild horses and burros because "they contribute to the diversity of life forms within the Nation"). See also ENVIRONMENTAL LAW: FROM RESOURCES TO RECOVERY, supra note 10, at 126-27 (describing the Marine Mammal Protection Act as an example of biocentrism in present law). At least one court has interpreted state environmental legislation as giving "the force of law" to the land ethic of Aldo Leopold, which "simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land." ALDO LEOPOLD, A SAND COUNTY ALMANAC AND SKETCHES HERE AND THERE 204 (1949). See Application of Christenson, 417 N.W. 2d 607, 615 (Minn. 1987).

35. See Douglas R. Williams, Valuing Natural Environments: Compensation, Market Norms, and the Idea of Public Goods, 27 CONN. L. REV. 365, 376 (1995) ("[T]he market failure theory [and its] supporting pricing rhetoric does not adequately express the way in which natural environments are valued by substantial segments – indeed, a sizable majority – of the citizenry. Public decisions to protect such environments as public goods can then be understood as an attempt to institutionalize and protect through law a substantive conception or, better, a plurality of substantive conceptions of why natural environments are valuable."); id. at 378 ("[T]he protections we wrap around particular natural environments are best understood as public, political commitments to shield these environments from raids by other institutions, the most threatening of which is the market and the values it institutionally embraces and the purposes for which it serves as an expressive vehicle."). See also PETER S. MENELL & RICHARD B. STEWART, ENVIRONMENTAL LAW AND POLICY 143 (1994) ("It is far from obvious that government policies should in principle be addressed solely to 'consumers' existing preferences. Congress in practice – and often in disregard of the advice of proponents of the economic allocation model – frequently adopts policies . . . that seem implicitly to reject the criterion of maximizing the satisfaction of existing preferences.").

36. CASS SUNSTEIN, AFTER THE RIGHTS REVOLUTION: RECONCEIVING THE REGULATORY STATE 58 (1990). See also Sagoff, supra note 13, at 1395-96 ("most Americans reject the notion that the natural environment should be made over to serve the wants of the self-interested consumer").

37. See Robert Glicksman & Christopher H. Schroeder, EPA and the Courts: Twenty Years of Law and Politics, LAW & CONTEMP. PROBS., Autumn 1991, at 249, 305-06. See also Sagoff, supra note 13, at 1418-19:

The environmental legislation of the last twenty years has consistently indicated our preference for national policies that respond to concerns other than economic efficiency. This legislation rejects markets as the indicator of the national will. There is nothing in this legislation or in the public debate on environmental protection that remotely suggests that most people regard pollution as a problem only because pollution is inefficient. Rather, we regard it as a problem because it is efficient . . . These laws demonstrate that we are not consumers bent on satisfying every subjective preference. We are that, of course, but we are citizens as well. And, as citizens, we insist upon a model of government and a vision of political life that allow us to posit collective values and to give effect to our common will.


41. PERCIVAL, ET AL., supra note 32, at 149-50 (the Occupational Safety and Health Administration commonly adopts design standards).

42. MENELL & STEWART, supra note 35, at 234 ("Command and control regulation consists of direct requirements on production methods or outputs."). See also ENVIRONMENTAL LAW: FROM RESOURCES TO RECOVERY, supra note 10, at 130; Richard B. Stewart, Regulation, Innovation, and Administrative Law, 69 CALIF. L. REV. 1256, 1264 (1981).

43. Professors Menell and Stewart raise the possibility that Congress turned to command-and-control regulation because environmental regulation in this country has tended to follow the
“catastrophe theory of planning,” and “government response to crisis is often typified by quick (and, therefore, generally crude) measures aimed at preconceived ‘wrongdoers’ such as industrial polluters.” MENELL & STEWART, supra note 35, at 239. The predominance of command-and-control regulation also may be attributable to an ignorance of economic theory:

It may be, as well, that the roots of the regulatory tradition lie in the fact that most people, including most public decision makers, do not understand either the ways in which social and economic systems function to produce pollution problems or the sophisticated market-based programs of control offered by theoreticians and experts.

Id. The authors acknowledge, however, that command-and-control regulation may be “the most effective approach, particularly when real-world problems of implementation and administration are taken into account.” Id.

44. S. REP. No. 414, 92d Cong., 1st Sess. 4 (1971). See also WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW 54 (2d ed. 1994) (“The philosophy that sustained the best-technology movement in U.S. environmental law is that acts of pollution are presumptively social wrongs, and that a best-efforts standard of avoidance is an appropriate norm that should be embraced by the law . . . . It broke the necessity for a close legal linkage between proof of damage and the need for control. It abandoned any generic reliance on cost-benefit principles where cleanup would be expected only if the benefits of clean water exceeded the costs of obtaining it.”).


46. The precautionary principle “asserts that regulators and decision makers should act in anticipation of environmental harm, without regard to the certainty of scientific information pertaining to the risk of harm . . . . Adoption of the precautionary approach signals a shift from the historically accepted policy-making paradigm, which places undue reliance on the fallibility and comprehensiveness of scientific knowledge, and clings to the notion that nature’s assimilative capacities are unbounded, or even ascertainable.” Gregory D. Fullem, Comment, The Precautionary Principle: Environmental Protection in the Face of Scientific Uncertainty, 31 WILLAMETTE L. REV. 495, 497-98 (1995).


48. Professors Shapiro and McGarity claim that any increase in efficiency attributable to the application of cost-benefit analysis or to the application of economic incentive-based approaches would come at a cost in equity because, under most proposals for reform along these lines, the efficiency gains would be captured entirely by regulated firms rather than distributed among the intended beneficiaries of regulation. See Shapiro & McGarity, supra note 23, at 740. See also Jonathan Bender, Societal Risk Reduction: Promise and Pitfalls, 3 N.Y.U. ENVTL. L. J. 255, 276-77 (1995) (criticizing argument that costs saved through reduction in environmental regulation could be used for more efficient and effective risk reduction because cost savings would probably not be redistributed to regulatory beneficiaries, and even if they were, there is no assurance that these savings would actually be spent on risk reduction efforts).

49. MENELL & STEWART, supra note 35, at 246. But see Richard Revesz, Rehabilitating Interstate Competition: Rethinking the “Race to the Bottom” Rationale for Federal Environmental Regulation, 67 N.Y.U. L. REV. 1210 (1992) (arguing that the desire to prevent states from competing for industry is not a convincing justification for federal pollution control laws).

50. Latin, supra note 45, at 1271. Virtually all of the major federal pollution control laws have citizen suit provisions that authorize adversely affected individuals to sue EPA for failure to perform a nondiscretionary duty and regulated entities alleged to be in violation of their regulatory obligations.

51. Congress anticipated, for example, that the deadlines in the Clean Air Act of 1970 for emission standards for new cars and trucks would spur the auto manufacturers to develop improved, less-polluting versions of or substitutes for the internal combustion engine. See also EPA v. National Crushed Stone Ass’n, 449 U.S. 64, 75-78 (1980) (making variances from nationally uniform effluent limitations available on grounds of economic affordability would be inconsistent with the technology-forcing character of the Clean Water Act).

52. Latin, supra note 45, at 1273. See also Shapiro & McGarity, supra note 23, at 743 (although technology-based regulation is imperfect, “this ‘academic failure’ has been an enormous success in the real world”).

53. In large part, this difficulty is attributable to the fact that the nearly one-third of the nation’s land owned by the federal government is managed in five different systems by four federal agencies, each subject to its own baffling array of statutory management directives. The five systems are the National Park, Forest, and Wildlife Systems (administered by the National Park
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Service, the Forest Service, and the Fish and Wildlife Service, respectively, the BLM public lands, and areas carved out of the preceding four systems for special protection as wilderness, wild and scenic rivers, and national trails. ROBERT L. GLICKSMAN & GEORGE CAMERON COGGS, MODERN PUBLIC LAND LAW 1-3 (1995).

54. COGGS & GLICKSMAN, supra note 30, § 1.02[2] (citing Udall v. Tallman, 380 U.S. 1, 19 (1965)).

55. Id. §§ 2.02, 2.03[d].


58. See James L. Huffman, The Inevitability of Private Rights in Public Lands, 65 U. COLO. L. REV. 241, 275 (1994) [hereinafter Private Rights] (the Multiple-Use, Sustained-Yield Act “was designed to assure that the wealth [attributable to public natural resources] was shared”).

59. Cf. Huffman, Public Lands Management, supra note 56, at 30 (the objectives of public lands management “should be to maximize the net benefits experienced by the members of our society while assuring fairness in the distribution of the costs and benefits of that management”). Professor Huffman argues that allocational efficiency includes protection of aesthetics, species survival, and the needs of future generations because people place measurable values on these objectives. Id. at 30 n.2. See also James Huffman, Governing America’s Resources: Federalism in the 1980’s, 12 ENVTL. L. 863, 897 (1982) [hereinafter America’s Resources] (public resources management seeks to retain certain lands in public ownership to preserve opportunities for certain individual activities that are essential to maintain important societal values, to protect the interests of future generations, and to provide for uses that would not be provided in a private market economy).

60. Id. § 475 (1994).

61. 16 U.S.C. §§ 528-531 (1994). See COGGS & GLICKSMAN, supra note 30, § 16.01[1] (“If multiple use statutes are as standardless as some courts apparently assume, they might be vulnerable to nondelegation doctrine challenge.”).


63. Id. § 529.

64. Id. § 531(b).

66. Id. § 531(a).


69. Id. § 1131(a). The Act defines wilderness, in part, as “an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain.” Id. § 1131(c).


71. Id. § 668dd(a)(1).


73. Id. § 4332(2)(C). See generally COGGS & GLICKSMAN, supra note 30, chapter 10G.


76. For a description of these duties, see generally COGGS & GLICKSMAN, supra note 30, chapter 15C.


79. Thus far, the courts have tended to treat BLM decisions under the FLPMA planning provisions somewhat more deferentially than Forest Service decisions under the NFMA. Compare COGGS & GLICKSMAN, supra note 30, § 10F.04[4] with id. § 10F.05[3]-[4].


82. Pildes & Sunstein, supra note 80, at 98. For similar reasons, critics of command-and-control regulation have argued that inquiries into the feasibility of control techniques for various industries impose massive information accumulation burdens on
regulators and that agency determinations of best available technology tend to prompt litigation funded by money which could have been invested in compliance efforts under a more decentralized, market-based system. Reforming Environmental Law, supra note 81, at 1336-37.

83. Technology-based controls also are arguably counterproductive from an environmental perspective because, contrary to the technology-forcing objective of Congress, they discourage the development of new pollution control technology, which will become mandatory as soon as the agency learns about it. See Reforming Environmental Law, supra note 81, at 1336.

84. Id. at 1335-36.

85. See, e.g., id. at 1337 (technology-based regulation "is inconsistent with intelligent priority-setting" because "[i]t simply regulating to the hilt whatever pollutants or problems happen to get on the regulatory agenda may preclude an agency from dealing adequately with more serious problems that come to scientific attention later").

86. ENVIRONMENTAL PROTECTION AGENCY, UNFINISHED BUSINESS: A COMPARATIVE ASSESSMENT OF ENVIRONMENTAL PROBLEMS (1987) [hereinafter UNFINISHED BUSINESS], referenced in ENVIRONMENTAL PROTECTION AGENCY, REDUCING RISK: SETTING PRIORITIES AND STRATEGIES FOR ENVIRONMENTAL PROTECTION 4 (1990) [hereinafter REDUCING RISK]. UNFINISHED BUSINESS assessed a ranking, prepared by a group of senior agency managers and staff, of the risks posed by thirty-one of the environmental problems EPA regulates. The report concluded that the risks that were most severe were not necessarily the same as those to which EPA or Congress had devoted the most attention. Id. See also Donald T. Hornstein, Reclaiming Environmental Law: A Normative Critique of Comparative Risk Analysis, 92 COLUM. L. REV. 562, 579 (1992) (the EPA report described a "mismatch between the Agency’s high regulatory effort on ‘medium to low’ risks (mostly involving groundwater pollution) and low regulatory effort on ‘high’ risks (especially various forms of indoor and global air pollution)").

87. REDUCING RISK, supra note 86.


89. Stephen Breyer, Beyond the Vicious Circle, 3 N.Y.U. ENVTL. L. 251, 251 (1995) ("The first theme of Breaking the Vicious Circle is the existence of a serious problem of misallocation of both the regulatory budget and compliance expenditures created by our current system of risk regulation. If we are spending somewhere in the range of $4 billion per life saved on hazardous waste land-disposal bans, while failing to implement vaccination and mammography programs that could save lives at a cost of well below $100,000 per life, something is wrong, and lives are being wasted.").

90. E.g., John D. Graham, The Risk Not Reduced, 3 N.Y.U. ENVTL. L. 382, 395 (1995) ("redeployment of existing resources could achieve substantial gains in health and environmental protection"); Pildes & Sunstein, supra note 80, at 8-9 (government should see "as one of its principal missions, the goal of rationalizing regulatory policy by ensuring good priority setting, comparison of risks in terms of seriousness, and careful attention to the most important problems."). Justice Breyer supported the creation of a centralized administrative group staffed with experts in risk assessment and risk management whose goal would be better coordination and rationalization of federal risk regulation. Breyer, supra note 89, at 251.

91. Pildes & Sunstein, supra note 80, at 100; Market Incentives, supra note 81, at 189; Cass R. Sunstein, Administrative Substance, 1991 DUKE L. J. 607, 626-29. Lisa Heinzerling, Selling Pollution, Forcing Democracy, 14 STAN. ENVTL. L. J. 300 (1995), argues that the economic-incentive-based regulatory approach favored by Ackerman, Stewart, Sunstein, and others will not promote democratic values better than command-and-control regulation does.

92. See supra note 50 and accompanying text.

93. E.g., Bruce Hamilton, Unfinished Business, SIERRA, Sept./Oct. 1989, at 48 ("the agencies entrusted with [managing the federal lands] continue to open the door to development in the pristine places that remain"); sources cited in Huffman, Private Rights, supra note 59, at 242-43.


96. James L. Huffman, Protecting the Environment from Orthodox Environmentalism, 15 HARV. J. OF L. & PUB. POL’Y 349, 353 (1992) [hereinafter Orthodox Environmentalism]; James L. Huffman, Markets, Regulation, and Environmental Protection, 55 MONT. L. REV. 425, 431 (1994) [hereinafter Markets, Regulation] ("Even in the face of numerous legal obstacles, markets result in the private provision of many environmental benefits."); Id. at 431-32 ("If we removed the institutional obstacles to market transactions, not the least of which are the massive subsidies that state and local governments provide to destroyers of the environment, environmental protection would surely benefit."); James L. Huffman, Judge Plager’s "Sea Change" in Regulatory Takings Law, 6 FORDHAM ENVTL. L. J. 597, 598 n.11 (1995) ("Advocates of free market environmentalism take the position that property rights protection is critical to wise resource management and that many, if not most, environmental objectives will be better achieved through a clearly defined system of property rights and free markets.").

97. Terry L. Anderson & Donald R. Leal, Free Market Versus
Political Environmentalism, 15 HARV. J. L. & PUB. POL’Y 297, 299-302 (1992); id. at 298 (“Without the typical restrictions on end-use and location, the markets for federal water will ensure correct water prices, thereby promoting greater efficiency and conservation.”). See also Huffman, Markets, Regulation, supra note 96, at 433 (water markets would provide better incentives for efficient water use in the West than would the current system of reclamation project regulation).

98. Anderson & Leal, supra note 97, at 302.
101. Bruce Babbit, Federalism and the Environment: An Intergovernmental Perspective of the Sagebrush Rebellion, 12 ENVTL. L. 847, 849 (1982) (the Rebels support state ownership because it would be “less bureaucratic, more responsive, and more representative of state and local interests”); Huffman, Public Lands Management, supra note 56, at 52 (most of the Rebels “sought to shift public control from the federal to the state governments so that they might better influence the decisions of public managers”).

Professor Huffman has characterized the Sagebrush Rebellion as “a generally unsophisticated argument over political turf in the spirit of the colonial land claims and two centuries of intervening assertions of states rights.” Huffman, Public Lands Management, supra note 56, at 52. See also Huffman, Private Rights, supra note 59, at 241 (advocates of privatization of the public lands “have not been taken seriously”).

107. Reform of the federal land management laws proceeded along a different time line from reform of the federal pollution control laws. Whereas command-and-control regulation represented the first meaningful attempt at pollution control at the federal level, the federal lands and resources legislation adopted beginning in the 1960’s was itself a response to perceived deficiencies in traditional public land law. See supra notes 53-79 and accompanying text. As a result, by the mid-1970’s, when attacks on command-and-control regulation were just beginning, the public land laws had already experienced some of the kind of fine-tuning that the critics of command-and-control regulation were advocating in the pollution control arena. Because we discussed some of these reforms of the public land laws above, we limit this section to analysis of the early reforms to the federal pollution control laws.
108. See generally Joel Mintz, Economic Reform of Environmental Protection: A Brief Comment on A Recent Debate, 15 HARV. ENVTL. L. REV. 149 (1991); Heizerling, supra note 91, at 305-10. See also ENVIRONMENTAL LAW: FROM RESOURCES TO RECOVERY, supra note 10, at 140 (“Economic incentives provide a mechanism to spur innovation, reduce litigation, reduce administrative costs, provide flexibility and increase efficiency.”). See also Terry L. Anderson, Enviro-Capitalism vs. Environ-Socialism, KAN. J. L. & PUB. POL’Y, Winter 1995, at 35, 36-37 (reliance on the free market will provide the wealth to afford environmental quality and create the appropriate incentives to preserve environmental amenities).
109. JOHN H. DALES, POLLUTION, PROPERTY AND PRICES 83, 93-97 (1968). Two supporters of the use of marketable permits explained the benefits of such a system as follows:

Another good approach is for government to set the total quantity of a pollutant that will be permitted, then grant or sell a fixed number of tradable allowances or permits to discharge that substance. Government should generally impose fees on those who put pollutants into the atmosphere — instead of (for example) mandating a particular substance for use in motor vehicles. Consumption of the harm-producing goods will decline. Producers will shift to less harmful methods of production. . . . [A marketable permit system] would create market-based disincentives to pollute and market-based incentives for pollution control. Such a system would also reward rather than punish technological innovation in pollution control, and do so with the aid of private markets.
Pildes & Sunstein, supra note 80, at 113. See also Heinzerling, supra note 91, at 301 ("Market-based trading programs allow firms to choose the means of compliance that is cheapest for them, including buying permits from firms that can more cheaply reduce emissions and thus have excess permits to sell. As a result, many economists predict that such programs will reduce the costs of environmental protection.").

110. See A.C. Pigou, The Economics of Welfare 129-30 (1960); see generally F. Anderson, et al., Environmental Improvement Through Economic Incentives (1977); Rodgers, supra note 44, at 44 ("Many economists urge the taxing of pollution discharges to reflect the costs to the community, and thus bring the source closer to the 'optimality' ideal."); Pildes & Sunstein, supra note 80, at 112-13.

111. Percival, et al., supra note 32, at 151. Robert W. McGee & Walter E. Block, Pollution Trading Permits as a Form of Market Socialism and the Search for a Real Market Solution to Environmental Pollution, VI Fordham Envtl. L. J. 51, 52 (1994), contend that while the use of economic incentives is better than command-and-control regulation, "a system of fully protected private property rights is superior to both."

112. Market failure may occur absent government inducements to provide information because information may be a public good and manufacturers may lack incentives to provide information about products that may create risk. "[A]s a result, dangerous products may drive safe ones from the market." Pildes & Sunstein, supra note 80, at 103-04. See generally Mary L. Lyndon, Information Economics and Chemical Toxicity: Designing Laws to Produce and Use Data, 87 Mich. L. Rev. 1795, 1831-33 (1989); Howard Latin, Environmental Deregulation and Consumer Decisionmaking About Uncertainty, 6 Harv. Envtl. L. Rev. 187 (1983).

113. See Pildes & Sunstein, supra note 80, at 105 (provision by the government of sufficient information to enable people to make knowledgeable judgments may increase the democratic character of government by promoting citizen participation in and control over government responses). Cf. id. at 115 (economic incentive programs may also promote democracy because "a system of financial penalties or rewards allows less room for interest-group maneuvering. The large question – how much environmental protection at what cost – does not permit legislators to favor a well-organized, narrow group, such as the agricultural lobby or the coal lobby. Special favors cannot be provided so readily through a system of economic incentives. The very generality of the question will work against narrow favoritism.").


118. Id. § 7651b(b). For a critical appraisal of the acid deposition control provisions from the perspective of enhanced democratic accountability, see Heinzerling, supra note 91, at 319-36.


121. Percival, et al., supra note 32, at 622. Less than a year after that incident, an accidental release of aldicarb oxide from a Union Carbide plant in West Virginia deflated company claims that "such accidents could not happen here." Id.


123. Percival, et al., supra note 32, at 626.

124. Pildes & Sunstein, supra note 80, at 106. A California analogue of EPCRTKA, the Safe Drinking Water and Toxic Enforcement Act of 1986 (also known as Proposition 65), has reportedly had similar beneficial effects without inflicting the "significant and detrimental" economic impact on agriculture and manufacturing predicted by the law's critics. See Percival, et al., supra note 32, at 626.


126. In the section on "Accountability," the Contract pronounced that "[t]he government is too big and spends too much, and Congress and unelected bureaucrats have become so entrenched to be unresponsive to the public they are supposed to serve. The GOP contract restores accountability to government." Republican Members of the House of Representatives, Contract With America 1 (Sept. 28, 1994).

127. The Contract's section on "Responsibility" declared that "[b]igger government and more federal programs usurp personal responsibility from families and individuals. The GOP contract restores a proper balance between government and personal..."
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responsibility.” Id. 128. According to the Contract’s section on “Opportunity,” [t]he American dream is out of the reach of too many families because of burdensome government regulations and harsh tax laws. The GOP contract restores the American dream.” Id. 129. See, e.g., H.R. REP. NO. 39, 104th Cong., 1st Sess., pt. 1, at 5 (1995) (“On November 8, 1994, the American people sent a clear message to Washington: ‘GET GOVERNMENT OFF OUR BACKS.’ Included in this message was a deep and growing resentment of the extent to which federal regulations have intruded upon the every-day lives of most Americans.”).

130. E.g., 141 CONG. REC. S12024 (daily ed. Aug. 9, 1995) (statement of Sen. McConnell) (“Once again, the Federal regulatory apparatus is poised to disrupt a broad range of industries, and pass the costs on to middle-class consumers . . . . Here we’re trying to encourage investment and job creation — and these regulations could force a Kentucky plant to close down a state-of-the-art manufacturing operation and let go thousands of employees. All because some bureaucrats in Washington are designing their perfect world for the rest of the country to follow.”); id. at S11234 (statement of Sen. Hutchison) (“We have seen so many people devastated in their ability to use their land and farm and ranch and make their livelihoods, because of the Endangered Species Act being overzealously enforced.”).

131. H.R. REP. NO. 39, supra note 129, at 9 (federal regulations cost the private sector from $430-$500 billion annually, and “the American people have a right to ask whether they are getting their money’s worth”); H.R. REP. NO. 33, supra note 125, at 15 (“The general problem as perceived by many in State and local government and in the business community is that Federal regulatory costs are too often out of proportion to the problems that the regulations are designed to address.”).

132. The committee report on the Job Creation and Wage Enhancement Act of 1995 stated:

The concern with Federal risk assessment practices is the perception among many that Federal risk assessment, characterization and communications is biased and based on a series of hypothetical assumptions which are designed to overstate the risks. . . . In many contexts, Federal agencies explicitly state that their risk assessment process is designed to produce estimates that “err on the side of safety” because of scientific uncertainties and to ensure that the broadest range of the public is protected, consistent with Federal statutory intent. It is generally believed that these “upper bound estimates” are highly improbable and differ from the most plausible level of risk by many orders of magnitude. Moreover, the risk is criticized as inappropriately collapsing scientific findings with a preconceived policy judgment or bias. The perceived overstatement of risk is a serious concern among the regulated community. Many argue that there should also be “best estimates” or estimates of expected value in addition to upper-bound estimates to provide a more realistic benchmark.

. . .

In the case of some agencies, there is evidence that institutional factors may pose a barrier to objective risk presentation and appropriate regard for basing regulatory action on credible science. In a 1992 Report, “Safeguarding the Future: Credible Science, Credible Decisions,” an EPA-appointed panel of experts found a “climate and culture” within the EPA that cast serious doubt on the quality of science used by the Agency to justify its programs. Even many agency personnel perceived that EPA science was “adjusted to fit policy.”


133. E.g., H.R. REP. NO. 112, 104th Cong., 1st Sess. 93 (1995) (discussing testimony about “the need to increase State and local flexibility to prevent [the Clean Water Act] from imposing ‘one-size-fits-all’ standards and requirements that do not reflect regional and local differences”).

134. E.g., H.R. REP. NO. 46, 104th Cong., 1st Sess. 3 (1995) (discussing the need for protections of private property against “overreaching Federal regulations”); id. at 4 (“The burden of the uncertainty of takings law falls most heavily on small property owners who are intimidated by the power of bureaucrats. Takings litigation is a long and expensive process which only the most well-financed and dedicated property owner can endure. Small property owners do not have the time or money to bring a lawsuit against the Federal government.”).

135. E.g., H.R. 9, § 3001(2), 104th Cong., 1st Sess. (1995), reprinted at 141 CONG. REC. H2611 (daily ed. Mar. 3, 1995) (resources available to health, safety, and environmental concerns need to be allocated “so that the incremental costs of regulatory options are reasonably related to the incremental benefits”); id. § 3001(1) (improvements in the environment and in reduced human health risks attributable to regulation “have been more costly and less effective than they could have been”).

136. E.g., id. § 3102 (“The purposes of this title are . . . to present the public and executive branch with the most scientifically objective and unbiased information concerning the nature and magnitude of health, safety, and environmental risks in order to provide for sound regulatory decisions and public education”). See also H.R. REP. NO. 112, supra note 133, at 86 (report on the Clean Water Act Amendments of 1995) (“The purpose of the bill
is to reauthorize and amend the Clean Water Act to provide a flexible, scientifically sound, and cost-effective basis on which to maintain and continue improvements in water quality.”); id. at 97 (“The Committee also heard repeatedly of the need to ensure that Clean Water Act standards and requirements are based on sound scientific evidence and principles.”).

137. E.g., H.R. 9, § 9001, supra note 135, at H2619 (declaring a national policy of preventing any law from limiting the use of private property so as to diminish its value and requiring federal agencies to insure that their actions will not limit the use of privately owned property so as to accomplish that result); H.R. Rep. No. 46, supra note 134, at 3 (the purpose of the Private Property Protection Act of 1995 “is to ensure that private property owners are compensated when the use of their property is limited by overreaching Federal regulations”).


140. The House Republicans elevated euphemism to a new art form in their quest to adopt the Contract into law.

141. Various versions of regulatory reform sponsored by the Republican majorities in Congress made their way through both the House and the Senate in 1995. The details differed both among the bills and within the same bill over time. This article does not attempt to dissect and compare each of these regulatory reform vehicles. Instead, it focuses on provisions of regulatory reform legislation that seem to represent the thrust of what Republican majorities in the 104th Congress have sought to achieve in revising environmental regulation. Many of the examples discussed are taken from bills adopted by the House of Representatives, which, as of the end of 1995, had made more progress in adopting regulatory reform and environmental legislation than had the Senate, and which is where the Contract With America originated. The Job Creation and Wage Enhancement Act, for example, originated as H.R. 9 in the first session of the 104th Congress. Following its introduction on January 4, 1995, it was divided into several bills and distributed to the appropriate House Committees. One of these bills was adopted as the Unfunded Mandates Reform Act, Pub. L. No. 104-4 (1995). The other bills, H.R. 830, H.R. 925, H.R. 926, and H.R. 1022, dealt with paperwork reduction, private property protection, regulatory relief, and risk assessment and cost-benefit analysis respectively. After passing each of these bills separately, the House consolidated them back into H.R. 9 and sent it to the Senate, which failed to reach a consensus on regulatory reform for the rest of 1995. The focus of the Senate’s debate on regulatory reform for much of 1995 was S. 343, originally sponsored by Senate Majority Leader Dole. For a thorough discussion of the bills introduced in the first session of the 104th Congress that dealt with regulatory reform, see John Pendergrass, et al., The Environment and the Contract, 25 Envtl. L. Rep. 10350 (1995). The House also passed a bill to amend the Clean Water Act in the spring of 1995, H.R. 961, 104th Cong., 1st Sess. (1995), but efforts to push a similar bill through the Senate languished.


143. The Executive Order applied to regulations with expected impacts on the economy of at least $100 million. Exec. Order No. 12,291, § 1(b), 46 Fed. Reg. 13,193 (1981). H.R. 1022 would reduce that threshold to $25 million, increasing the number of regulations subject to the cost-benefit requirements. H.R. 1022, §§ 3(3), 201(a), supra note 142.

144. H.R. 1022, § 202(a)(2), supra note 142.


146. H.R. 1022, § 202(b)(1), supra note 142 (“notwithstanding any other provision of federal law...[this bill] supplement[s], and to the extent there is a conflict, supersedes[s]” the decision criteria for rulemaking otherwise applicable under the statute pursuant to which the rule is promulgated”). The Senate Republicans’ main regulatory reform proposal, S. 343, did not originally include a supermandate.


148. Id. § 627.

149. E.g., H.R. REP. NO. 33, supra note 125, at 15.

150. H.R. 9, § 3001(4), supra note 135.

151. H.R. 1022, §§ 102-105, supra note 142; H.R. REP. NO. 33, supra note 125, at 16. H.R. 1022 would require that each risk characterization, to the extent feasible, provide the best estimate or estimates of risk for the specific populations or natural resources which are the subject of the characterization, along with a statement of the reasonable range of scientific uncertainties. H.R. 1022, § 105(1).

152. H.R. 1022, § 301(b), supra note 142. See also S. 343, § 640(c), supra note 147, at S9276.

153. H.R. 1022 would authorize the federal courts to deem unlawful any significant risk assessment document or characterization that “does not substantially comply with” the statutory risk assessment and characterization principles. H.R. 1022, § 401, supra note 142. Some observers believe that, under this standard of review, the courts would closely scrutinize agency procedures. See Pendergrass, et al., supra note 141, at 10350.

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Compliance with the cost-benefit requirements of H.R. 1022 also would be subject to judicial review under the same standard. 154. See supra note 127 and accompanying text.


156. Id. § 101(a)(2), 109 Stat. at 56 (to be codified at 2 U.S.C. § 658d(a)(2)).

157. Id. §§ 202(a), 205(a), 109 Stat. at 66 (to be codified at 2 U.S.C. §§ 1532, 1535(a)).


166. Id.

167. But see 26 ENV'T REP. (BNA) – Current Dev. 657-58, Aug. 4, 1995 (House appropriations bill for EPA, according to EPA, would “1) leave health protections intact, but prevent enforcement of those protections, 2) block health protections in existing laws, 3) exempt states or particular industries from obeying existing protections, and 4) prevent future actions to protect public health from taking place or even from being considered as options.”). Legislative supporters of the Contract seem less enamored of efforts to protect the environment absent a direct, demonstrable link between pollution and adverse effects on the public health. Republican sponsors of legislation to amend the Comprehensive Environmental Response, Compensation, and Liability Act, for example, have urged the adoption of less stringent cleanup standards for hazardous waste disposal sites that are not adjacent to property that is being used or likely to be used in the near future for residential purposes than the standards applicable under current law. See, e.g., id. at 915, Sept. 15, 1995.

168. H.R. 9, § 3001(1), supra note 135.


172. Republican legislators in the 104th Congress have frequently emphasized the adverse economic impact of environmental regulation on the national economy. E.g., id. at S11870 (daily ed. Aug. 8, 1995) (statement of Sen. Murkowski) (opposing a higher royalty on hardrock minerals on federal lands because it “would simply drive the industry out of the United States”); id. at S11872 (statement of Sen. Craig) (“[W]hen you put a moratorium on patenting, you have really put a moratorium on future mining, and if there is no future in future mining in this country, then the industrial base, the mining base of that base begins to move offshore.”); id. at S11878 (statement of Sen. Simpson) (criticizing the Interior Department’s “subtle but fully deliberate plan to totally drive the western rancher and his or her livestock off of public range lands”).


174. This hostility is symbolized by the decision early in the first session of the 104th Congress to drop the word Natural from the name of the House Committee on Natural Resources. See The Environmental Counterattack, N.Y. TIMES, Feb. 5, 1996, at A10 (nat’l ed.); Nature on the Auction Block, ATLANTA CONST., Oct. 18, 1995, at A10. In an even more brazen advertisement for their pro-development proclivities, the Alaska congressional delegation sponsored a change in the name of the Arctic National Wildlife Refuge to the Alaska Oil Reserve. Jessica Matthews, Battle for the Environment, WASH. POST, Nov. 27, 1995, at A21.

175. See, e.g., Pendergrass, supra note 141, at 10357 (“If enacted in its present form, H.R. 1022 would likely substantially alter the practice of risk-assessment and cost-benefit analysis, increase analytical burdens on agencies, and change the ways in which agencies allocate resources. The resulting long, complex assessment documents may do little to improve the public’s understanding or agencies’ use of risk assessment and cost-benefit analysis. Significant delay in making public policy decisions may also result in the many instances where the bill requires technically demanding analyses of alternatives and assumptions.”). According to the Congressional Budget Office, H.R. 1022’s low $25 million threshold for a “major rule” subject to cost-benefit and risk assessment requirements would itself result in $250 million in additional annual costs for EPA. DAILY ENV’T REP. (BNA), Mar. 3, 1995, at 2118.


178. The risk assessment and cost-benefit mechanisms required by H.R. 1022 are difficult to reconcile with the professed goals of proposals to amend the Paperwork Reduction Act. See supra note 139.
179. Senator Chafee, a Republican from Vermont, characterized the Senate Republicans' principal vehicle for regulatory reform, S. 343, sponsored by Senator Dole, as follows: "Every hurdle that has made [the Toxic Substances Control Act] a useless law to protect health and the environment is rolled up in this [risk assessment] bill before us today. It applies across all of our health and our safety and our environmental statutes." 141 CONG. REC. S10198 (daily ed. July 18, 1995).

180. See supra note 172.

181. See, e.g., 141 CONG. REC. S11871 (daily ed. Aug. 8, 1995) (statement of Sen. Craig) ("I believe, and I think many Senators do believe, that public policy says that mining of public resources for the value of our country, our mineral estate, our industrial base and for employment is a good public policy.").

182. See, e.g., Raymond Rasker, A New Era For the Western Public Lands, 65 U. COLO. L. REV. 369, 390 (1994) ("in numerous areas throughout the West, the role of public lands is shifting away from facilitating commodity production"); James Brooke, Montana Mining Town Fights Gold-Rush Plan, N.Y. TIMES, Jan. 7, 1996, at 8 (nat’l ed.) (the combined income in Montana, which is "shifting its economic base from mining to tourism," from mining and logging in the early 1990’s was surpassed by income from recreational tourism); Timothy Egan, Alaska Republicans Push Subsidy for Logging, N.Y. TIMES, Sept. 12, 1995, at A8 (while timber jobs in southeast Alaska declined by 40 percent over a four-year period, "the area added thousands of jobs in seafood processing, tourism and government").

183. E.g., Eric J. Sy, They Hate the Government, But Love Those Subsidies, N.Y. TIMES, Jan. 2, 1996, at A11 (nat’l ed.) (supposedly anti-government Western Republicans do not oppose distribution to the states of more than half a billion dollars in revenues collected under the Mineral Lands Leasing Act); Marc Reisner, Concrete for America? Count Him In!, N.Y. TIMES, Aug. 20, 1995, at A13 (describing Republican legislator’s support for construction in his district of dam with relatively low water yield potential and for a “fire sale of the nation’s largest irrigation project to its main beneficiaries,” farmers); Egan, supra note 182, at A8 (Alaska’s Senators sponsored a bill that would require the federal government to provide the state with 2400 jobs in the timber industry, at a cost to taxpayers of up to $30 million a year, a bill that would have been “laughed out of the Senate” if it promoted midnight basketball programs instead of money-losing timber jobs. The state’s director of commerce and economic development criticized the “notion of a planned or centralized economy” reflected in the bill as “counterproductive to the goal of creating a strong, diverse economy.”). Although ranchers often regard themselves as a “paragon of American independence and self-sufficiency,” most benefit from federal subsidies in the form of a discount on the cost of leasing federal lands, the emergency feed program, and the government’s predator control program.

The public foots the bill of at least $100 million a year to support ranchers in just eleven western states. Oppenheimer, supra note 94, at 38.


185. See, e.g., Oppenheimer, supra note 94, at 38 (Idaho rangeland and watershed consultant remarked that “[i]f we really had a market environment, we’d lose [ranchers] quicker, more efficiently”); WILDERNESS SOCIETY & ENVIRONMENTAL DEFENSE FUND, THE LIVING LANDSCAPE: TAXPAYERS’ DOUBLE BURDEN, Exec. Summ. (Oct. 1993), cited in RODGERS, supra note 44, at 5 (1995 Pocket Part) (U.S. taxpayers underwrite natural resource extraction activities responsible for endangering species on federal lands “through at least $1 billion in annual subsidies and then pay millions of dollars more for attempts to recover the species”).

186. See supra part III.B.1.b.

187. The OTA was “widely praised [in government, academic, and scientific circles] for offering impartial advice and analysis to the senators and representatives who must make decisions on technical issues in which they have little expertise. . . . The agency . . . fell victim to budget cutting by the Republican majority and, its supporters say, shortsightedness about its value in providing unbiased, understandable advice on complex issues. . . . The agency was established during the Nixon Administration to give Congress technical expertise equal to that available to the executive branch through its many departments and agencies.” Warren E. Leary, Congress’s Science Agency Prepares to Close Its Doors, N.Y. TIMES, Sept. 24, 1995, at 14. According to the head of the White House Office of Science and Technology, “the demise of the agency after it had proved its effectiveness reflected an anti-intellectual and anti-science mentality among some members of Congress who were not interested in looking at issues factually.” Id. The OTA was created in 1972, “coincident with the passage of the major federal environmental laws.” Alan S. Miller, Environmental Regulation, Technological Innovation, and Technology-Forcing, NAT. RESOURCES & ENV’T, Fall 1995, at 64. 188. See H.R. REP. NO. 173, 104th Cong., 1st Sess. 30 (1995); John H. Cushman, Jr., Spending Bill Would Reverse Nation’s Environment Policy, N.Y. TIMES, Sept. 22, 1995, at A1, C19.


190. See Cushman, supra note 188, at A1, C19. Interior Secretary Bruce Babbitt stated that the result would be the "terminat[ion] of a hamp[er] against important scientific research on offshore environmental studies, fisheries research, and the Pacific Northwest Forest Plan.” INSIDE ENERGY/WITH FEDERAL LANDS, Dec. 25, 1995, at 14.


192. A remarkable example of an effort to put the deregulatory cart before the information-gathering horse was Republican support for an industry-backed appropriations rider that would
preclude EPA from expending any appropriated funds to substitute for the current national ambient air quality standards for ozone a more stringent revised standard. The proposal, which came in the midst of EPA's collection and analysis of data to determine whether the current standard is sufficiently protective of the public health, would not bar adoption of a less stringent standard. See INSIDE EPA, July 28, 1995, at 14-15.

197. See H.R. REP. NO. 112, supra note 133, at 98 ("The fact that not all wetlands are of equal value will be taken into consideration in making regulatory decisions. A high degree of protection will be given to the most valuable wetlands, but low-value wetlands will not be subject to Federal permits. In fact, the type of activities occurring in wetlands that are regulated will actually be broadened to assure that valuable wetland resources are afforded a high degree of protection.").
201. S. 768, § 402, supra note 159. This provision would reverse the Supreme Court’s decision in Babbitt v. Sweet Home Chapter of Communities for A Great Or., 115 S. Ct. 2407 (1995).
202. Sen. Reid, a Democrat from Nevada, criticized Senator Helms’ proposal to prevent the Interior Department from spending money to save the red wolf on the ground that it would set “a very bad precedent for us to start micromanaging what is going on in the Interior Department. ... Now we are coming in here with line-specific legislation dealing with a red wolf. I do not know about the red wolf. I do not think most people in this body know a great deal about the red wolf. I think that most of this body should agree we are not capable of legislating.” 141 CONG. REC. S12019 (daily ed. Aug. 9, 1995).
204. William K. Stevens, G.O.P. Seeks to Delay Ban on Chemical Harming Ozone, N.Y. TIMES, Sept. 21, 1995, at A13; Holes in the Ozone Treaty, NEWSWEEK, Sept. 25, 1995, at 70; Republicans Assault Ban on Ozone Depleting Compounds, INSIDE EPA, Sept. 29, 1995, at 7. Representative Delay acknowledged, after introducing his own bill to repeal the domestic ban on CFC production, that he had not even read the WMO’s report, which was widely regarded as the most authoritative analysis of the ozone depletion problem. Stevens, supra, at A13.

207. See 141 CONG. REC. E2053 (daily ed. Oct. 26, 1995) (remarks of Rep. Delay) ("as many scientists have long suspected, and despite the public scare campaign by environmental extremists, the reports of destructive global warming have been greatly exaggerated."); id. at E2270 (daily ed. Nov. 30, 1995) (remarks of Rep. Istook) ("the theory of global warming is not supported by the facts. The scare mongers would have us shut down our domestic energy production based upon falsehoods. The scare mongers are receiving grants from taxpayers to attack taxpayers’ livelihoods."). See also id. at H14142 (daily ed. Dec. 6, 1995) (statement of Rep. Lowey) ("Unbelievably, we have leaders on the Republican side of the aisle who claim they know more about the threat to the Earth’s ozone layer than Nobel prize-winning scientists and who are working to repeal bans on these harmful chemicals.").
208. H.R. 1022, § 105(1), supra note 142, at H2633; S. 343, § 634(2), supra note 147, at S9274.
209. Richard Stone, Agencies Decry Fuzzy Science in Bill; Bill Applies Cost-Benefit Analysis to Environmental Regulations, 267 SCIENCE 1089 (Feb. 24, 1995) (quoting Adam Finkel, senior fellow at the Cecil and Ida Green Center for the Study of Science and Society at the University of Texas):

[Scientists worry that the [Republican-sponsored House regulatory reform bill] would sanction environmental policies based on fuzzy scientific concepts. “I feel like a chemist waking up one morning to find an alchemy bill going through the House.” ... [Scientists familiar with the bill are ... bothered by provisions that would require agencies to “provide the best estimate or estimates” of a risk to people or natural resources. The problem is that there is no way to define a best estimate of risk when different scientific models give widely varying estimates. ‘That’s the alchemy’ ...”]

See also 141 CONG. REC. S10211 (daily ed. July 18, 1995) (statement of Sen. Glenn) ("[ S. 343 ] states that agencies must base each risk assessment only on the ‘best reasonably available scientific data in scientific understanding.’ I ask, who determines what data are best in that requirement? What is best? Scientists say there is often wide dispute within the scientific community about what data are best, and it is common practice for agencies to use several different data sets.").
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211. See supra notes 46-47 and accompanying text.
212. E.g., H.R. 1022, § 105(1)(B), supra note 142, at H2633.
213. See, e.g., supra notes 203-07 and accompanying text.
215. E.g., H.R. 1022, § 201(b)(1), supra note 142.
217. E.g., id. at S12013 (daily ed. Aug. 9, 1995) (statement of Sen. Kemphorne) (“We must reform the Endangered Species Act in such a way to make sure that it does not become the super law that overrules all other laws of our Nation.”).
218. See supra part III.B.2.
219. See also 141 CONG. REC. S11870 (daily ed. Aug. 8, 1995) (statement of Sen. Murkowski) (“Now, on the issue of reclamation, the mining law should give the States the primacy for assuring that surface effects from mineral activities are reclaimed. . . . [T]he Western Governors association . . . opposes restrictive Federal standards that many believe can be seen as another unfunded mandate from Washington. We have had enough of unfunded mandates.”); supra notes 158-62 and accompanying text.
220. See H.R. REP. NO. 64, 104th Cong., 1st Sess., pt. 1, at 2 (§ 104(b) of the Common Sense Legal Standards Reform Act of 1995 would preempt state law “to the extent that State law applies to an issue covered by this title”).
222. See Richard C. Reuben, The New Federalism, 81 ABA J. 76, 80 (1995) (quoting Professor Gerald Krug) (“A suspicious view of the new federalism is that it is really about creating the illusion of transferring power. . . . We say we are sending power back to the states, but in fact there is no regulation because states don’t have the resources to regulate effectively.”).
223. It may not even result in more accountable government. See, e.g., Huffman, America’s Resources, supra note 60, at 888 (“Although liberty may be better served in some respects by lodging power in state governments as opposed to the federal government, it is not always so.”); id. at 890 (at the present time, individual autonomy is more likely to be protected by federal than state pollution control laws).
224. Tarlock, supra note 20, at 1319. See also George Cameron Coggins, “Devolution” in Federal Land: Abdication By Any Other Name . . ., (HASTINGS W.-N.W. J. ENVTL. L. & POL’Y, forthcoming in 1996) (local control of public resources and abdication of responsibility by federal land management agencies are primarily responsible for myriad forms of destruction of public resources); Babbitt, supra note 101, at 849 (“The historical record does not support the view that the states are responsible trustees of the public domain.”).
225. See, e.g., Montana Mine May Get 20-Year Exemption From Water Quality Standards, INSIDE EPA, Dec. 15, 1995, at 7-8 (describing state law allowing less protective water quality standards in areas that have experienced significant degradation as a result of pollution generated by mining).
226. Cf. Huffman, America’s Resources, supra note 60, at 896 (a transfer of power to the states is attractive to those who exercise power in the states); Michael C. Blumm, Public Choice Theory and the Public Lands: Why Multiple Use Has Failed, 18 HARV. ENVTL. L. REV. 404, 422 (1994) (“A theory that assumes organized local interests are a surrogate for the national public interest is a recipe for imbalance.”).
227. But see Revesz, supra note 49.
228. Cf. Shapiro & McGarity, supra note 23, at 749-50 (explaining why adequate workers compensation is unlikely to be provided at the state level).
229. Huffman, America’s Resources, supra note 60, at 896.
230. Blumm, supra note 158, at 13. See also Huffman, America’s Resources, supra note 60, at 897 (“[T]here are few reasons to believe that state governments actually would do a better job of public land and resources management than the federal government.”).
231. The rhetoric offered by Contract supporters in favor of downsizing the federal bureaucracy, however, is difficult to square with the retention of programs that provide subsidies to favored constituents. See supra notes 183-85 and accompanying text.
232. See, e.g., Congress Hit on the Environment, ROCKY MOUNTAIN NEWS, Apr. 21, 1995, ed. F, at 42A (statement of EPA Administrator Carol Browner) (“We have actually seen lawyers and lobbyists for polluters invited into the back rooms of Congress, where behind closed doors, without public debate, they have written for themselves special exemptions from the responsibilities that all businesses have been expected to live up to.”). See also Fritsch, supra note 176, at A1 (pulp plant pressured Senator to block listing of hazardous waste disposal site under CERCLA).

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233. See, e.g., Egan, supra note 182, at A8 (Senator Murkowski canceled a series of formal hearings on his bill to subsidize the timber industry in Alaska “after it became clear that many people in his home state opposed it,” substituting informal workshops).

234. Senator Murkowski of Alaska, for example, opposed a proposal by Senator Bumpers to extend a moratorium on the issuance of patents under the General Mining Law of 1872 pending revisions to that law.

What we all agree on is that mining law reform should be done appropriately in the authorizing committee . . . . But the question today is, are we going to pass mining law legislation as part of an appropriations bill? Most members would say no, we should not do that . . . . Moratoriums, such as the one offered by the Senator from Arkansas, become the means by which Congress avoids its responsibility under the law and to make changes in statutes such as the mining laws . . . . The moratorium is going to slow it down. It is going to perhaps kill any incentive at the present time to complete action on this comprehensive bill . . . . A moratorium is a kind of misguided Federal policy that simply creates confusion and distrust among the American people and tramples on their inherent rights.


235. E.g., 26 Env’t Rep. (BNA) – Current Dev. 1399, Dec. 15, 1995 (House passed a 1996 fiscal year spending bill for EPA that included riders that would eliminate EPA’s veto power over dredge and fill permits issued by the Army Corps of Engineers, prohibit the addition of new sites to the National Priorities List under CERCLA, and bar EPA from issuing standards for reformulated gasoline); id. at 549-50, July 14, 1995 (describing appropriations riders in the House that would prevent EPA from “enforcing or implementing storm water permits, combined sewer overflow permits, wetlands rules, effluent limitation guidelines, pretreatment standards, new source performance standards, or new or revised water quality standards under the Clean Water Act”; suspend EPA Clean Air Act rulemakings involving petroleum refineries, the oil and gas industry, and hazardous waste incineration; and prevent EPA from requiring facilities to submit data under the EPCRTKA). “Riders to appropriations bills are a simple, direct and increasingly popular way to tie the hands of the agencies. The riders either eliminate money for a particular activity or ban the activity outright.” Fritsch, supra note 176, at A1.


239. See, e.g., House Panel Votes to Allow Oil Drilling in Arctic Refuge, N.Y. Times, Sept. 20, 1995, at A16 (House Committee on Resources decision to put provision allowing oil drilling in the Arctic National Wildlife Refuge in an omnibus budget bill would “limit further debate on a hotly contested proposal”). One EPA official described the Republicans’ strategy as an effort to rewrite statutes by any means necessary, including using appropriations bills to curb statutory enforcement. “Since they haven’t been successful in doing it through the appropriate process, which is to go back and propose legislative amendments, they are now trying to do it through the appropriations process.” 26 Env’t Rep. (BNA) – Current Dev. 592, July 21, 1995. See also Environmental Promises to Keep, N.Y. Times, Sept. 25, 1995, at A10 (The essence of the “devious” Republican strategy of “legislation by appropriation” “has been to use the complex budget process to impose philosophical goals that would not be achievable through normal legislation.”).

240. Former EPA Chief Criticizes Congress’ Methods for Changing Agency, Inside EPA, Sept. 15, 1995, at 2. Reilly criticized Congress for redefining EPA’s operations through budget cuts and mandates in appropriations bills rather than through reauthorization of substantive statutes. Instead of confronting problems in environmental statutes in “the honest way,” the Republican-led House has “proceeded with wholesale riders, left [EPA’s] responsibilities on the books, but directed the agency not to enforce the laws.” Id.


242. Id. at 2922 (Stevens, J., dissenting).

243. Compare H.R. 961, § 803(D), supra note 193, (requiring compensation when regulation diminishes the value of property by 20 percent or more) with Lucas, 112 S. Ct. at 2893 (compensation is due when regulation eliminates all economically beneficial or productive use of regulated property); Penn Central Transp. Co. v. City of New York, 438 U.S. 104, 131 (1978) (Supreme Court precedents “uniformly reject the proposition that diminution in property value, standing alone, can establish a ‘taking’”). See also Byrne, supra note 106, at 123 (House takings legislation would exceed the levels of compensation “guaranteed by the Constitution by even more than does enforcement of the current judicial takings doctrine.”).

244. The justification for compensating landowners adversely affected by federal environmental regulation, however, may be

245. See Byrne, supra note 106, at 137 (legislative takings proposals “appear to be vehicles for politicians who wish to derail existing environmental protections without directly confronting the consequences of doing so”).


248. Id.

249. Shuster & Hayes, supra note 246, at A17.

250. Id. See also *House Opt to Weaken Water Act*, THE BALTIMORE SUN, May 17, 1995, at 1A. (“Throughout the debate, the bill’s sponsors whipped up an anti-regulatory fervor by criticizing officials of the EPA and others who set the standards, issue the permits and designate the wetlands governed by the bill . . . . Mr. Shuster, the bill’s principal sponsor, called them an “environmental Gestapo.”); *Clean Water Act Gets Major Rewrite in House*, THE HOUSTON CHRON., May 17, 1995, at A1 (“‘Wetlands will not have bureaucrats practicing Gestapo-like tactics on the American people,’ [Shuster] said after the vote [on H.R. 961].”). For further discussion of the rhetorical strategy of “relating horror stories about innocent citizens whose property is severely devalued or appropriated by the act of (allegedly) overzealous officials enforcing (apparently) confiscatory and irrational laws,” see Michael Allan Wolf, *Overtaking the Fifth Amendment: The Legislative Backlash Against Environmentalism*, VI FORDHAM ENVTL. L.J. 637, 639 (1995).


252. See United States v. Pozsgai, 757 F. Supp. 21, 22 (E.D. Pa. 1991), aff’d in part and rev’d in part, 947 F.2d 938 (3d Cir. 1991) (describing damage to neighboring property). In this sense, H.R. 961 may be a worthy successor to Pennsylvania Coal Co. v. Mahon, 260 U.S. 393 (1922), the landmark regulatory takings case that has been described recently as standing for the proposition “that some people’s property [the coal company’s] deserves more protection than other people’s property [the people whose homes were destroyed by undermining].” John A. Humbach, *Should Taxpayers Pay People to Obey Environmental Laws?*, VI FORDHAM ENVTL. L.J. 423, 426 (1995). Cf. Frank I. Michelman, *A Skeptical View of ‘Property Rights’ Legislation*, VI FORDHAM ENVTL. L.J. 409, 417 (1995) (finding no “remotely principled basis” for limiting the kinds of property rights protected by Republican-sponsored legislation and attributing the bill to legislators “playing political favorites (or political opportunities)”).

253. See supra notes 167-69 and accompanying text.


255. H.R. 1022, § 105(1)(A), supra note 142, at H2633; S. 343, § 634(2)(A), supra note 147, at S9274.

256. It is not clear, for example, whether the term refers to a best estimate for the average person or to an estimate that reflects variability in the human population. Stone, supra note 209, at 1089.

257. Since 1980, EPA regulations have reduced from 88 to 9 percent the proportion of all children in the United States with blood lead levels above this threshold. Twenty percent of urban black children, however, continue to exceed the threshold. Id. at 1089.


259. For a discussion of these justifications, see supra part II.B.1.a.

260. See supra part II.A. (defining deregulation for purposes of this article as a response to perceived regulatory failure that rejects the original justification for regulation).

261. The failure of Contract supporters to acknowledge a responsibility to future generations in preserving our national natural resource heritage is even more striking given the frequency with which Republicans in the 104th Congress have justified cuts in social programs on the ground that continuation of these programs without modification is inconsistent with efforts to balance the federal budget, and the drive to balance the budget is based in large part on a desire to avoid saddling our descendants with this generation’s debts. See, e.g., *Budget to Dominate Campaign*, ROCKY MOUNTAIN NEWS, Jan. 7, 1996, at 58A.


264. See H.R. 260, 104th Cong., 1st Sess. (1995); Reisner, supra note 183, § 4, at 13 (describing Republican proposals to sell portions of Redwood National Park to help shrink the national deficit). Cf. H.R. REP. NO. 133, supra note 173, at 3 (expressing concern that "some of the 368 units of the National Park System may not now meet the criteria of national significance, suitability and feasibility" and do not belong in the National Park System); id. at 9 (describing requirement that the Interior Secretary develop a list of areas where NPS management should be modified or terminated). After the House rejected a proposal by Representative James Hansen of Utah to create an independent commission to review the national parks to determine which

268. Compare supra note 24 and accompanying text (existing environmental legislation aims to reverse these priorities). As the director of the Office of Science and Technology Policy testified before the House Committee on Science, “t]ypically, for environment, health, and safety regulations the costs are concentrated in the near-term, while the benefits are dispersed over time. It might be difficult, for example, to quantify the long-term economic benefits of saving the bald eagle, but virtually all Americans supported efforts to save this national treasure.” FDCH Congr. Testimony, Statement of Dr. John H. Gibbons, Feb. 3, 1995.

269. Some observers apparently have no such doubts. See, e.g., Reisner, supra note 183, § 4, at 13 (describing Republican positions on environmental issues as “a mix of zealotry and hypocrisy in equal proportion”); Lewis, supra note 1, at 31 (arguing that “the real reason the Republicans want to reduce protection of wetlands and air and water is to increase the profits of campaign supporters” and that “[t]he hypocrisy of those who would destroy is brazen, and the danger is great”).

270. Because we have little doubt that bills such as H.R. 961 would result in increased protection of the private property rights of developmental interests, we focus in this part on the possible mismatch of the tools of regulatory reform to the goals of more efficient resource allocation and enhanced governmental accountability. But cf. Byrne, supra note 106, at 137 (raising doubts as to whether bills requiring regulatory takings analysis will actually protect property rights). In addition, some economists have argued that compensation for regulatory takings may promote inefficient resource allocation by encouraging landowners to overinvest in private capital because they need not take into account the value of their land for public projects. E.g., Jill Elaine Hadley, Book Note, Preaching to the Choir, 105 YALE L. J., 1153, 1156 n.10 (1996) (citing Lawrence E. Blume, et al., The Taking of Land: When Should Compensation Be Paid?, 99 Q.J. ECON 71 (1984)) (reviewing Richard A. Epstein, Simple Rules for a Complex World (1995)). If this criticism is valid, then the takings-related proposals of Contract advocates may interfere with their professed support for efficient resource allocation.

271. John F. Cooney, Back to the Future: Regulatory Reform Legislation, ADMIN. & REG. L. NEWS, Spring 1995, at 1, 13. See also FDCH Congr. Testimony, Testimony of Carol M. Browner, Administrator, U.S. Environmental Protection Agency, Mar. 22, 1995, at 4 (“Many human health and ecological benefits of pollution control are extraordinarily difficult to estimate; as a result, cost-benefit analyses, of environmental and public health programs can often undercount benefits relative to costs. We fear that important health and environmental effects that science cannot quantify today will not be taken into account in those decisions—including developmental effects in children, reproductive effects in men and women, neurotoxic effects (from lead poisoning, for example) and ecological effects of many types.”). 272. See supra part II.B.1.a.


274. S. 343, § 624(c)(2), supra note 147.

275. Id. § 636(b).

276. See 141 CONG. REC. S10192 (daily ed. July 18, 1995) (statement of Sen. Levin) (“if, for $100 million in costs, we can save 1,000 lives, but for $110 million in costs we can save 2,000 lives, ought we not be able to go with the slightly more expensive approach for double the savings in lives even though the lower cost-smaller savings approach might meet the minimal statutory criteria?”); id. at S10208 (statement of Sen. Glenn) (Under the least cost test, “[t]he agency must pick the cheapest alternative, even if for a few more dollars it could save hundreds of more lives or reduce pollution by a much greater amount. In other words, common sense goes out the door on this approach.”). 277. Id. at S10194 (statement of Sen. Levin) (“What if an agency can reduce the risk for very little money but cannot prove that it is a significant reduction in the risk? Should an agency be able to regulate if there is a reduction in the risk to our safety or our food or the environment which may be not a significant reduction but is a reduction and is worth doing on a cost-benefit basis because the cost is so slight that even though the benefit is not major, nonetheless it is justified?”).

278. Linda Greer, Senior Scientist for the Natural Resources Defense Council, illustrated the point by describing recent efforts by Intel to assess the risks that users of its Pentium chip would get wrong answers. The company estimated and announced that one error would appear for every 27,000 years of normal computer use. Shortly thereafter, IBM decided to halt sales of computers using the Pentium chip based on its own risk assessment that predicted that errors would occur once a day for the average user. The orders of magnitude that separated the two risk assessments of a well defined arithmetic problem highlight the difficulties of applying risk assessment methodology to the field of environmental risk, which is fraught with much greater
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279. See Pendergrass, supra note 141, at 10357 ("[H.R.] 1022 could suspend the development of risk-assessment science because it would be extremely difficult to deviate from or alter the principles contained in the law, even if new scientific evidence indicates that they are inadequate or wrong."); Beth S. Ginsberg & Cynthia Cummins, EPA's Project XL: A Paradigm for Promising Regulatory Reform, 26 ENVTL. L. REP. (ENVTl. L. INST.) 10059, 10060 (1996) ("The budding science of risk assessment will be paralyzed if codified into legislation. To be effective, individual risk assessments must be tailored to the specifics of the situation.").

280. See Daniel E. Koshland, Science and Society: Science and Government Should Cooperate, 260 SCIENCE 143, Apr. 9, 1993 ("Science is dealing with the unexpected, the frontier, the search for a new path, not with the predictable, the established edifice, the walk down the well-paved road.").

281. S. 343, § 623, supra note 147.

282. Id. § 627.

283. H.R. 1022, § 301, supra note 142; S. 343, §§ 636(a)(1), 640, supra note 147, at S9275-76.

284. H.R. 1022 specifically bars agencies from excluding peer reviewers "merely because they represent entities that have a potential interest in the outcome." H.R. 1022, § 301(a)(3), supra note 142. Nicholas Ashford asserts that

[the principal danger lying ahead is that the research necessary to provide the data and insight into mechanisms for understanding health effects from exposure to chemicals will continue in a disorganized, uncoordinated fashion utilizing a shrinking resource base. Research in academic institutions is increasingly likely to be funded by industry or industry-biased sources. This will greatly compromise the public interest.... The illusion of the desirability and value of so-called peer review may continue to undermine the oversight necessary for scientific independence. The peer review process in both government funding and journal publications has been to a large extent captured by conservative, proindustry interests. This argues for the creation of an independent institute, as well as an independent funding for risk assessment.

Nicholas A. Ashford, Future Directions in Reducing Risks: A Warning Against Overreliance on Risk Assessment Approaches, in CHEMICAL RISK ASSESSMENT AND OCCUPATIONAL HEALTH: CURRENT APPLICATIONS, LIMITATIONS, AND FUTURE PROSPECTS 226 (C. Mark Smith et al., eds., 1994).


286. See Huffman, Markets, Regulation, supra note 96, at 428 ("Public decisions are by definition political decisions. They are social choices based upon an aggregation of the values of those who have political influence. Scientists have no special capacity in selecting among competing values. To the extent that we rely upon them, we have simply given them the power to make our social choices for us."); James L. Huffman, Truth, Purpose and Public Policy: Science and Democracy in the Search for Safety, 21 ENVTL. L. 1091, 1106 (1991) ("If we do not recognize the conceptual distinction between science and values, we will almost certainly have public policies that are based upon unreliable data and controlled by nondemocratic means."); Huffman, Private Rights, supra note 59, at 273 ("while science can help the pursuit of chosen goals, it offers no assistance with the definition of the public interest").

287. See, e.g., 26 ENV'T REP. (BNA) — Current Dev. 15, May 5, 1995 (House regulatory reform legislation would shift responsibility for making risk decisions from the executive branch to the courts).


291. Justice Stevens, writing for a unanimous Court, noted that

Judges are not [technical] experts... and are not part of either political branch of the Government...

[F]ederal judges — who have no constituency — have a duty to respect legitimate policy choices made by those who do. The responsibilities for assessing the wisdom of such policy choices and resolving the struggle between competing views of the public interest are not judicial ones: 'Our Constitution vests such responsibilities in the political branches.'

Id. at 865 (quoting TVA v. Hill, 437 U.S. 153, 195 (1978)). See also id. at 865-66 ("While agencies are not directly accountable to the people, the Chief Executive is, and it is entirely appropriate for this political branch of the Government to make such policy choices — resolving the competing interests which Congress itself either inadvertently did not resolve, or intentionally left to be resolved by the agency charged with the administration of the statute in light of everyday realities.").

292. See generally Richard E. Levy & Robert L. Glicksman, Judicial Activism and Restraint in the Supreme Court's
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Environmental Law Decisions, 42 Vand. L. Rev. 343 (1989); Glicksman & Schroeder, supra note 37, at 302-03.

293. Judicial review also may interfere with efficient resource allocation because “[p]erfecting a record that will survive judicial review may make individual rules too expensive to write, reducing total agency workproduct, forcing agency resources away from the rulemaking area into other, less productive forms of regulation, or thwarting innovative approaches to substantive problems.” Glicksman & Schroeder, supra note 37, at 301.

294. See supra part IV.B.1.b.

295. See supra part IV.B.2.


297. Id. § 6(a)(6) (to be codified at 42 U.S.C. § 300g-1(b)(6)(A)).

298. H.R. 1022, §§ 104-105, supra note 142, at H2633; S. 343, §§ 633-634, supra note 147, at S9274-75.

299. H.R. 1022, § 401, supra note 142; S. 343, § 625, supra note 147.

300. S. 1316, § 5, supra note 296, at S17704 (to be codified at 42 U.S.C. § 300g-1(b)(3)).

301. S. 343 also would require that environmental agencies prioritize their resources to address the risks they consider most serious. S. 343, § 639(c), supra note 147, at S9276.

302. S. 1316, § 28(c), supra note 296.

303. UNFINISHED BUSINESS, supra note 86.

304. BREYER, supra note 88.

305. S. 343, § 627(a)-(b)(1), supra note 147, at S9273.

306. Id. § 627(b)(2).

307. See supra part IV.B.1.b.

308. 29 U.S.C. § 655(g) (1988). The agency also must “give due regard to the recommendations of the Secretary of Health, Education and Welfare regarding the need for mandatory standards in determining the priority for establishing such standards.” Id.


311. Id. (citing H.R. Rep. No. 835, 97th Cong., 2d Sess. 2 (1982)).

312. S. 1316, § 5, supra note 296, at S17704 (to be codified at 42 U.S.C. § 300g-1(b)(3)(A), (B)(v)).

313. H.R. 1022, § 301(b), supra note 142.

314. S. 1316, § 6, supra note 296, at S17705-06 (to be codified at 42 U.S.C. § 300g-1(b)(6)(D)).

315. H.R. 1022, § 401, supra note 142.

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