

INDIANA UNIVERSITY

**SPEA**

SCHOOL OF PUBLIC AND  
ENVIRONMENTAL AFFAIRS

*Smart Policy.  
Sound Science.  
Stronger Communities.*

*Celebrating  
35 Years  
of the EPA with  
William D.  
Ruckelshaus*



April 19, 2006

Wells-Metz Theatre  
275 North Jordan  
Indiana University  
Bloomington





The history of SPEA, the School of Public and Environmental Affairs, is not unlike the history of the agency we celebrate today. As the Environmental Protection Agency was first developing under the leadership of William Ruckelshaus, SPEA was founded in 1972 on the premise that society's complex problems demand comprehensive solutions. The largest school of public affairs in the United States, SPEA's curriculum and research are distinguished by a vigorous interdisciplinary approach to education and problem-solving.

In the 2005 *U.S. News & World Report* rankings of graduate and professional programs at American and international schools, SPEA Bloomington was in the top three with Harvard and Syracuse. SPEA's Environmental Policy and Management degree ranked first. Among the School's distinguished faculty are A. James Barnes, the deputy administrator of EPA from 1985 to 1988. Professor Emeritus Lynton Keith Caldwell, one of the principal architects of the National Environmental Policy Act and an initiator of the environmental impact statement, remained on the SPEA faculty from the School's inception until his death in 2006.



### *The United States Environmental Protection Agency*

Born in the wake of elevated concern about environmental pollution, the U.S. Environmental Protection Agency opened its doors in downtown Washington, D.C. on December 2, 1970. EPA was established to consolidate in one agency a variety of federal research, monitoring, standard-setting and enforcement activities to ensure environmental protection. EPA's mission is to protect human health and to safeguard the natural environment—air, water, and land—upon which life depends. For more than 30 years, EPA has been working for a cleaner, healthier environment for the American people.

EPA marked its 35th anniversary on December 2, 2005. From regulating auto emissions to banning the use of DDT; from cleaning up toxic waste to protecting the ozone layer; from increasing recycling to revitalizing inner-city brownfields, EPA's achievements have resulted in cleaner air, purer water, and better protected land.

# 35 Years of the EPA

*A Symposium and Celebration*

*Keynote Speaker*

**William D. Ruckelshaus**

First and Fifth Administrator of the U.S. Environmental Protection Agency

*Introduction*

Honorable Mitch Daniels  
Governor, State of Indiana

*Panelists*

A. James Barnes, Professor, former SPEA Dean, and  
former U.S. EPA Deputy Administrator

Bernard Goldstein, Professor and former Dean  
University of Pittsburgh Graduate School of Public Health

Marcus Peacock, Deputy Administrator  
U.S. Environmental Protection Agency

Paul Portney, Dean, Eller College of Management, University of Arizona  
former President, Resources for the Future

*Host*

Astrid E. Merget, Dean,  
School of Public and Environmental Affairs (SPEA), Indiana University

*Presented*

Wednesday, April 19<sup>th</sup>

1:00 p.m.

Wells-Metz Theatre

275 North Jordan, Bloomington Campus  
Indiana University



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## *Contents*

<i>Welcome</i>	4
Astrid E. Merget, Dean, School of Public and Environmental Affairs, Indiana University	
<i>Introductory Comments</i>	7
Honorable Mitch Daniels, Governor, State of Indiana	
<i>Keynote Speaker</i>	9
William D. Ruckelshaus First and Fifth Administrator of the U.S. Environmental Protection Agency “Sustaining Environmental Protection in the Face of Population and Economic Growth: Can We Do It?”	
<i>Question-and-Answer Session</i>	20
<i>Roundtable Discussion</i>	22
“Critical Issues in Environmental Policy”	
Participants: Bernard Goldstein, Professor and former Dean, University of Pittsburgh Graduate School of Public Health	
Marcus Peacock, Deputy Administrator, U.S. Environmental Protection Agency	
Paul Portney, Dean, Eller College of Management, University of Arizona former President, Resources for the Future	
Moderated by A. James Barnes, Professor and former SPEA Dean, Indiana University; former Deputy Administrator, Environmental Protection Agency	
<i>Postscript</i>	43
Christine Vujovich, Vice President of Marketing and Environmental Policy, Cummins Jim Rogers, CEO, Duke Energy Michael Steinhoff and Denise Walker, SPEA students	





### *Dean Astrid E. Merget's Welcome*

Good afternoon and a very spirited and warm welcome from me—Astrid Merget, Dean of Indiana University's School of Public and Environmental Affairs—to all of you:

To our many distinguished guests—from around the country, from the government of the state of Indiana, and from the University and the community, who have all assembled here; to our corporate partners, Cummins and Duke Energy, who have generously supported this symposium; to my colleagues and our students in the School of Public and Environmental Affairs, who capture in this celebration the very spirit and mission of our School; and most especially, to our honored and featured guest today, the Honorable William D. Ruckelshaus, who will be shortly introduced by one of his disciples in public service, our governor, the Honorable Mitch Daniels.

Anniversaries like this are most unique events because they partake of a peculiar alchemy. They are at once retrospective in recalling the past, but they are also prospective in fostering visions of the future, not just illusions of times gone by. They are at once sentimental in recalling good times, but they also force realistic appraisals of mistakes made and lessons learned. And they are at

once celebratory of what's been achieved, but they are also challenging about what needs to be done.

A university, as both the venue and the host for an anniversary, allows us to partake of both the sweet and the bitter and to use the platform of the past as a springboard for the future. Here are critical thinkers, as scholars of the past, and analysts, as architects of the future.

As we mark the 35<sup>th</sup> anniversary of the U.S. Environmental Protection Agency, all of us are struck by its resonance with the mission of our own school here at Indiana University.



*Although great strides have been made in improving the environment and in amplifying the environment to a global stage, there still remain new challenges—global climate change foremost among them.*

Over those 35 years we have become more sophisticated in the ways of formulating, implementing, and evaluating public policy for the environment. With years of experiences, our premises for policy have moved beyond the simple, indeed simplistic, model of regulation—and its handmaiden litigation—to one of greater negotiation and collaboration. Our contemporary approaches, in their pragmatic forms seek to honor democratic values in the plurality of our communities and harness market values with incentives, not just sanctions, in the robust marketplace.

Although great strides have been made in improving the environment and in amplifying the environment to a global stage, there still remain new challenges—global climate change foremost among them. And while we have reinvented many production and distribution technologies, as always with the advent of new technologies, come new environmental issues. And the challenges keep unfolding—in complex, convoluted manifestations, in pluralistic settings, and in new natural venues. Keeping abreast is a vexing task that often defies the best of incentives and intentions and that perplexes analysts, frustrates advocates, and stumps policy-makers.

In many ways, the EPA and SPEA have evolved on complementary paths—soulmates, if you will, in mission and in development. Both the EPA and this School have been dedicated to deploying science to analyze the trinity of environmental issues: problems of the earth, of the water, and of the air.

Both recognize the critical importance of predicating public policy on solid science. Both understand that a better world depends on a willingness to change our behavioral patterns as a community, as individuals in our conduct, and as agents of our economy. The shared goals are simple: conserving our cherished natural and physical resources and the vitality of our citizens and their communities.

As the EPA was taking root, SPEA embraced the spirit of those days by championing the salience of the environment in the public arena and, indeed, within our own academic community. In 1972, Indiana University established the School of Public and Environmental Affairs under the inspired leadership of its then-president, John Ryan, who joins us in the audience this afternoon. Coincident with the formation of EPA and then SPEA, one of our founding faculty, Professor Lynton Caldwell, was the author of the Environmental Impact Statement, one of the earliest tools formulated by the EPA to begin to monitor the environment. Professor Caldwell also graces our audience this afternoon.



Perhaps the person who personified all the values that SPEA extols—smart policy, sound science, stronger communities—is the first administrator of the EPA, William D. Ruckelshaus, who championed in elegant and pragmatic ways the rule of law as the foundation for the agency, and then became its fifth administrator who rescued the agency from what many diagnosed as political excess and administrative ineptitude that threatened its mission and compromised its credibility.

In his presentation to the National Council on Science and the Environment a little over a year ago, I heard him articulate what in many ways was an anthem to his own credo as a public servant and a beacon for SPEA's mission. He said, and I quote:

“The environment and natural resource problems we face are worth solving for their own sake. If we can solve them by using the processes and pronouncements of democracy and freedom, we will have done the world, ourselves, and our values a great favor.”

What a point of pride in our own civic culture that the first and fifth administrator Bill Ruckelshaus—and, I might add, an early member of SPEA's Board of Visitors—is in fact a Hoosier. From a youthful career in politics here in Indiana, Bill Ruckelshaus vaulted onto the national stage. In those early days he inspired many to extol public service as a meaningful career, including our governor. In so doing, Bill Ruckelshaus had crystallized a vision of public service that heralded not only democratic values and the rule of law, but also the ability to work effectively across all sectors—in business, philanthropy, advocacy and government—as an essential talent.

So who better to introduce our honored guest than the governor of the state of Indiana, the Honorable Mitch Daniels, whose early inspiration for public life derived from working on a Ruckelshaus senatorial campaign back in 1968 and occasioned a leave of his studies at Princeton University? Like his mentor, Indiana's chief public servant has moved across the sectors with adroit effect and skill—from the apex of government in Washington and the White House to the grassroots of Indiana's varied communities. Those perspectives, experiences, and accompanying talents have endowed Governor Daniels with a wisdom of insight, an effectiveness of administration, and a versatility in solving complex problems that press for more enlightened and more efficient public policy—values and talents similarly shared by our honored guest. The governor has just returned from a valiant, albeit tiring, journey to Iraq to be with us this afternoon. Without further ado, I present to you the Honorable Mitch Daniels, governor of the state of Indiana.





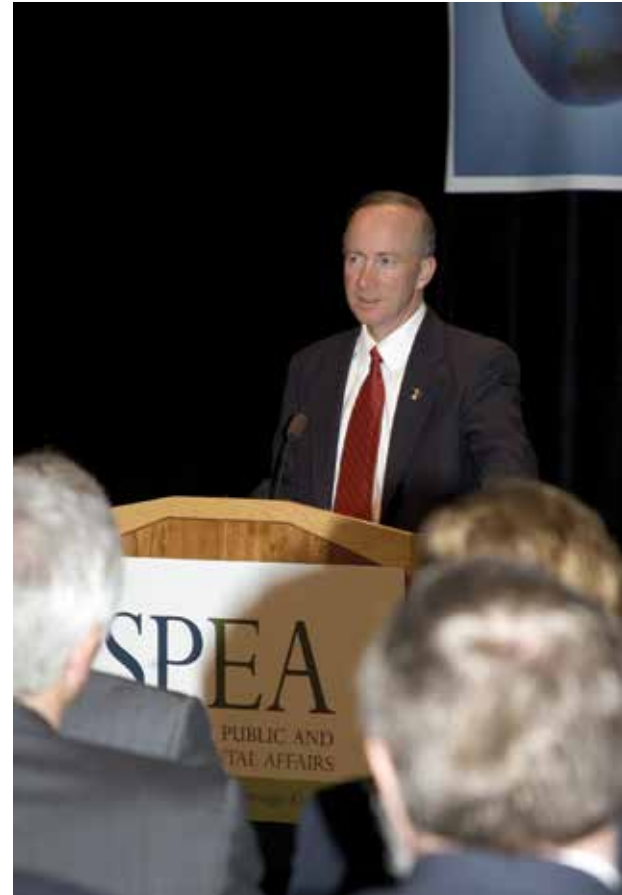
### *Introductory Remarks by Indiana Governor Mitch Daniels*

Astrid, President Ryan, and good friends of SPEA, I would travel halfway around the world to hear Bill Ruckelshaus speak. In fact, I just did. This time yesterday, if I don't account for about nine time zones, I guess I was in Islamabad, Pakistan, courtesy of a broken hydraulic unit on a plane. We had a little delay in our return home from an enormously illuminating trip to Kuwait and to Iraq and to Afghanistan to carry the message of support and love to those people, young and not so young, who are representing our state there and serving our country.

If I can retrace those steps: from Islamabad by C130 cargo plane back to Afghanistan, from whence we'd come, from Afghanistan to Tbilisi, Georgia to refuel; from there to Brussels; from Brussels to Washington; a couple hours' sleep in the Lincoln bedroom; breakfast with the President and our national leadership; and here with 12 minutes to spare, thank goodness, because any opportunity to hear my first boss and one of this nation's premier public servants, Bill Ruckelshaus, is worth all the trouble that one might take.

As Astrid said, I am just one of innumerable people who were first motivated to public service by an encounter with this remarkable man. I see some of them sitting here; old friends like Larry Landis, still serving the state of Indiana. My friend John Clark, who assists SPEA and has been called back from his porch at Lake Monroe to the service of the state now; my good friend and recent comrade, Marcus Peacock, whom you'll be lucky enough to hear from in a follow-up session. We are just an infinitesimal fraction of the legion of people who came to understand what excellence in public service is all about from the good fortune of a close encounter with Bill Ruckelshaus.

People in this day and age, I think, are far, far too loose with superlatives, and yet this is one occasion when they're entirely in order. The word "paragon" can be fairly applied to our speaker today. He epitomizes and represents as very few others those qualities we should always hope for in our public officials, and that any public official entrusted with part of the stewardship



*Bill Ruckelshaus' public service has been marked by thoughtfulness and reasonableness, grounded in principle, but always open-minded, always curious for new information, always very respectful of the facts and willing to be guided by them.*

of the people's business ought to seek to emulate every single day. It starts with integrity, first and last. Bill Ruckelshaus has personified that—most days very quietly, on a few days in his life under conditions more dramatic, but he exudes it so naturally that one working in proximity, or just watching what he does, would be ashamed to ever let one's own conduct slip from that standard.

Then, of course, there is the consummate skill with which he has practiced his various trades, both public and private. As Astrid said, his public service has been marked by thoughtfulness and reasonableness, grounded in principle, but always open-minded, always curious for new information, always very respectful of the facts and willing to be guided by them. I used to work in my business life with some of the most brilliant scientists in this world, and they had a saying, "If you torture the data long enough, it will confess." Bill Ruckelshaus never tortures data, but he seeks it out, and he studies it with enormous intellectual curiosity and acumen, and then applies it to decision-making in a way that invariably finds practical and constructive solutions.

Last, and maybe most important, in a way that unifies people, he has dealt in his storied career with some of the most controversial, difficult, and potentially divisive questions on the public agenda. But I defy you to recall a time in which he emerged from a problem-solving exercise or an important national debate without the goodwill of people—even those with whom he might have disagreed—and very, very often with the active endorsement and support of people who initially took a different viewpoint. That is a rare skill set and a badly needed one in this day and age. For all those reasons, if I'd been even further away than Pakistan, I'd have found a way to be here and introduce to you my model and a paragon in public service, Bill Ruckelshaus.



***Keynote Address:***

***“Sustaining Environmental Protection  
in the Face of Population and Economic Growth:  
Can We Do It?”***

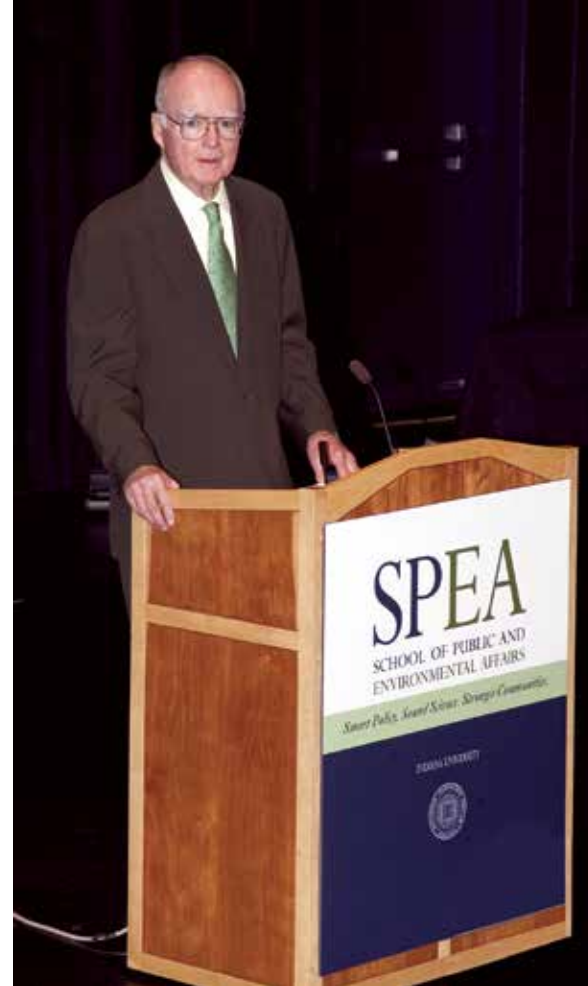
***William D. Ruckelshaus  
First and Fifth Administrator  
of the Environmental Protection Agency***

Mitch, that introduction ranks right up there with having a carbon forest named after you. They are both aimed at reducing the effect of the hot air to follow.

My wife, Jill, and I are delighted to be home in Indiana. Jill spent her undergraduate years here at IU majoring in English. It’s the primary reason I have written out my remarks today so as to minimize the grammatical errors and silent condemnation! The other reason is, I can no longer see my written notes. It is truly disconcerting when searching for the next thought, you glance down at your notes and are greeted with a misty incomprehensible scrawl.

Jill and I have been gone from Indiana for almost 40 years. For the first 30 of those, whenever either of us mentioned home, we both knew we meant Indiana. Having lived in Seattle for most of the last 30 years, our sense of home as a place has now transferred, but beneath this fragile northern woods exterior beats the heart of a Hoosier.

Coming back to Indiana and to this School of Public and Environmental Affairs, started by my friend, Chuck Bonser, led for so many years by my twice EPA colleague, Jim Barnes, and now by Astrid Merget is very gratifying to me. And the same school is overseen by a distinguished Board of Visitors that includes two more EPA colleagues, John Clark, who now serves Indiana in the governor’s office and who was present at the creation, and Phillip Angell, who endured both of my tenures at EPA, the second time as Chief of Staff and with whom I still work closely today on a number of fronts. Finally, the Board includes former Senator Birch



Bayh, who in 1968 stopped dead in its tracks one of the most promising political careers in Indiana history—mine. Well, Birch, that race took place 38 years ago. I know that date well because I'm almost over it. Seriously, Birch Bayh and now his son, Evan, have served our state and nation in exemplary fashion. Indiana is lucky to have produced such fine public servants.

Let me touch on some of the things that Dean Astrid asked me to emphasize when we met about this event several months back.

We Americans have always had a peculiar relationship with our government, especially with the laws and regulations that impinge on our daily lives. There's an old rubric that characterizes how this plays out in other nations. In France, they say, everything is either prohibited or allowed. In Italy, everything is allowed, especially that which is prohibited. In China, everything is prohibited, especially that which is allowed. And in Singapore, everything that is not prohibited is compulsory. It seems to me the best way to apply this to the United States is something like, "Everything, whether prohibited or allowed, winds up in court."

Actually, as we all know, Americans today both demand a great deal of their government while at the same time exhibiting monumental distrust of government actions, especially at the federal level. Trust has been leaking away for at least the last four decades—according to a *New York Times*/CBS poll, first taken the last year of the Kennedy Administration, 63 percent of Americans said in effect they trusted the federal government to do the right thing; this year we're down to about 20 percent as a result of the war in Iraq—it has been as low as 13 percent over that 40-plus year period. I think it is fair to say with some ups and downs, trust in government has been on a steady downward glide for more than 40 years.

Clearly, many feel this trust has eroded for good and sufficient reasons. The famous scandals, the abuses of power stand out like grim tombstones in our recent history. Attach the suffix "-gate" to any word and we all know what it means. But, in truth, unless the people can place some minimum degree of trust in their government institutions, free societies don't work very well. To me, this is the central, ugly fact confronting government in America, because mistrust engenders a vicious, descending spiral. The more mistrust by the public, the less effective government becomes at delivering what people want and need; the more government bureaucrats in turn respond with enmity toward the citizens they serve, the more ineffective government becomes, the more people mistrust it, and so on, down and down. If that spiral continues to whirl, the laws will cease to be administered and, when the inevitable chaos starts to bite, the society will become less free. It was George Bernard Shaw who said, "Whenever a people are faced with a choice between chaos and tyranny, they inevitably choose tyranny"—a lesson we need to bear in mind in Iraq.

It's my belief that for us to avoid this dark fate, America must generate a renaissance of trust, so that the government, at all levels, is no longer *them* but *us*, as it ought to be in a democracy. I think this can be done. What I'm here to tell you this afternoon is that it has already started, remarkably enough in the very area that has historically been at the center of mistrust—in environmental protection and resource management. That's the good news. The catch is that the restoration of trust here is going to require the most profound changes in the way public administration functions in the environmental field, and I believe in many others as well.





To understand the nature of the solution, you have to understand to some extent the genesis and the depth of the problem. Let us recall that starting 30-plus years ago, this country began a heroic series of environmental programs on a wave of public enthusiasm. These programs have had an enormous beneficial effect on all our lives. We should never lose sight of that. My wife and I returned in January from the celebration of the 35<sup>th</sup> anniversary of EPA. They even had portrait unveilings of all the former Administrators. Since I was there twice they hung two pictures of me causing some unseemly grumbling among my successors and predecessors. Sometimes successors and predecessors were the same person. Despite 35 years of progress, EPA is assailed by interests on both sides of the environmental debate and is often cited as the model of a bureaucracy either out of control or incapable of fulfilling its mandate.

The reasons for this paradoxical situation are as complex as the uncoordinated tangle of our nation's environmental laws, but the salient factor to my mind is this: EPA does not inspire trust because it was created out of profound *mistrust*. From the beginning, those who with great energy pressed the environmental revolution considered that pollution was an evil that had to be utterly expunged. The laws were written, in most cases, to require the elimination of any palpable effect of pollution with a margin of safety, and without regard to costs. Could industry be trusted to do this? Of course not. It was not in its economic interest to do so, and besides, in the early days of the struggle, industry had often dragged its heels, cheated, and provided misleading information. (I believe this is currently the rare exception rather than the rule, but it still happens and when it does, it is widely publicized, adding to the mistrust.) Could the states be trusted? Of course not. In many cases, state governments were considered to be in thrall to industrial interests and many set themselves up as pollution havens in order to attract industry and create jobs. Besides, if the states had the competence to deal with pollution in the first place there would have been no need for federal intervention.



*At present, the most significant threats to our domestic environment seem to lay, not with major industrial sites, but in the habits of us ordinary Americans.*

Then surely the federal government itself could be trusted? Not so fast! It was conceivable that any administration, and particularly a Republican administration, could at some date not accord to environmental protection a sufficiently high priority, and so there were written into a host of federal laws a set of specific standards that had to be achieved coupled with stringent deadlines. Flexibility and discretion in applying the laws were largely stripped away from the senior officials of the EPA. Many of these laws were conceived in the period 1970-1972, when their principal author, Senator Muskie, was seen as President Nixon's chief rival for the presidency. Also, ample provision was made for citizens to sue EPA, and the provision has been amply used. Over 65 percent of the appealable actions EPA takes end up in court. Such things as citizen suits and Freedom of Information Act requests are ways in which a mistrustful citizenry can try to reclaim power it thinks is being misused. This is a notably clumsy way of trying to make progress; I think there is a better way.

It's important to note, despite these unwieldy aspects, our environmental protection system racked up some admirable successes. Cars were made far less-polluting. The wastes pouring from industrial smokestacks and waste pipes were greatly reduced. The mindless dumping of toxic chemicals was largely stopped. Lake Washington, on whose shores I now live, was cleaned up largely due to the actions of a determined citizen—Jim Ellis.

But, at present, the most significant threats to our domestic environment seem to lay, not with major industrial sites, but in the habits of us ordinary Americans: We like to drive big, powerful cars, use a lot of electricity, live in big houses, generate a lot of waste, enjoy cheap food, and live in grassy, sprawling suburbs. When EPA actually tries to deal with these new sorts of problems, for example, by mandating auto inspections and regulating non-point-source run-off from farms and suburban areas, it is intruding on some of the more sacred precincts of American life—such as driving, for example, or the free use of private property. Here, where the willing cooperation of millions of people is required, a high degree of trust is absolutely essential. Americans today are not going to inconvenience themselves just because someone in Washington tells them the medicine will do them good. So lack of trust in this context tends not merely to slow environmental progress, but to bring it to a halt.

That's a quick sketch of the problem. The solution will have to come from two very different places. First, we must begin to address some of the fundamental shortcomings of our system of environmental protection. In several reports commissioned by Congress, the National Academy of Public Administration noted that EPA lacks the authority to manage



many problems in a multimedia, cost-effective way. Since the media programs (by media, I mean air, water, and land) are like stovepipes at EPA, we often spend large sums of our national treasure simply moving waste from air to the water to the land, declaring victory at each step of the way. The reports conclude that the statutes and media programs they have created seem to defy the integration that would facilitate strategic priority-setting.

So reform is necessary at the center, but this administration—rightly or wrongly—having been so discredited in the public’s mind on the issue of the environment, has no chance to effect the necessary statutory reforms. Reform at the periphery is also required to cope with the kind of contentious local battles that fill our TV screens with yelling crowds carrying signs and our courtrooms with interminable litigation. From the Endangered Species Act to farm run-off to water use, the battles rage. Getting federal or state authority to deal effectively with problems of this type is much like teaching an elephant to repair watches. It’s not a question of technical ability or bureaucratic ineptitude. It’s a scale problem.

Here I don’t mean a mere repetition of the usual populist or Jeffersonian cant that government is best when it’s closest to the people. Simply pushing a problem down from the federal level, say, to the states, is not of itself going to fix things, because without adequate authority and technical ability and resources, the game will not play in a smaller arena either. Deciding on the appropriate scale for dealing with a complex problem is itself a complex process. It’s one that businesses, for example, agonize over. Small is not necessarily beautiful; it’s not necessarily ugly, either—just appropriate under certain conditions and *not* in others.

A good example is our national policy in dealing with two different birds. One, the Peregrine falcon, was close to extinction 25 years ago. We saved the falcon by acting on the national level. We banned the pesticides that were destroying its eggs. No conceivable set of local efforts could’ve done that. In contrast, we’ve spent years of contentious effort trying to rescue the spotted owl in the Northwest part of North America using national legislation and enforcement. Whether the owl has a future is *still* the subject of strenuous debate and litigation, and the fight over its habitat is *still* far from being resolved. In my view, with the spotted owl, we have been trying to solve what is essentially a local problem with tools of an inappropriate scale.

But even if we do decide that a problem is best handled in a smaller arena, we should recall that if you’re in a fight to the death with poisoned daggers, a smaller arena is not necessarily a good thing. The point is to stop fighting and start generating creative solutions, which is what the relatively new collaborative decision-making processes are all about. I don’t think it’s an exaggeration to say that if they continue to flourish as they have in the past few years, this approach will work profound changes in the way we Americans deal with our most difficult domestic environmental problems.

No less an authority on citizen participation than the late John Gardiner, former Secretary of Health, Education, and Welfare in the Kennedy Administration and founder of Common Cause, shortly before he died stated, “With all due respect to the ancient arts of law and diplomacy, the recent development of systematic, *teachable* techniques for getting at the roots of conflict, and engaging multiple parties in disciplined and voluntary collaborative problem solving, represents something new in the 5,000 years of recorded history.”



Strictly speaking, of course, the cooperative approach is not new but arises from something deep within the American grain. We have never conceived our nation as consisting only of the People and the State. We are a densely civic society and have been since the days when De Tocqueville observed that no sooner had five Americans gathered together than they had hatched a plan for some civic improvement. It has taken some time, but the same social impetus that gave us our parks and museums and, in the 18<sup>th</sup> and 19<sup>th</sup> century, raised our barns and other local improvements, has now been directed at issues that once were the exclusive province of technically trained government experts.

Perhaps we may date this modern change from the late 'sixties, when Harvard University proposed to build a laboratory in Cambridge dedicated to the new, and to some, terrifying field of genetic recombination research. Bitter controversy bloomed until the Cambridge City Council refused to issue a permit to its mightiest institution before it had been demonstrated that the facility would not pose unacceptable risks. The city established a committee of ordinary Cambridge citizens to gather evidence from both sides of the dispute, and for weeks these people sifted highly complex testimony from some of the greatest scientists in this field. In the end, the facility was built, with the safety arrangements chosen by the committee. It was a wise and stable decision—the many similar gene labs that have been built since that time rely on versions of the protective protocols developed in Cambridge—and virtually no other community has had to go through that sort of controversy since.

In 1984, while I was at EPA, the second time, along with A. James Barnes and Phillip Angell, we confronted a similar situation in Tacoma, where the problem had to do with the regulation of a copper smelter and community complaints about the smelter emitting toxic fumes. The community was sorely divided and largely ignorant of the complex scientific and economic issues involved, which did nothing to reduce the intensity of the controversy. We set out to explain all the issues to the community—to give them the same information we had to use to make the final regulatory decision. And then we asked their advice. In the end, the citizens concluded that the community could preserve 600 jobs and public health. With technical help from EPA, the community was able to educate itself, and it found that it did not, in fact, have to choose between jobs and health. A panel of citizens developed a plan that allowed the smelter to continue its operations in a safer way. In this exercise, I was struck by the ability of local groups not only to drive to consensus on complex issues, but to invent solutions that had simply not been thought of in the heat of combat. The smelter shut down anyway because copper prices went south. It seems that one answer to democracy's apparent failure is more democracy.

Since that time, cooperative decision-making processes have arisen spontaneously and in increasing numbers throughout the country. In some cases the goal was to bypass long-standing deadlocks. People, it seems, want their environmental problems *solved* and not merely massaged by government officials, and perpetual litigation seems to have limited appeal as a spectator sport. The American West has specialized in this sort of process, probably because it is in the small timber, ranching, and mining communities of the West that the conflicts between livelihood and environmental protection seem particularly sharp.







We've had our wars on the land and the waters in the Northwest—the listing of 27 salmon species south of British Columbia being the recent example. But these are mild in comparison to the disputes over water that take place in states throughout the arid intermountain West. It's difficult to exaggerate how violent—sometimes literally violent—these water disputes can get. Think of burning a flag in an abortion clinic built on top of a Superfund site. Yet cooperative processes are starting to be used even here, which I think is a good sign. If you can get consensus on the demands salmon place on water versus all the other uses such as drinking water, irrigation, transportation, recreation, and so on, you can get consensus on anything.

A prime example is an effort we have labeled the “Shared Strategy in Puget Sound” in the state of Washington. After the Chinook or King salmon was listed by NOAA as threatened in Puget Sound, representatives of all of the governmental agencies at

the federal, state, local, and tribal level, along with business, environmental, agricultural, and fishing interests came together and fashioned a plan to help the fish recover.

The federal, state, and tribal governments set the fish goals and all 14 watersheds in Puget Sound developed plans and local commitments to achieve those goals and place us on a ten-year trajectory to meet them. In some cases, actually getting to the goals will take 50 years. A portion of the plan for making necessary changes in Puget Sound proper was developed by the Puget Sound Action Team, a state agency. The overall plan was published in the *Federal Register* and proposed by NOAA on December 27 of last year, and is slated to be approved in June (2006). The key to its development and, more importantly, its implementation, will be the commitment of the people most impacted by the needed changes. Absent their ongoing involvement and insistence on progress, nothing much will happen. We've made a good start, but by no means are we home free.

Citizens are turning to these collaborative decision-making processes with increased frequency in the West, and in a few cases in the rest of the country, as they realize that in many cases they are the only path out of gridlock. By one count, over 60 of these watershed efforts are now underway in the Colorado River drainage alone. Similar processes are well underway throughout the state of Washington involving salmon recovery.

It is essential to understand that each of these efforts is unique to the problems, the locale, even the personalities involved. This approach is absolutely *not* something you can stamp out with a cookie cutter. The process must be local and fit the place involved. Nevertheless, even at this preliminary stage, it is possible to derive some general lessons about how to set up a successful cooperative project.



First, every important stakeholder must be brought in at the very start of the process. Everyone has to be in the boat rowing. You can't leave anyone on shore because those are the people most apt to heave rocks as the boat goes by. When you include all interests, you almost guarantee that the result will transcend the sterile posturing of single-interest politics, and that people will learn the habit of listening before passing judgment. Involvement of all has to be early because, remember, we're operating in an atmosphere of fiercely held interests. No one wants to feel co-opted by some prior set of assumptions or decisions. The very *point* of the process is that everyone gets to see the cards dealt, everyone gets to kick the tires on the technical issues. By the way, if everyone who is likely to be impacted by a decision is involved, an agreement is much more likely to effect a sustainable decision than one handed down by a remote government or a court. This is an underlying assumption of the citizen-based salmon recovery plan in Puget Sound.

Second, the relevant governmental authorities must signal in unambiguous terms that the process is the only game in town, and that what comes out of it will more-or-less prevail as public policy. Then everyone must play or risk being left out. The government's role is to set the arena—then the process has the best chance to succeed. This is often, not always but often, crucial in order to get former opponents around the same table to work together in good faith. If one or another party thinks it can get another bite at the apple in some other forum, they will hold back from the full cooperation necessary for success. Let me note here that these processes are utterly different from the typical public meeting, where people state their positions and afterward are under no obligation to listen to any opposing statements. In collaborative processes you *have* to listen to the other side.

Third, professional facilitation and access to extensive technical advice is essential. We've learned that ordinary citizens have an amazing ability to filter through scientific information that may contain contradictions and come up with reasonable findings. Now, in some cases it is important for government agencies to provide technical support for these processes. I said you need the backing of government in these things, and you do, but while government can initiate and sometimes participate in such processes, it is sometimes best for the actual cooperative decision-making group to operate under the auspices of a non-governmental, demonstrably neutral, organization. The point, after all, is that lots of people don't trust the government. This is very hard for some government officials to accept. They need to be trained—a useful role for great universities like IU.

Another function for government is to set broad or aspirational goals to initiate action by the local citizens. For action to sustain local recovery efforts for salmon, the federal government set the stage from both the executive and legislative branches. The salmon were listed as threatened by the executive branch, as required under the Endangered Species Act passed by the legislative branch. Government sets the context the side boards written which affected people supply their own solutions.

You have to confront economics in some detail. What you *don't* want is a trivial "feel-good" agreement on vague principles that leads to no action. Make no mistake: These processes are ultimately about who gets what. Their real genius lies in discovering that sometimes different sides can *each* get what they *need*, that the pie can be artfully cut so as to be bigger than we



*You have to confront economics in some detail. What you don't want is a trivial "feel-good" agreement on vague principles that leads to no action.*

thought. Facts won't resolve disputes, but they can narrow them. From that realization much further progress can often be had.

Finally, such a process must have as its goal some deep and permanent solution. In the words of Donald Snow of the Northern Lights Foundation, a Montana not-for-profit facilitation institution, it must "break through the shallow façade of rhetoric and reach to the heart of the issue." Only when people are united despite their differences by hard-earned trust, does the astounding political power of such a process become effective.

Having said all that, I should emphasize that cooperative decision-making processes are by no means panaceas for every societal problem. They are extremely difficult to bring off, frustrating to participate in, often lengthy, grueling for their members, and they can easily fail. They can fail, for example, when short-term economic interests overwhelm all other factors. Regional land-use planning efforts that call for some property owners to be deprived of a significant fraction of the value of their holdings with no compensation are in this class. They can fail for lack of local leadership. They can fail also, as I suggested, when one advocacy group or interest believes it can get more in some other place than it can in the collaborative process.

And we should also remember that this movement toward cooperative decision-making is growing in poisoned soil. Throughout the nation and here in our state, among the national environmental groups and industry associations, there are talented, dedicated people who have been trained in a tradition of combat, accustomed to fighting for total victory in pursuit of deeply held beliefs. They *like* going to court. They will not easily yield their historic leadership or work in good faith with traditional enemies. Does this mean that cooperative efforts for salmon or anything else are doomed? No, for ultimately, in my view, American pragmatism will prevail. If cooperative processes are seen to work over the long run, if neither side feels co-opted, if they continue to yield creative solutions that allow the extraction of livelihood from natural resources or salmon while at the same time preserving the resource or environmental values, then they will establish a permanent place among our civic institutions.

Meanwhile, the consensus approach is starting to trickle back through the legal profession. We can detect signs at all levels that the paladins of the adversary approach are exhausted, and, more significantly, that the people are tired of watching the warriors squabbling while important public business goes undone.

On the administrative level, some parts of the federal government are saying to parties in contention over proposed regulatory efforts, "If you don't want us Feds stomping through your



garden with our heavy boots, settle your differences and make a recommendation and the Feds will heed your messages!” NOAA’s participation in the development of the salmon recovery plan in Puget Sound was crucial for its success. NOAA policy people were at the table from the beginning. We created an inclusive scientific process. My daughter, Mary, a NOAA scientist in Seattle, chaired this effort and answered science questions as the scientific response together. So far, this approach has avoided the debauchery of the dueling scientists.

A recent joint initiative formed by the University of Washington and Washington State University is aimed at continuing the trends I just mentioned. Endorsed by both university presidents and boards of regents, a “Policy Consensus Center” has been created. The idea is to take the enormous pool of intellectual talent that exists in Washington State’s universities and apply it to helping that state solve its more intractable problems.

The center is physically located at both universities. It will be governed by a broadly inclusive board, including many widely recognized names in the state. Both university presidents are serving as ex-officio members. It is chaired by a distinguished and uncommonly handsome American—me.

Our purpose is to be receptive to public and private requests for help. The problems and the players’ willingness to work toward a common solution will be analyzed and a process suggested. This process may or may not involve the Center—or the two universities. In just two years of the Center’s existence, we are already working on several problems—two assignments requested by the governor, one by Senator Patty Murray, and one by the Department of Ecology. It is a work in progress, but shows great promise.

I was involved in starting a similar effort at the University of Wyoming. It is in its tenth year and has assisted the state in solving many of its problems. I believe every state should have a similar university-based center to help bring its people together to solve problems—including Indiana and Indiana University. It’s good for the faculty and students, it’s consistent with the research mission of a great university like IU, and it’s good for the state.

If the trend toward collaborative problem-solving continues, American public administrators will find themselves in an unfamiliar world. Historically, public administration has prided itself on its ability to apply the tools of rationality to complex social problems in accordance with some statutory charter and coming up with a decision. I think that in the future, many such decisions will emerge from the sort of group processes I have been describing, wherever the decisions are at the appropriate scale. The role of the public administrator here will be largely to foster the process to make sure that it has adequate technical support and set the context for decisions. This may be a troubling change for some, but you have to ask yourselves whether it isn’t preferable to spending more time in public administration hell—that is, sitting in front of some high-school auditorium with a crowd calling you the spawn of Satan while the TV cameras roll.

This does not mean that public officials will have to abdicate their authority or their responsibilities. If designed properly, these cooperative decision-making processes can supplement and amplify the democratic processes, and assist leaders in building the public support necessary to fashion and implement a solution.





Hopefully, we may one day observe an upward virtuous spiral, where trust engenders success and satisfaction with government actions, which in turn creates higher levels of trust and makes government actions either less necessary or easier to accomplish. Here it's important to recall that democracy is not just a way of choosing the personnel of government. If that was all it was, then on the evidence of some aspects of the recent elections in Iraq, it might not have lasted. Instead, the real virtue of democracy is that it is a school. In it, we learn how to manage the public aspects of our lives, and thus, unlike any other system of government, it is progressive—we can actually get better at it as time goes on. The Athenian city/state democracy lasted 200 years and though not perfect, it kept improving. But democracy is a hard school. When we doze off, as we will inevitably do from time to time, we get a sharp rap on the knuckles. When we pay attention, we earn the gold stars, one of which must be the restoration of trust between government and people. Thomas Jefferson once pointed out that if the people appeared not enlightened enough to exercise their control of government, the solution was not to take away the control but to inform their discretion by education. The cooperative processes that are springing up around the country are doing just that, giving to large numbers of citizens a new comprehension of the complexity involved in government decisions, out of which has got to come a heightened appreciation of, and tolerance for, the necessary work of government.

If these processes work, if they spread, if they become an indispensable part of government at all levels, we may take it as a sign that we, as a people, have moved up a grade in democracy's school. It holds out the hope that, eventually, the United States itself will be ready for self-government.

As more and more such efforts abound, the cumulative effect can be enormous and may foretell a time when, once again, citizens look to their leaders, elected and appointed, fully expectant and trusting that they will do the right thing.



## *Question-and-Answer Session*

**Astrid Merget:** We'll take a few questions following that elegant commentary and what I think is a wake-up call to us as citizens in general and citizens who care about the environment. Bill will take a few questions, then we'll break for refreshments and resume in a conversation. So, who would like to pose a question?

**Question:** Thank you for the wonderful comments. I was wondering if you care to comment on the U.S. Institute for Environmental Conflict Resolution, a government-established organization to foster collaborative problem-solving.

**Mr. Ruckelshaus:** Well, I'm familiar with the many governmental institutions. I think it's a good idea. It has contributed to a number of conflict resolution efforts, particularly in the West, but I'm sure that's true in the East as well. I'm just more familiar with the ones in the West. I think that what we need is a series of offices in each of the administrative branches of domestic government. They don't work so well in the foreign field, but on domestic issues they work quite well. They need to work together so that they understand what works in what set of circumstances and what doesn't. What conditions have to be present if they're going to be successful. Governmental institutes can play a really important role in helping to accomplish that.

When I said people need to be trained, they do because it's entirely possible, and I've seen it happen way more than once where a government official who doesn't understand how these processes work can come in and say or do something that completely destroys it right at the outset. So, governmental employees need to understand how they work and what their role has to be in order for them to function properly. I think an institute can play a real role in causing that to happen.

**Question:** In 35 years since EPA was created, we've seen many changes in the world. I'm wondering if you'd reflect on the relationship between the United States policy-making and the international community with regard to the environment.



**Mr. Ruckelshaus:** When we started at EPA, we were really the first country that had marched out and done something like that. I can remember going through our offices down in Waterside Mall where we used to be located and seeing in and out of this warren of offices down there, foreign representatives coming and asking us: “How did you do this? What were you doing about that?” At international conferences, EPA, Council on Environmental Quality (CEQ) and counterparts at the State Department were always in a very strong position to help other countries think about how to make progress. Don’t repeat our mistakes and remember the origins of all this effort in our country and what they might do about it.

I think we’ve lost some of that momentum over the years. Probably part of it inevitably because countries catch up and to the extent that Nordic countries, for instance, in Scandinavia would have a very strong environmental ethic in their people, their governments respond to that as they can step out and do things—maybe even beyond where we are now. But I think we need to re-establish our position of leadership in the world because we are a huge part of the world’s economy—about a third of it. We have five percent of the people in the world, and we burn an awful lot of energy. So we’re in the middle of a whole lot of environmental problems. We have the wealth, the know-how, the economic base, as well as a position of strength in the world that gives us not only tremendous opportunities for leadership, but really obligations, I think, to lead in areas of this kind. I just think we have to step up and accept that responsibility like we did early on.

**Astrid Merget:** Let’s take one more question, and we’ll break for a refreshment and resume. Yes, up in the balcony.

**Question:** I’d like to first of all thank you very much. How would you say your management of ethics were so important to EPA?

**Mr. Ruckelshaus:** Oh, they were crucial. The agency can’t function unless it’s trusted. Primarily, the way to gain trust is through transparency. Everything you do has to be open. You can’t assume that the public can begin to understand the nature of decisions that you make or the nature of the problems that you’re addressing unless you give them the same facts that you have. The example I cited in Tacoma was just one of what I think are many examples of that kind. I’m not sure that we understand that as well as we once did. How openness can lead to trust and in turn, better decisions than trying to do things where you think the experts have the ability to do it and the public has nothing to contribute. That’s just not right, as we’ve seen over and over again. Unless you can generate sufficient trust and even if the decision is not supported by individuals in society because they would come out differently, at least they know what you were weighing. They know what the facts are as well as you do. If you can’t communicate that level of understanding to the public, regaining their trust is virtually impossible to achieve.



## ***“Critical Issues in Environmental Policy”***

**Roundtable Discussion**

**Moderated by Jim Barnes**

**with panelists Bill Ruckelshaus, Bernard Goldstein,  
Marcus Peacock, and Paul Portney**

**Astrid Merget:** Not only do the insights and the challenges posed by Bill Ruckelshaus in his remarks provoke us to think, but in this academic setting it is also appropriate to convene diverse thinkers about those remarks, and in so doing, to invoke a lively candid exchange of ideas, both retrospective and introspective, across the academy and government. My predecessor, the second dean of SPEA, is the ideal candidate to spark such a colloquy among colleagues. Before entering the world of academe as dean in service to SPEA for 12 years, Jim Barnes had an illustrious career in government that early on tracked with Bill Ruckelshaus in the formative days of EPA and then in their remarkable stint at the Department of Justice made so very dramatic by the Saturday Night Massacre. Jim eventually returned to EPA and served as deputy administrator of the agency until returning to Indiana University as dean of SPEA. Jim will host this segment as a conversation among colleagues. Thanks, Jim.

**Jim Barnes:** Well, thank you, Astrid. As you’ve indicated, our goal for this session is to let you eavesdrop on a conversation among four very thoughtful individuals who have spent a good deal of their professional lives dealing with some of the most pressing public health and environmental problems that we’ve faced as a society. Let me introduce them to you.

On my far left, Paul Portney. In his decade as the CEO of Resources for the Future (RFF), he was the guiding hand of the pre-eminent environmental research think tank in the country. He currently serves as the dean of the Eller School of Management at the University of Arizona in Tucson, but before assuming that deanship, spent 30 years at RFF, which for those of you that are familiar with the Washington scene, know is an independent, non-profit organization that conducts research on environmental energy and natural resource issues. I think, most importantly, it’s a place where if you were looking to get top-flight research and analysis without the kind of political agenda or spin behind it that one often finds associated with different organizations, that RFF was the place to go. Paul is the author/co-author of ten books, including one called *Public Policies for Environmental Protection*.







*Left to right: Goldstein (leaning), Ruckelshaus, Barnes, Peacock, and Portney.*

On my immediate left, Marcus Peacock currently serves as the deputy administrator of the Environmental Protection Agency, a position to which he was appointed in August of 2005. Trained as an engineer, he brings a broad background from private business as well as service on the staff of the House Committee on Transportation and Infrastructure. Before his position at EPA, he was an associate director of Natural Resources, Energy and Science at the Office of Management and Budget. I couldn't help but note when I saw his bio that he lists that he's the EPA point person for dealing with the aftermath of Hurricane Katrina.

In reflecting back on my own EPA deputy administrator experience, one of my fondest memories was dealing with a trash barge that loaded up in Islip, New York and went south, hoping to unload at North Carolina. It was refused permission to do so and was towed over the next week or two, first through various ports in the Gulf of Mexico, and then out to the Caribbean where there was a hope that some tinhorn dictator would agree to unload it. All the time this is happening, the national media is following it. Finally, I got it coaxed back to New York where I thought it should have rested to begin with. But I say that simply because when I compare that experience to Marcus' dilemma, thinking about what do you do with hundreds of thousands of refrigerators filled with rotting food, just for openers—much less the hundreds of thousands of tons of hurricane debris, demolition material, and sediments containing toxic waste—it's no small challenge that he's right in the middle of.

**Marcus Peacock:** Jim, this is why I always ask when I'm in a tough situation, "What would Jim Barnes do?" [Laughter] Then I just follow that.



**Mr. Ruckelshaus:** Bring it all to New York. [Laughter]

**Mr. Peacock:** I think it'll be a good hour.

**Mr. Barnes:** Bill began by noting the problem with litigation at EPA when I was general counsel . . . that people sued us 65 percent of the time. Now, as a lawyer, you might say if you have a client who gets sued 65 percent of the time, that's a pretty good deal, but that can get old after a while when everybody challenges every decision. I really don't think it's changed much for my successors.

The third member of our panel is Bernie Goldstein. He's a physician. He's been a leading environmental health scientist focused on health effects of pollutants for more than 30 years. I first met him when Bill brought him on board in 1983 during his second . . . I venture whether to say "coming," or "incarnation," as administrator.

In any event, Bernie served as the assistant administrator for research and development and also the science advisor to the administrator. When Bill and the agency needed somebody in a white coat with a lot of credibility with the scientific community to go out and explain to the public the complexities of some of the issues faced—remember we had the ethylene dibromide or EDB issue that had been used as a fumigant and it was in our citrus, it was in our grain cereals, cake mixes—Bernie was the person that put that MD's white coat on and with authority was able to talk to people about the risks from EDB. He was the founding dean of the Rutgers School of Public Health, subsequently the dean of the University of Pittsburgh Graduate School of Public Health, and now is a professor there. He's also a frequent consultant with the World Health Organization and the United Nations' environmental program.

So, with those introductions, what I'd like to try to do is throw out the first question. It's my hope then to sit back and let the conversation take off from there among the panelists here. Bill, you gave us an excellent starting point, as you described, I think, a very compelling mechanism to deal with some of the seemingly intractable environmental problems and natural resource issues that we continue to face. Some, as you pointed out, are quite different from those that you faced when you came to EPA in 1971. You used to refer to those as ones you could taste, smell, feel . . . very visible problems. Some of them are quite different now.

But the question I'd like to focus on initially is, are there some lessons in what he outlined for the kind of subset of problems that he talked about, that can apply to what some other problems that people believe are also serious problems? Let me be more specific on that. In the environmental law class I teach, and I'm pleased to see we've got some of those folks in the room here today—I find students that are raising questions about the viability of our current regulatory schemes to deal with what they perceive to be some of the most troublesome environmental problems that are out there. For example, global climate change—as we hear about or read about glaciers melting at an increasing and alarming rate; levels of mercury in our surface waters attributable to air deposition, much of it beyond our shores and really kind of beyond the reach of the major mechanism we have for dealing with surface water pollution, the Federal Water Pollution Control Act, known as the Clean Water Act.



Then there is an array of chemicals that are suspected endocrine disruptors, as well as discarded pharmaceuticals and so on that are found in our surface waters, our groundwater, that we don't appear to be monitoring for; and that we don't appear to fully appreciate the danger they may pose to humans and other species. The students ask where in this regulatory structure that you've laid out for us that was put in place in the '70s and modified, since do these problems fit? How do these authorities deal with these current problems?

They also see a legislative process that has gone from the 1970s, when you had a bipartisan process where people crafted approaches to dealing with perceived environmental problems, and a system that now appears to be locked in partisan gridlock so that we're not making many of the mid-course corrections we need, or developing and crafting new solutions to deal with the emerging problems. So, the overall question here to start with is how well-equipped are we as a society in terms of the scientific, analytic organizational policy responses we need to deal with these problems? Are there some gems in some of the ideas that Bill put forward that might be useful?

Bernie, why don't I start on your end in terms of the contribution science can make? Maybe, how it is changing or evolving, and how you see it contributing?

**Dr. Bernard Goldstein:** Wow! Yes, is the answer. The analytical issues are fascinating and they're driving some of the issues that you discussed. This glass of water that you've given me—I'm sure has superb Bloomington water, has no measurable benzene in it right now. Ten years from now it will. Now that's not because your water's going to get bad. It's because we, as scientists, cannot measure the level of benzene that's in there now. We will ten years from now because our analytical techniques will get better.

The CDC just published something—I think it's 128 different compounds that they can find in human blood. This is a national survey. It's part of a national health and nutrition survey that's been going on for many years. It's got a wonderful disclaimer in front of that says, "Oh, we don't know what this means in terms of your health. So, pay no attention to the numbers." But, in fact, it will of course drive some of these issues that Bill's talked about, and that you're asking about.

So, from an analytical, scientific point of view, I think we're making things even more difficult in terms of what EPA is going to have to deal with because we're focused so strongly on where we can look, rather than what is meaningful. We're not spending as many resources as we should in trying to explain to the American public what this means as opposed to saying, well, you've got it; it's there.

Bill talked about the collaborative effort. From a public health point of view, this is crucial. There are three levels at which we in academic public health—in the broader sense, not just in the environmental area—deal with the public. One level is that we're at least nice enough

*Dr. Bernard Goldstein*



to let the public know that we've done a study that's pertinent to them before they read about it in the newspapers.

A second level is that we actually involve the public. We hire local people. We have a citizens' advisory board that looks at the research while we're doing it.

But Bill's really asked for a third level. You really asked for those scientists involved in setting the research agenda to listen to the public; to try to develop science to help resolve those uncertainties that are crucial to the public; to try to be able to put new facts on the table, which sometimes moves disputants toward conflict resolution. For academics to provide credible, transparent science pertinent to dispute resolution means that we've got to be able to listen—something we don't do very well in academia. We have to cut down on our arrogance. We've got to realize that some of the most important science is not originating with us but is coming out of what is needed by society. We have to be able to communicate a lot better than we usually do as scientists, including being able to say to the community when an issue develops that our science isn't going to have an answer.

**Mr. Barnes:** Any reaction to that, Bill?

**Mr. Ruckelshaus:** I think Bernie's right. The answer to a lot of this is transparency, viewed in its most positive sense that living in a democracy, as we do, if you want to get the right response out of people as to how they view their own interests, they need to understand the risks and the benefits of what it is you're trying to deal with. So you have to communicate very clearly to them what those risks are. Tacoma is a very good example: They had a risk of arsenic that might have poisoned some people living around that plant and they were very excited when it began. But once we communicated to them long enough so they got an understanding of the nature of that risk, it was no longer as frightening to them as it once was. They were able to accommodate a reduction in the risk.

In the first place, when people found out where the risk was, it wasn't inside the plant or on the island, about five miles north where our modeler said the problem was the worst. It was in the parking lot. They found that out by measuring it themselves; it was being vented out of the plant into the parking lot. So, if you got in your car and got out of there, you were alright. But more important to those people was the communication of the nature of the problem. They were demanding decisions that were consistent with their own interest.

**Mr. Barnes:** Marcus?

**Mr. Peacock:** Let me answer part of your question, at least somewhat narrowly from the perspective of EPA. By the way, I appreciate the invitation to come here for no other reason than to get to listen to Bill. I've heard him a number of times and every time he's right on. I always learn a lot. I always take notes and come away much smarter than when I came.

EPA is very proud to be 35 years old, but that's pretty young compared to other federal agencies. Other federal agencies have gone through a maturation period and there's always a story there that they can tell about how they were founded and how they've evolved, whether



it's USDA or the Department of Transportation or whoever it is. There's often a regulatory component, but there's also almost always an advocacy component for that part of the economy that they regulate.

As I think Bill pointed out, EPA was born at a time where we realized there were some large problems. It was born as a regulatory body. We've never yet gotten to the point where we're an advocacy body for producing environmental good. I think that's a transformation, as Bill pointed out, that has started but we still have to get through, which means working, for instance, with the farming community in reducing nutrients that are in the Mississippi watershed to solve the hypoxia problem in the Gulf.

For instance, we've just recently signed a consent decree with farmers to try and monitor air emissions from animal feed operations. That's a novel approach. They're going to monitor air emissions, and for that we won't, at least for two years, enforce air requirements on them in order to get data to make better decisions later on. That requires a different way of thinking. It requires trust between the farm community and EPA, which in the past has been difficult to come by. But that's an example of the direction we have to head in. There are barriers to doing that, which I'm sure we'll discuss more. But that is the transformation we have to go through.

**Mr. Barnes:** Paul, anything you'd like to pick up on?

**Mr. Portney:** Sure. Four quick points if I could. First of all, I want to thank you and the organizers for including me in this. I'm not going to go on and on because Bill will go home with too big a head if I say what I really want to say here. But suffice it to say that Bill Ruckelshaus is the guy I always wished I could grow up to be. I've failed in that, but I'm probably better for having tried along the way. So, I'm honored to be a part of this, and I mean that in all sincerity.

Jim, you asked such a big question. I think one way that we can usefully think about the environmental problems that we have is between which ones are reversible and which ones aren't, because if you look at conditions in the United States when Bill Ruckelshaus and Jim came into the EPA in 1970, air quality was a mess, the Cuyahoga River had spontaneously combusted in the summer of 1969. And the truth is that although no one realizes this or takes the time to take credit for it, air quality in every single metropolitan area around the country is significantly better today than it was 35 years ago. Even though there are more cars and more people in many of those metropolitan areas, air quality has improved dramatically, water quality is better, we now treat solid waste the way we treated nuclear waste in 1970. I mean, that's how much care we give to it.

So, we've demonstrated that we can reverse deterioration for some problems. I actually think we spend too little time worrying about problems we can't reverse. That really brings us to global climate change

*Marcus Peacock*





*Paul Portney*

in any kind of meaningful time scale. I think we need to be paying more attention to that than we are now.

The other significantly irreversible problem is, of course, habitat disruption and species loss, because no matter how wealthy we are or how wealthy the Chinese or the Indians are in 40 years, we can't buy back species that we drive off the face of the earth once and for all today. So, that's one way we could think about environmental problems.

Bill said something else that I'll just throw out and hope that he and other panelists will respond to. He talked about collaborative decision-making, which is pushing environmental decisions back down from the federal level much closer to the local level. I've always believed that while it was appropriate to federalize air pollution and water pollution and a couple of other environmental problems in the early 1970s, I actually think we federalized some problems that should have been left at lower levels of government. In my view, though I expect others will disagree with me here, those would include things like standards for landfills, where if an area chooses not to have very stringent landfill standards, it's not going to spill over to another state. I would also include in that, hypothetically at least, the harm from having higher chemical contaminants in drinking water that comes from a lifetime of consumption. So, if the state of Indiana wants to spend its money on things other than drinking water protection, vaccinating kids or on something else, I don't see why they shouldn't have the right to do that because that's not going to affect residents of Ohio or Michigan or Illinois.

On this question about what's the appropriate jurisdiction to deal with these issues, I'm in dead agreement with Bill that certain environmental problems lend themselves to collaborative decision-making, but I'd love to hear my co-panelists talk about how you would set a national ambient air quality standard or deal with a problem like climate change using collaborative decision-making. I think it would be pretty challenging.

The final thing I would throw out plays off something that Marcus said. It's true that by the standards of federal agencies, EPA is a pretty young agency at 35, but I have to tell you that I think it's aging quickly. Like myself. [Laughter] Not quite that bad, but one of the things that I think has made EPA unique in its first 35 years has been its ability to attract ambitious, bright, young, energetic people. I have the sense that while they certainly still get their share, EPA is sort of falling victim to the kind of ossification that has affected other government agencies. I can't think of a better agency in the federal government to try to reinvent itself and to set an example for the rest of the federal government than the EPA. Maybe we could talk a little bit about how EPA could continue to sort of keep that edge and the uniqueness that it's had throughout its early life.



**Mr. Barnes:** Well, since we've got a large SPEA mafia at EPA, I'm sure Astrid's answer would be to make sure they're coming out here every year to keep recruiting here and we'll keep that pipeline filled.

**Dr. Goldstein:** Jim, let me suggest a research project for someone in the audience based on the comments that Marcus and Paul have made. There's another agency that was formed 35 years ago under the Occupational Safety and Health Act and it divided the science away from the regulation. It basically put the science in NIOSH, in the Department of Health and Human Service, and the regulation in OSHA, in the Department of Labor.

I have no proof, but in my view EPA's done a far better job than OSHA in putting out science-based regulations during its 35-year lifetime. But during this period EPA has also been accused of having its science too beholden to its regulators, producing the science that the EPA administrator wants. Of course, that's not true for NIOSH, since the Secretary of Labor has nothing to say about NIOSH hiring practices or who gets promoted or how much budget NIOSH gets. I'm not sure how you could determine whether better science-based regulation comes out of EPA because of this closeness between regulators and scientists. I think it would be important to find out as part of this reinvention that you're talking about.

**Mr. Barnes:** Let me ask Bill and Marcus that question. As an administrator, is it useful to have the capability to do the scientific research in the agency or is it enough to have agency managers overseeing research products?

**Mr. Ruckelshaus:** It's essential to have as a part of the agency. I was recently a member of the National Ocean Commission, and we spent a lot of time looking at NOAA and the way it was managed. A number of our members, when we started as a commission, were in favor of separating the science and the policy decision-makers on the grounds that somehow the science would get corrupted by their closeness to the decision-maker. My own view is the opposite. We get corrupted by the science, not the other way around. [Laughter] It's just the opposite because one of the things you mentioned about Bernie's tenure there was about ethylene dibromide (EDB), which was a problem that was sprung on us just almost overnight. The question was contamination of grains around the country. There were pictures of the head of the equivalent of the Food and Drug Administration in Florida ripping Aunt Jemima pancakes off the shelf and grocery manufacturers were in my office saying, "You've got to do something about EDB." I talked to Jill. She was out in Seattle at the time. She said she had just seen a morning program talking about ED8—this is how far the public was away from where we were. We were talking about EDB and they were talking about ED8. But we had to do something right away.

We calmed people down long enough to give researchers a chance to come up with some reasonable estimate of the nature of the risk, and how long you might be able to bleed this stuff out of the grain without going through horrendous kinds of economic impacts. If we hadn't bought some time, we would have had to make a decision. We simply would have made a decision with less facts, less data, less understanding of what it is we ought to do. Therefore, it induced public trust in our actions. So, I think taking the science out of EPA makes no sense.



**Mr. Peacock:** I agree with that. You can look, for instance, at ATSDR, the Agency for Toxic Substance Disease Registry, which is required to go look at Superfund sites and do a health assessment. EPA looks at these sites and decides whether or not they should be listed as a Superfund site. We would love to have ATSDR's information in order to determine whether or not it should be listed. But typically by the time we get through the process of deciding whether or not it should be listed, the ATSDR comes out with its study usually a year or two later. To have the science in-house lets you make it more mission-oriented, more policy-relevant, which is what we've got to have if we're going to do our job.

**Mr. Portney:** Well, let me weigh in on that for just a second. Here I'll have to ask Bernie and Bill a question, but my impression of one of the challenges of decision-making in the case of ethylene dibromide was you were under tremendous political and economic pressure to take it off the market. Was it not the case, though, that once you did that, the fumigant that would have been used as a substitute was, I believe, methyl chloride, which hadn't been subject to all of the toxicity tests, but that at least some people thought was more harmful than the substance you were going to take off the market? I think that goes to the statutory challenges of running an agency like the EPA, where in a way, you're driven by the law to do something that arguably could have even increased the risk to the public.

That just doesn't make any sense at all. The EPA administrator, it seems to me, ought to have the right to say, "Okay. This is a harmful substance, but if I take it off the market I could be doing more harm than good. I'm just not going to do that." But, of course, the law often prohibits the administrator from acting thusly.

**Mr. Ruckelshaus:** Well, what we were allowed to do, though, with EDB was to bleed it out. It had been on the market for 35 years, so whatever impact it was going to have on people, it was going to have. What we could show was by gradually reducing its impact on grain, the total body effect or impact of EDB would fall off very rapidly. Essentially, the fright that existed was unwarranted. You're right. There were substitutes that were arguably worse and we hadn't done studies on those.

**Mr. Peacock:** There's another important element to this, which is the debate that's been going on since EPA's founding regarding the separation between science and policy decisions. You see it obviously going on today. It's something that people focus on, in particular, where it appears policy officials or politicians have gone into the science world to either try and control the science or shape it or suppress it or emphasize certain aspects of it.

It also goes the other way, which is where you have someone who may be wearing a white lab coat who starts to try to make policy decisions. It's a gray area. It's a bit like trying to draw a line between where air space ends and outer space begins. But by having science in-house, you're able to have a more free discussion between the scientists and the policy officials. If that communication is good, I think you end up with a better result than if there is some organizational separation between the two.





**Dr. Goldstein:** The external scientific community also needs to be involved because EPA's scientific credibility is always going to be dependent upon the views of the external scientific community. Marcus knows that I'm concerned about what's been happening with the Clean Air Scientific Advisory Committee. Two different events have occurred recently that are related to CASAC—one a very valuable review of the whole standard-setting process, which I think Marcus initiated when he came to EPA. This has resulted in a recommendation for more involvement by the EPA administrator's office much earlier in the process. The second event is the administrator proposing a standard for particulates that the Clean Air Scientific Advisory Committee views as less stringent than the range of standards recommended by CASAC. EPA may be right about the public health implications of their proposal, but right now you've got a really upset Clean Air Scientific Advisory Committee led by some relatively conservative, well-respected scientists, which is shared by the broader scientific community. Of course, it's in the context of an administration, which at least gives the impression of not following the scientific community too much. So we've got problems with the credibility of EPA science because EPA's administrator does not seem to be listening to the external scientific community.

**Mr. Portney:** If I can weigh in on this briefly, first of all, I'm not familiar with the debate about the Clean Air Science Advisory Committee.

**Mr. Peacock:** Lucky you. [Laughter]

**Mr. Portney:** I consider myself fortunate. I'm out in Arizona where the debate is over building a 30-foot high fence all along the border between Arizona and Mexico, to which the governor said, "They'll just build a 31-foot ladder." She's exactly right. But one of the reasons why debates about the Clean Air Science Advisory Committee are so pitched is certainly as a result of the Supreme Court decision several years ago saying if the law had wanted the administrator of EPA to consider costs in setting the standards, that's what the law would say. It now becomes the case that health effects evidence alone dictate where that standard should be set, even though I would allege every right-thinking man and woman would say, "Well, of course we want to take the health effects into account, but we also have to pay attention to how expensive it will be to meet the standards."

Now that there's absolutely no ambiguity, a nine to nothing Supreme Court decision on this, the stakes are much higher because the administrator of EPA can't look at the costs and it's even harder for him or her now to say, "Well, as I read the health evidence, it's convincing down to this point, but it's pretty speculative after that." Where it's clear, as Administrator Browner did, I think correctly, basically set the standard saying, "Well, it would be too expensive to meet an ozone standard below this level. So, I'm going to set the standard there, but I'm going



to justify it on the basis of health effects.” I just think that having a law like that encourages disrespect for the law. I think it’s a problem in environmental policy.

**Mr. Ruckelshaus:** I agree with that completely. I think we are confusing science and values in a lot of this stuff and that we ought to be very transparent when we’re basing decisions on values and when we’re basing them on scientific facts. But in fact what you’re doing is making allowance for something that’s prohibitively expensive because that then becomes available knowledge to people and they lose faith in the government’s willingness to act in a trustworthy way. So we ought to be up front about those values that we’re injecting into decisions. There’s nothing wrong with that. That’s the way people act normally.

**Mr. Peacock:** I agree with what you said, Paul. To the Act’s credit, it very clearly puts the decision in the lap of the administrator. That’s why it’s an *advisory* committee. The important thing for the administrator is to make it transparent, if he’s making a different decision from the advisory committee’s recommendation, why he’s done that. The fantastic thing is we now have the capability with the Internet to get information out to people very quickly. We can be very transparent.

For example, you mentioned Hurricane Katrina before, Jim. If you go on the EPA Web site you can see all over the hurricane area—you can go to New Orleans if you want—and see where we’ve taken every single water sample, sediment sample, soil sample, see when it was taken, what the results were. You can link to the chemical characteristics. It’s just all there for everybody to see, which is a capability we would not have had five years ago.

**Mr. Barnes:** I’ve got one other science issue I’d like to explore, and then we want to, I think maybe turn in Paul’s direction with some things.

Bernie, in a conversation a couple days ago, you indicated that you saw some differences between how the Europeans use or don’t use science—or misuse science—and how it affects decision-making in the United States.

**Dr. Goldstein:** I recently told an anecdote at one of these European/U.S. environmental policy meetings of Bill Ruckelshaus coming back from Munich, I think it was, and saying to all of us, “Please, if I ever think of going to Europe to meet with the European environmental ministers, throw your body in front of me and don’t let me go.” [Laughter] And your argument was that the Europeans are really focused on guidelines and they don’t have to meet those standards.

There’s an issue coming out called the “precautionary principle” and I’m not sure how many of you have heard about it. It’s now official. It’s Berkeley city council, the San Francisco city council; I think Seattle considered it.

**Mr. Ruckelshaus:** We’re considering it. We’re seeing how it comes out in those other areas.

**Dr. Goldstein:** The precautionary principle is good public health. The idea is basically you should not delay action when there’s a threat of harm based upon scientific uncertainty. You



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shouldn't wait until you get all the information. That's certainly a very positive thing. It's like sustainable development. Everybody's in favor—anybody here opposed to sustainable development? So it has come out with a very positive spin to it.

It's come out of Europe. Part of the reasons it's developed in Europe is the point you made long ago to us that Europeans have not had the kind of standing in courts so you won't have anywhere near as much business, Jim, in a European environmental agency because you can't go to court quite as easily as you can here—although the European community is wrestling with that now. I think for any of you interested in public policy, it should be very interesting to follow what's happening there. They're doing things that we haven't looked at perhaps since the Federalist Papers.

But the key issue for us is that a lot of the precautionary principle, which is good public health, is also hard to verify without any real science. So if you went out and got a hamburger on a bun in one of the local places here, you've got to know that neither the meat nor the bun can be sold in Europe because they claim they are unhealthy. It's really a trade barrier. There's really no science behind that.

So it's gotten into a lot of disrepute to some extent because of the scientific issues, but to some extent it's a very good public policy approach in that it shifts the burden of proof to those who would say something is safe. That sounds good and basically we did that with the Hazardous Air Pollutant Act. When you came to EPA in your second coming, Congress was beating up on you about doing something about hazardous air pollutants. The concern is that we were too slow. The process takes forever.

**Mr. Ruckelshaus:** We had seven substances and you've got 189.

**Dr. Goldstein:** And the 189 are listed in the Act and your only regulatory approach is to take something off the list by going through all the rule-making, rather than the previous approach, which was to go through all that rule-making to finally get something on the list. That's a classic use of the precautionary principle. So is the use of maximum available control technology as opposed to the previous risk-based approach.

The question is, has that worked and to what extent is it really better? It's now 16 years after 1990 and EPA does not have all the regulations in place yet. EPA will still have legal



issues. So it may not be faster. There's also a question of once you have maximum available control technology, how do you ever get better control technology?

There's the possibility of industry substituting a compound that isn't on that list for something on that list. But that's probably a compound we as toxicologists know less about. Maybe it's more likely to surprise us and cause adverse health effects. Another problem is that all compounds on the list are treated almost equally. For example, both benzene and toluene are on that list. Benzene causes leukemia. We think it's a risk even at the low levels in this room. Toluene is not. Why would industry prefer to use toluene rather than benzene if they're both going to be regulated with the same control technology?

Those are the kind of issues that have come up that are classic precautionary issues. As the precautionary issue gets more in use in the United States, we're going to have to deal with whether we have the science to really answer those kinds of questions.

**Mr. Portney:** I'm actually grateful to the Berkeley city council for having weighed in on the precautionary principle because having lived and taught there for two years, I'm therefore skeptical of anything and this helps me form my own position on the precautionary principle now. So I'm going to view it quite skeptically if the city council there has endorsed this in a vigorous way.

**Mr. Barnes:** Paul, I'd like to come back to you and maybe open a door a little farther than you suggested when you mentioned the issue of global climate change and which issues we should intervene in. I know you've done a lot of work with the use of cost benefit analysis to help inform both what kind of issues we ought to be looking at and how we ought to look at them. What's the utility or role of cost benefit analysis in helping decisionmakers like Bill Ruckelshaus or Marcus Peacock decide whether in this array of things that people are beating on them to have to regulate or take on, which ones they should take on, particularly in a setting where sometimes the short-term costs appear significant and it's a little uncertain what the long-term trade-offs are going to be?

**Mr. Portney:** Jim, I got to thinking as you were introducing Bernie and talking about him coming in to EPA with his white science coat, it made me mindful of the difference between sciences and economics because most people think that economists should come in in white coats, but with long sleeves that tie behind the back. [Laughter] I think it'll come as no surprise to any of you to know that I think that economics has an important role to play in decision-making. But as strongly as I feel about that, I think it's nuts to think that decisions, whether regulating ethylene dibromide or setting a national ambient air quality standard for ozone or making a decision on global climate change, ought to be made solely on the basis of economic analysis, whether it's cost-effectiveness analysis or benefit cost analysis. To have laws like we have that explicitly say that costs can't even be taken into account, as I said earlier, it's just nuts to me. So I see cost benefit analysis and economic analysis as a decision-making tool, but certainly not a rule. It ought to be part of the tool kit.





**Dr. Goldstein:** Can't the state decide how they're going to meet this standard based upon cost?

**Mr. Portney:** Well, they can. But, I mean, they can try to meet it as inexpensively as possible, but some goals don't make sense even if you've met it as inexpensively as possible. I mean, there are some standards that can be set where the benefits aren't worth it even if you do everything you can to minimize the costs.

**Mr. Peacock:** I have a great job. I get to get up every morning and my goal is to go to work and help improve the environment and help improve public health. That's why a lot of people come to EPA and stay there. That's what makes it exciting.

On the other hand, when you are faced with a number of policy options, there's a number of things you have to weigh, including benefits and costs. For instance, we could spend a lot of time and effort eliminating the next increment of ozone. Maybe that's where the statute drives us. But if we could redirect those resources, or some portion of them, to addressing, for instance, climate change, which Paul has pointed out is a larger issue and an irreversible issue, doesn't that make more sense for the public? So you end up, particularly with the legislative deadlock we've had for quite some time now, with constraints about being able to serve the public better.

**Mr. Barnes:** That dilemma doesn't sound much different from the one you looked at 20-some years ago, does it?

**Mr. Ruckelshaus:** Well, one of the ways of looking at our environmental laws, at least those that were passed during the decade of the '70s, is as an expression of the lack of trust of the executive branch by the legislative branch. Instead of delegating with limits that were important, responsibility for making judgments in this area to the executive branch and then overseeing them quite aggressively so that they do the job assigned to them by the Congress—the Congress particularly did not trust the executive branch to do the right thing—and they wrote standards and rules and deadlines right into the law.

Those rules and deadlines fit some problems, but for other problems they have make no sense. For instance, the original hazardous air pollutant standards that were written into the law were that you were to establish a threshold below which there was no health effect and then provide a margin of safety below that threshold to fully protect public health. Well, in the abstract it's kind of hard to argue against that. But in fact, when we then came along with



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increased measurement systems and the ability to trace some carcinogens almost down to zero, it really wasn't possible to do what the Congress told us to do. So, as the administrator you were faced with a choice: either indiscriminately manage these hazardous air pollutants so that anything you declared a hazardous air pollutant essentially was banned or refuse to put the hazardous air pollutant on the list, in which case your powers to regulate it were greatly reduced. There may have been a lot of things you could do at a relatively small cost to reduce the threat or risk of air pollution without calling it a hazardous air pollutant and forcing yourself to ban it that would have made a lot of sense for the public interest, but you didn't have the power to do it; you weren't given that responsibility by Congress.

It all goes back to the question of trust. They didn't trust the executive branch to do the right thing. It's unfortunately been part of this whole debate ever since.

**Mr. Portney:** Let me just jump back in briefly. You asked me about the role of economics. In a way, I think we've got the worst of both worlds now in the sense that, at least under the Clean Air Act, the Supreme Court has unequivocally decided that under Section 109, it doesn't say consider costs, so you can't consider costs. Yet under Executive Order 12866, before the agency can issue a standard, they have to do a benefit cost analysis. One of my favorite stories comes from Bill, who when he came back to EPA in 1983, was told he had to issue a particulate standard. He looked at the evidence and said, "Well, we can't issue this because we haven't done the benefit cost analysis."

So his staff ran out and did a benefit cost analysis and then came to him with it. He said, "Oh, don't show it to me. If I look at this, I'm in violation of the law." So you've got to do an analysis, but you can only look at it after you've promulgated the standard. I mean, is this a great system or what? [Laughter]

**Mr. Peacock:** I think part of the purpose of that is, at least in retrospect, if we're doing something stupid, people can figure that out and perhaps correct it before we do it again.

**Dr. Goldstein:** Well, it's the same issue with cost benefit analysis for hazardous air pollutants. For the list of 189, the additional items are there because you're frustrated there hasn't been enough information developed to show that these are truly toxic. Then you turn around and say in the same law that you must do a cost benefit analysis. Well, you don't have any information



about the potential benefits because you don't know what health effects these might have. So, it's sort of silly to ask for a cost benefit analysis. You have to say at that point, "We're acting in a precautionary way. Congress is making us do it. But Congress, please don't ask us to justify economically what you're making us do because we can't."

**Mr. Barnes:** Maybe we should go back for a second to the challenge that the decision-makers have when it's time to make a decision. As you've pointed out, sometimes you really have no choice. Folks from Florida walk into your office and say, "We've been running some tests on this EDB that you just banned and you thought it was a problem with groundwater. We are finding it in our grains and bread and oranges. You've got to do something about it." What kind of principles would you draw on or put forward that you found provide good guidelines for dealing with issues like acid rain?

**Mr. Ruckelshaus:** Why'd you have to choose that one? [Laughter]

Well, for all of these things there is no sort of cookie cutter approach that works for every one of them. The EDB was a sort of national health emergency, created as much as anything by the media, but also by a reaction on the part of regulators in Florida and when I say we had no choice but to act, we had to do something. We either had to be able to reassure the public that there was no risk or we had to remove the risk that the public perceived was there.

What we were able to do was buy some time by being very open about what we were doing, about how long it's been in the grain supply, that if there is a problem we've already got it anyway and we're going to look at this. We gave ourselves a deadline to come to a conclusion. I think it was three or four weeks, and we would make a decision then. All of that had a calming effect on the public. We did this all very publicly, very transparently. It calmed them down until we could get a clear look at it and decide what to do.

In the case of acid rain, it's a lot like global warming in many respects in that the source of the pollution is remote from its impact *geographically*. In the case of global warming, the source of the pollution is remote from its impact *chronologically*. In both cases you get the resistance on the part of the people that are producing the pollution to do something significant about reducing it. In one case because it didn't affect them: It was in a different part of the landscape that was affected; in another case, because it will affect their children.

Now everybody says they're in favor of doing something about posterity. They're kind of like Groucho Marx who once said, "Why should I care about posterity? What's posterity ever done for me." It seems to me in those cases, the kind of principles you weigh, what is the effect of doing nothing? It's kind of the precautionary principle in a sense. What is the effect of doing nothing over an extended period of time? In the case, certainly, of climate change, the longer we wait, the harder and the more expensive it is to deal with. Paul is right. If we did something really significant tomorrow about reducing carbon, we'd still have a huge effect to face over several decades.

So, what we ought to do is what's sensible today in reducing CO<sub>2</sub>—make sure we understand other gases, make sure we understand what those economic effects are and continue to ratchet down on what we're doing. I think we ought to have some kind of a Manhattan-style project



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to develop alternative energy sources. Not just for global warming, but for a whole bunch of different reasons, including national security. We don't have that kind of approach yet. Not even close to it. But I think the principles are different depending on the nature of the problem being dealt with.

**Mr. Portney:** I guess I'd like to weigh in here and come back to something that Marcus said to see if there's a role. You've talked about the EPA Web site and being able to track this information. Particularly because there are so many students here, I mean, I've learned from talking to the students at the University of Arizona in the time that I've been a dean there how research is now very, very Web-oriented. That's both a good and bad thing and I worry a little bit about it.

You remember that old saying that if you had a million monkeys and a million typewriters, they could eventually produce the works of Shakespeare? We know from the Internet now that that's not true. [Laughter] But I want to ask Bernie and Bill and also Marcus, whether there's a way to try to use the Internet in ways that you didn't have it available when you were there that would be useful and, I guess at the same time, express a caution or offer a caution to students who sometimes go to Web sites with less discrimination than I hoped that they would.

There's a big difference between the *New York Times* Web site or the Energy Information Administration's Web site or the EPA's Web site and some idiot who's blogging from somewhere and puts up data on his or her own Web site. I worry about our ability to discriminate between reliable and unreliable sources of information. I'd love to hear Bill and Bernie talk about how regulation might have been different in your era with the availability of the Internet.

**Mr. Ruckelshaus:** I just think it's another tool you use to let people know what the problems are. One of Jim Barnes' predecessors used to talk about EPA. People were always complaining about EPA leaking all the time. He said, "EPA doesn't leak. It's just a bucket with no bottom in it." [Laughter] It was true. Everything we ever did was out there for everybody to see.

**Mr. Peacock:** It's a very attractive bucket. [Laughter]

**Mr. Ruckelshaus:** Why not do it yourself? Why not put the information out for people to deal with? In that way, you gain their trust and also have them share in some of the complexity of these decisions and thereby, I think, maintain their trust.





**Mr. Peacock:** Just to add to what you said, Paul, I think in the most recent issue of *Science* magazine they did an Internet search on estimates of the number of species being lost every year. The estimates went all the way from one a year to thousands a year. The distribution was almost flat. The article was about whether or not scientists had a responsibility to go in and help sort this out. I know Einstein talked about scientists seeking the truth had an obligation to reveal everything they found out about the truth, not just the findings they liked. I'm not sure everybody feels that obligation right now.

**Dr. Goldstein:** Marcus, you said it very well, this flattening out. Let me go back to the acid rain question and suggest from the bias of a scientist that what happened with acid rain, and I hope is happening with global warming, is that we narrowed down what reasonable scientists felt about this. At one point, you had reasonable scientists saying every tree in the Northeast is going down and every lake is going to turn acidic. You had other scientists, reasonable scientists—I mean, people with a lot of good scientific credibility—saying, “We don't see anything happening.”

**Dr. Goldstein:** What I think of NAPAC, what the acid precipitation research program did was simply narrow down the range of uncertainty, getting reasonable scientists at either end to sort of move a little closer to the center. I think the same thing's happening with global warming. But when you go on the Internet, it doesn't appear that way. You suddenly have a process that flattens everything out and you can get any extreme you want seemingly to be verified by a source which is not peer-reviewed and doesn't really represent what's credible within the scientific community. So I see it as a problem.

**Mr. Ruckelshaus:** But you wouldn't—substitution of the Internet for a peer review of scientific judgment is not something you would—scientists never endorse that. So, I don't know why the agency would.



**Mr. Peacock:** No, but the Internet obviously affects the views of the public as well as elected officials.

**Dr. Goldstein:** What the Internet does permit you to do is to segment the population that you really want to speak to. It allows you to get to groups that—and the thing that you pointed out of the boat going out and people are throwing rocks because they haven't been heard—there are people who are concerned and there are ways to get to them now through the Internet, which we just didn't have before.



**Mr. Barnes:** Is the Internet going to increase or decrease our confidence in the science that we're seeing? There's now more of a push for people to put their data and studies on the Internet without maybe going through the same journal peer-review processes that were commonplace in the past.

**Dr. Goldstein:** I taught for a while in Malaysia about five, six years ago. They could get off the Internet the abstracts of the scientific papers, but they could not get the papers. What was happening was that students were stringing together abstracts without any critical review of whether the data really substantiated what the scientists said in the abstract.

**Mr. Ruckelshaus:** This is the kind of guy that Paul wanted to put in that straight jacket.

**Dr. Goldstein:** I think the issue is to what extent is the Internet going to help us develop the critical approaches that are needed to look at this information, or on the other hand, is it going to basically just spread any crackpot ideas in this very flat way so that nobody will know what to do?

**Mr. Barnes:** Now, let me ask you about another question about science, though, where the press believes in taking an issue like global climate change and they'll say a group of scientists believe this and another group of scientists believe that. But the group that believes that may be five percent and 95 percent the other. That doesn't make the five percent wrong. I mean, sometimes five percent ends up being the answer, but that search for balance in a story in the newspaper is very confusing to the public because they think well, this looks like it's sort of evenly divided here when that isn't the case at all.

**Dr. Goldstein:** That's part of the problem with the flattening. In the past, the press would go to the American Petroleum Institute and they'd ask which scientist would you have us talk to about the ozone standard? And they would go to the National Resource Defense Council and ask the same thing. Both groups would suggest scientists who were reasonably reputable. That's the only way a journalist who doesn't know anything about ozone is going to be able to get the story.

So, when you narrow in the extremes of reasonable scientific opinion you get a fairer story. But now the journalist goes right to the Internet and finds somebody from a self-styled Scientific Committee on Ozone Problems. The title sounds very good, and they get quoted, but they really have no scientific credibility.

**Mr. Portney:** If I could, I think there's a science and economic issue though that makes environmental policy much harder today than before. Bill, you alluded to it. In 1970 when your rivers were spontaneously combusting and where in Pittsburgh in 1969, the pollution was so bad during the day that people had to turn their car lights on to drive, you knew you had a problem and there was plenty of low-hanging fruit. I think today we've done such an outstanding job in the United States of addressing many environmental problems that not only is this health



## *The cumulative impact of individual actions on the environment can be huge.*

threat posed by the substances that we now identify much smaller, the marginal benefit in economists' terms, we've sort of now picked the low-hanging fruit and so each additional unit of control is much more expensive. Making those judgments now is, I think, much harder than it was in the early days when if your rivers were on fire, you *knew* you had a problem and it was time to do something about it.

**Mr. Ruckelshaus:** I agree with you. I think that those big point sources of water pollution, for instance, are largely under social control. When EPA was first created, we did an estimate of water pollution problems in the country. Eighty-five percent was point source; 15 percent non-point source. It's almost reversed today. The cumulative impact of individual actions on the environment can be huge. It's exactly what's gotten in the way of salmon restoration out in the Northwest. So how do you get all those people who have to change the way they interact with the river where they live in ways that are beneficial to uses like fish? The only way I can think to do it is to use these collaborative processes because if they don't decide they want to do it, it won't happen.

I can show you in Puget Sound where people concerned with watersheds have decided to do things that if the government had gone in four years earlier and ordered them to do it, they would have said, "Nothing doing; you're crazy. Take them to court." We'd have been there for the next ten years with no progress being made. But when you present them with a problem and say, "Okay, *you* solve it," and you set some goals for them and give them the threat of the government coming in in the background if they don't act, it's amazing what they'll do. They'll go way beyond where the government would have gone in restoring the landscape or place that they all share. That's why I think there's great hope in these processes for dealing with these kinds of problems at EPA.

**Mr. Peacock:** Yep. That goes back to the transformation I was talking about where EPA is obviously writing the rules we need to write, but also developing these tools that draw out of people the stewardship that they already feel, whether it's companies or individuals or municipalities, and provide incentives for them to do what they realize is right.

The second aspect of this is in something that's changed dramatically over 35 years. That's the states and the expertise and the programs they now have. There's some states which, depending on the area, are out ahead of EPA and I think that's a good thing. Many of these





problems are location-specific and often the states have the expertise and the ability to bring people together to come up with a different solution. And EPA has to get out of the way—or at least just monitor those sort of situations.

**Mr. Ruckelshaus:** For some of these place-based kinds of problems, the state is every bit as big a devil as EPA in the eyes of the people living in that watershed. You need to actually get them involved in solving their own problems or they won't pay any attention to these remote governments.

**Mr. Barnes:** I think on that note it's a good time to bring this very delightful, informative conversation to a close and we'll turn it back to Astrid. [Applause]



### *Postscript*

**Christine Vujovich, Vice President of Marketing and Environmental Policy, Cummins**

**Jim Rogers, CEO, Duke Energy**

**Michael Steinhoff and Denise Walker, SPEA graduate students**

**Astrid Merget:** I don't know about you, but I just feel like I sat through a master seminar. I'm truly grateful for the insights and the knowledge and also just feel very privileged to have been in the company of these five distinguished people.

But what more fitting conclusion to this afternoon's symposium is this set of tributes to honor our guest, Bill Ruckelshaus. His service as a citizen extends beyond government to the world of corporate affairs. Despite his geographic distance, he really has never strayed very far from the state of Indiana.

So let me first call on and introduce to you Christine Vujovich. Tina serves as vice president for marketing and environmental policy for Cummins after serving as the vice president for environmental policy and product safety. Throughout her career after graduate studies in environmental engineering and in her successive positions at Cummins, she has been actively engaged in the larger industry and its attempts to develop rational legislation and regulations to reduce emissions from diesel and natural gas emission. Bill Ruckelshaus served for many years as a member on the board of Cummins, a global power leader with a worldwide network and a history of progressive and ethical leadership that recently was ranked as a U.S. top corporate citizen for 2005.

**Christine Vujovich:** First, Bill, Tim Solso, who is the CEO of Cummins, asked that I convey his best wishes to you. As you might expect, Tim is otherwise occupied keeping our stock price up and shareholder resolutions down. He, along with many at Cummins, has always relished the opportunity to enjoy your quick wit and wise counsel.

*Christine Vujovich*



Many of you know of Bill's dedication and accomplishments, all resulting from his commitment to public service. On behalf of Cummins, I wanted to share with you a sense of how he has influenced us in the private sector as a director at Cummins for 30 years.

As is the case with most directors, Bill rotated through the committees. But unique for our directors, Bill remained a member of our technology and environment committee from its inception to the time he retired. Cummins is a company subjected to frequent and stringent exhaust emissions regulations from the EPA. Such a committee gives the directors a chance to understand our strategies for complying with these regulations. Mind you, this is not a committee for the faint of heart. Topics such as combustion physics and its role in emissions control are often discussed. Though not an engineer by training, Bill recognized the importance of the debate that takes place when technology intersects with public policy. And because of that, he enriched us with his views of how Cummins can protect the public while advancing its technological know-how and flexing its competitive muscle.

Bill guided Cummins through some of its most difficult financial and reputational experiences. With every one of these challenges, his ability to listen and ask the tough questions helped position us in a much better place. Because of Bill's influence, dispute resolution, negotiated settlement, and sustainable development we now no longer fear as uncertainties but embrace as necessary business strategies. Our history and future is better for having been served by you, Bill. Cummins thanks you.

On a more personal note, you didn't know this, Bill, but you first appeared on our board of directors just three years before I joined the company. During two of those years, I did my graduate work at the University of Illinois under an EPA grant and worked summer jobs also under an EPA stormwater study grant, both of which would not have been available without your great vision for the Environmental Protection Agency. It influenced the lives of many people, myself included, and I thank you for that. [Applause]

**Astrid Merget:** Now let me introduce to you James Rogers, the president and chief executive officer of Duke Energy, a diversified company with a portfolio of natural gas and electric businesses, both regulated and unregulated, as well as an affiliated real estate company. Jim previously served as chairman and CEO of Cinergy for 11 years. He currently serves as chair of the Edison Electric Institute. He, too, has had a service that has involved a myriad of positions in the public and philanthropic arenas, including serving as deputy general counsel for litigation and enforcement for the Federal Energy Regulatory Commission.

I should note that Bill Ruckelshaus singled out and complimented Cinergy in a major speech he gave and applauded Cinergy for "openness and democratic ways in posing the fundamental environmental question of the day. That is, what do we need to do to develop common ground on global warming in this country." So, with little ado, Jim Rogers.

**Mr. Rogers:** Thank you, Dean Merget. Honored guests, it's a real privilege for me to recognize Bill Ruckelshaus.

I don't know of anyone in or out of government who has done more for environmental progress and sustainability in this nation than Bill has. His passion for environmental stewardship



and especially climate change is one of the reasons we featured Bill in Cinergy's annual report last year. It was our last annual report before our merger with Duke Energy this year and we devoted practically the entire report to global warming.

We did it to start a robust conversation about climate change with informed stakeholders like Bill. Bill represented regulators and we also featured customers, policymakers, investors, partners, and environmentalists. We presented their viewpoints, which in my judgment, cut through much of the misinformation about climate change depicted in the popular media, which is being fueled by emotional debates. It helped us understand the issue from all sides. As Bill is so fond of saying, "One thing we must do if our form of democracy is to work is to holster our political guns and lower our voices. After all, it's easier to listen with our mouths closed." We succeeded in starting a good dialog. It's bound to get attention when one of the largest burners of coal in the nation devotes its annual report to climate change.

Like Bill, we see the signposts. We see the evidence that the world is warming and that human activity is contributing to that warming. But what's not so clear is the impact of that warming. Even so, we think it's inevitable that we will live in a carbon-constrained world where CO<sub>2</sub> and

*Jim Rogers*

other greenhouse gas emissions are regulated. It may take years to determine the rules. In the meantime, how do we plan effectively to meet our energy needs of tomorrow?

Greenhouse gases are cumulative and stay in our atmosphere. We believe as Bill does that we must start working on the problem now because we can't solve it overnight. Flattening and then reversing our carbon output for our future generations will take "cathedral thinking." The magnificent cathedrals of Europe took up to 500 years to build and they couldn't be completed without craftsmen, financial backers, weavers, stonemasons, and many others believing in making the final vision a reality. The vast majority of these contributors never lived to see the completed structure, but that didn't stop them. They had a shared vision. Their mission and purpose were clear. We may never live to see the results of our efforts to flatten our carbon curve, but our mission and purpose are clear.

Bill is a cathedral thinker. Last year, I was fortunate to hear his talk "Democracy's True Test" at the annual John H. Chafee Memorial Lecture on Science and the Environment in Washington, DC. He showed how consensus



*We see the evidence that the world is warming and that human activity is contributing to it.  
What we don't know so well is what the impact will be.*

building and listening to stakeholders can accomplish more in the long-run than 200 pages of environmental regulations. He specifically noted that “Protecting the environment is not like building a highway or painting a building. You can’t do it and walk away from further work. You must stay everlastingly at it or things begin to slide. By any measure, we have made enormous progress, and that should give us hope as we tackle the next set of issues.” And then, I have never forgotten this specific example from his talk about a copper smelter in the state of Washington that was emitting toxic fumes in its local community. Bill related that, “The community was sorely divided and largely ignorant of the complex scientific and economic issues involved, which did nothing to reduce the intensity of the controversy. We set out to explain all the issues to everyone to give them the same information we had to use to make the final regulatory decision. Then we asked their advice. We listened. In the end, the citizens concluded that the community could preserve 600 jobs and protect its health. With technical help from EPA, the citizens were able to educate themselves and they found that they did not, in fact, have to choose between jobs or health. A panel of citizens developed a plan that allowed the smelter to continue its operations in a safer way.”

The “take-away” from this example for me was when he said, “I was struck by the ability of local groups and citizens not only to drive to consensus on complex issues, but to invent solutions that had simply not been thought of in the heat of combat. A random group of intelligent citizens can, on objective scales, come up with more right answers than one or more experts. This of course is a core assumption of democracy, and it turns out in a surprising number of cases to be demonstrably true.” That needs to be our approach on climate. Listen and then act. This will be Duke Energy’s approach as we continue to be proactive in molding and shaping U.S. carbon policy.

Bill’s leadership on the environment has also been grounded in his impeccable ethics throughout his long career. His willingness to listen to and understand stakeholders’ competing points of view led to his well-known advocacy for open meetings, open processes, and transparency in government.

Bill, your stewardship has been the example for us all and it will be for future generations. In my judgment, history will show you to be one of the greatest environmental stewards and cathedral thinkers of all time. Thank you, Bill, and thank you all. [Applause]





**Astrid Merget:** Thank you for those inspiring words. Those are really wonderful challenges to educators like me and my colleagues here because I hope we, too, can impart cathedral thinking to our next generation of students.

Apropos of that, as an anniversary celebration of EPA, we not only remember the past, but now we contemplate the future. In foreshadowing this to Bill, I assured him that the honor would not be another mundane wooden plaque that could adorn his walls, of which he has so many, but rather it would be more appropriate to the occasion.

So, let me call on Professor Ken Richards of SPEA who galvanized our students into vital participation in this celebration. Joining him are two of our inspired and innovative students, Michael Steinhoff, a candidate for the joint degree of the Master of Public Affairs and the Master of Science in Environmental Science, and Denise Walker, a candidate for the joint degrees of the Master of Public Affairs and Jurisdoctor.

**Ken Richards:** This is a real privilege and a pleasure for me to introduce these two students. Let me just describe them for you. Michael Steinhoff has a B.S. in Plant and Soil Science from the University of Tennessee. As Astrid mentioned, he's getting the MSES and the MPA with a concentration in Urban Sustainability. He's been an intern for the Bloomington Environmental Commission and the Bloomington Commission on Sustainability, and he was the recipient of the 2006 SPEA Volunteer of the Year award.

Denise Walker has a B.S. from Kansas State University in Life Science and in Natural Resources and Environmental Science. She's getting her MPA and JD. She's an A. James Barnes Outstanding Achievement Fellow. She has worked with the IU Conservation Law Clinic, with the Earth Justice Organization, the Indiana Conflict Resolution Institute, and the Federal Energy Regulatory Commission.

In working with these two students, one of the things I noticed was I could count on them. When I turned to Michael and I said, "We have some analysis to do," I simply had to turn the material over to him and it was done. When I needed volunteers and I turned to Denise, she said, "I'll have a band of law students there." And they were there. The reason it's such a pleasure to introduce them is because while they are truly exceptional people, they are typical of our outstanding SPEA students. So, it's only fitting they represent the students in this next presentation. [Applause]

**Ms. Walker:** Thank you, Ken.

Bill Ruckelshaus has given so much to his country. As the first administrator of EPA and the fifth, as deputy attorney general, and as the acting head of the FBI.

**Mr. Steinhoff:** Even more, he has set an example for this country: his moral fiber, his commitment to transparency in public administration, and his thoughtful and steady political vision.

**Ms. Walker:** He continues to provide advice and wisdom to the country, sometimes in the form of catchy insights. [Laughter]



**Mr. Steinhoff:** And sometimes in the form of deeper political analysis.

**Ms. Walker:** It seems only fitting then that we should honor William Ruckelshaus both for the decades of service to his country and for his vision of public participation in environmental policy that he continues to share.

**Mr. Steinhoff:** But how do you honor a man of such stature and vision? Perhaps a plaque?

**Ms. Walker:** As Dean Astrid said, no, we guess Mr. Ruckelshaus has received so many awards and plaques over the years that dusting has become a problem.

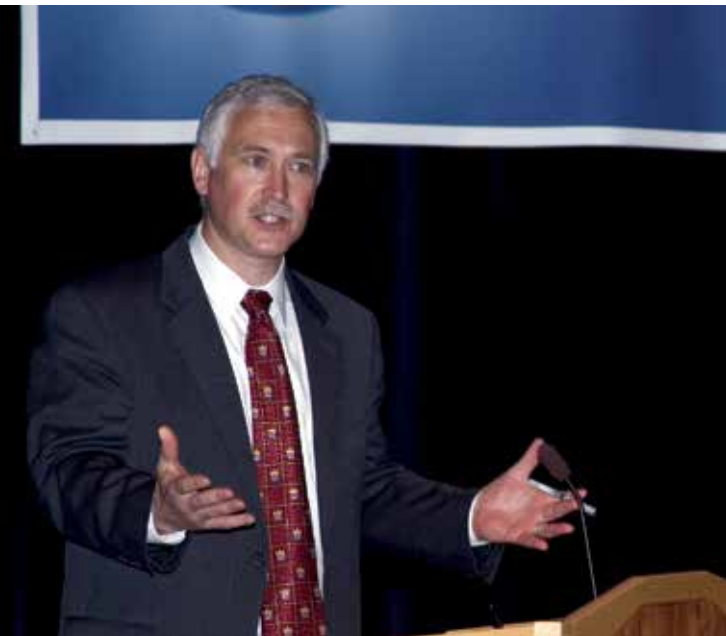
**Mr. Steinhoff:** We needed something that was both creative and yet practical. We decided that Bill Ruckelshaus needed a carbon grove.

**Ms. Walker:** Though there's been much discussion and wrangling on the science and policy of climate change, almost everyone agrees that trees are good.

**Mr. Steinhoff:** And more trees are better, especially when they can make an event like this symposium carbon neutral.

**Ms. Walker:** So, to honor Mr. Ruckelshaus, the students, faculty, and staff of SPEA and the law school, in cooperation with the IU Research and Teaching Preserve, have created the William Ruckelshaus Carbon Grove. Conveniently located just north of campus on Bales Road, the Ruckelshaus Carbon Grove was established on former cropland recently acquired by the Research and Teaching Preserve. We are especially indebted to Professor Keith Clay, the director of the preserve, for his enthusiastic support in securing the site for the carbon grove.

*Ken Richards*



**Mr. Steinhoff:** The grove is comprised of three components, a newly planted tree stand, a restored prairie habitat, and a control plot to provide a point of reference for measuring the carbon sequestration achievements of the other two plots.

**Ms. Walker:** On April 1<sup>st</sup>, my personal favorite holiday, we showed up with seedlings provided by the Indiana Department of Natural Resources, tools provided by the Sycamore Land Trust, the Research and Teaching Preserve, and the Hilltop Garden Center, and labor provided by just about everyone.

**Mr. Steinhoff:** We had hoped to have 20 volunteers on this day, but it was overcast and kind of wet, so . . . we only had 41 planters, two dogs, three children, and a baby.



**Ms. Walker:** SPEA Professor Burney Fischer helped organize the troops, instructed on methods of planting, and kept the work moving smoothly.

**Mr. Steinhoff:** Burney's classes marked out the field ahead of time assuring that the planting distances were carefully measured out using different colored markers for each species of tree: Burr Oak, Cherry Bark Oak, Yellow Poplar, and Kentucky Coffee Tree. We spread out and attacked the job.

**Ms. Walker:** Planting 700 trees might have been a daunting task, but it went quickly with 41 determined volunteers—volunteers who really put their backs into it.

**Mr. Steinhoff:** And this definitely shows a new side that doesn't necessarily come out in the classroom. Well, I guess Ken does tend to pontificate every now and then.

**Ms. Walker:** And Professor Bingham is all about collaborative processes, but I will say I've never seen her take orders until that day. When the job was done there was a sense of irrational exuberance, especially by the law students who don't really get out of the law library so much.

**Mr. Steinhoff:** Even the dogs looked forward to the day when this humble field of seedlings has grown to a stand of strong, healthy trees.

**Ms. Walker:** Of course it was rumored that they had ulterior motives.

**Mr. Steinhoff:** Afterwards, we went back to Professor Richards's home, had a toast to a good day of work, and sequestered a little carbon of our own.

**Ms. Walker:** We planted 700 seedlings on April 1<sup>st</sup>, but the work has just started.

**Mr. Steinhoff:** To show that our symposium was in fact carbon neutral, we first had to calculate the amount of carbon dioxide emissions that could be attributed to the event.

**Ms. Walker:** Most of the emissions are associated with the travel required to bring us all here. I, of course, rode my motorcycle. Our estimation of carbon emissions for this symposium suggests that we are responsible for approximately two tons of carbon.

**Mr. Steinhoff:** We expect within just a few years, however, the tree stand portion of the Ruckelshaus Carbon Grove will be capturing between two and three tons of carbon per year for decades to come.

**Ms. Walker:** That's exciting. So, when we declared this to be a carbon neutral event, that's not exactly accurate. This is a carbon friendly event.



**Mr. Steinhoff:** Over the next 20 years, the tree stand will sequester nearly 40 times as much carbon as was released from holding this symposium.

**Ms. Walker:** But the carbon grove is about learning, too. Professors from SPEA and the biology department will be using the Ruckelshaus Carbon Grove as a teaching laboratory where students will learn about field measurements and sampling.

**Mr. Steinhoff:** Not only will the Prairie Restoration Project provide a habitat for wildlife and capture additional carbon, but it will also provide insight into the relative carbon capture rates of tree planting and prairie restoration on reclaimed agricultural land.

**Ms. Walker:** And we all learned something first-hand about working together for a common purpose. We can do it and it can be fun.

**Mr. Steinhoff:** We also recorded the carbon sequestration project with the Energy Information Administration of the U.S. Department of Energy under the Voluntary Reporting Greenhouse Gases Program, also known as the 1605b Program.

**Ms. Walker:** As if you didn't already have enough connections with the Feds, now you're on the books at DOE.

**Mr. Steinhoff:** So, we say to you, Mr. Ruckelshaus, thank you for your service to this country and to the environment.

**Ms. Walker:** And to officially dedicate this carbon grove to you, we present you with the documentation, calculations, and the following proclamation from Dean Astrid, which we have put in this lovely red binder.

[Reading Proclamation] *Whereas William Ruckelshaus served his country as the first Administrator of the United States Environmental Protection Agency, served his country again as the fifth Administrator of the United States Environmental Protection Agency, served his country as the Acting Director of the Federal Bureau of Investigation, further served his country as Deputy Attorney General and further refused to compromise*

*SPEA graduate students, Michael Steinhoff and Denise Walker*



*his duty to the American public in the event known as the Saturday Night Massacre;*

*Whereas William Ruckelshaus faithfully served the State of Indiana as majority leader of the Indiana House of Representatives;*

*Whereas William Ruckelshaus continues to serve the public welfare by offering frequent and sage advice to private industry; continues to serve the public by providing a thoughtful and independent vision for environmental policy and process;*

*Whereas William Ruckelshaus has favored the many students, faculty, and staff at Indiana University with his participation in our public symposium; has favored the Board of Visitors of the School of Public and Environmental Affairs with his comments and advice;*

*Now, therefore be it resolved that the students, faculty and staff of the School of Public and Environmental Affairs extend their deep appreciation, gratitude, and respect to William Ruckelshaus for his contributions to the country, state, and school;*

*And further that it is right and fit that we hereby dedicate the William Ruckelshaus Carbon Grove in the Indiana University Research and Teaching Preserve as an expression of said appreciation, gratitude, and respect.*

*Signed Dean Astrid Merget.*

Thank you so very much. [Applause]

**Astrid Merget:** I think the students had the ultimate word. So, thank you all for joining in this celebration of EPA and tribute to Bill Ruckelshaus. [Applause]



### *About William D. Ruckelshaus*

EPA administrator, from December 1970 to April 1973. During EPA's formative years, he concentrated on developing the new agency's organizational structure, enforcement actions against severely polluted cities and industrial polluters, setting health-based standards for air pollutants and standards for automobile emissions, requiring states to submit new air quality plans, and the banning of the general use of the pesticide DDT. He left EPA in 1973 to serve as acting FBI director, during the Nixon Administration's cabinet openings following the breaking of the Watergate scandal, and then served briefly as deputy attorney general at the Justice Department.

During President Reagan's term, White House Chief of Staff James Baker asked Ruckelshaus to return to EPA and during his 1983-85 term as administrator, he worked to improve staff and public morale toward the agency, and advanced the process of risk-based decision-making for environmental risks subject to EPA regulation. He also oversaw removal of the pesticide ethylene dibromide from U.S. agricultural use, reaffirmed EPA commitment to a federal-state partnership to restore and protect the Chesapeake Bay, and helped EPA institute tighter controls on hazardous waste management.

Earlier in his career, Ruckelshaus had served as assistant attorney general in the Civil Division of the U.S. Department of Justice; as a member of the Indiana House of Representatives; and as deputy attorney general of Indiana. After completing his second term as EPA administrator, Ruckelshaus joined the Seattle law firm Perkins Coie, then served as CEO of Browning-Ferris Industries. He is now a principal in Madrona Investment Group, LLC, a private investment firm in Seattle, and a strategic partner for the Madrona Venture Group.

Ruckelshaus has served as chairman of the board of the World Resources Institute, special envoy to the Pacific Salmon Treaty between the U.S. and Canada, chairman of Enterprise for the Environment, and on the President's Council for Sustainable Development. He has served on the boards of directors of companies including Cummins Engine Co., Monsanto Co., and Nordstrom, Inc.

Ruckelshaus was born in Indianapolis and is a graduate of Princeton University and Harvard University. A pioneer in collaborative decision-making, Ruckelshaus is widely respected for being a consensus-builder among disparate groups, for his leadership and integrity, and for being a tireless advocate of transparency in government.



## *About the panelists*

**Marcus C. Peacock** has served as deputy administrator of the U.S. Environmental Protection Agency since August 2005. He arrived at the EPA after working as the associate director for Natural Resources, Energy, and Science at the Office of Management and Budget (OMB). Peacock was also involved in environmental issues on Capitol Hill within the House Committee on Transportation and Infrastructure.

**Dr. Bernard Goldstein** is a professor at the University of Pittsburgh Graduate School of Public Health. He was dean from 2000 to 2005, after serving as the founding dean of the School of Public Health at Rutgers University. Goldstein served as an EPA assistant administrator for Research and Development from 1983 to 1985. He continues to be actively involved in environmental health and public policy, serving as vice president of the Scientific Committee on Problems of the Environment, as a consultant to the World Health Organization and to the United Nations Environmental Program, and as a member of the executive committee of the Association of Schools of Public Health.

**Paul Portney** is the dean of the Eller College of Management at the University of Arizona in Tucson. Before arriving there, he served as the president of Resources for the Future (RFF) from 1995 to 2005. He joined the RFF in 1972, headed two of its research divisions, and served as vice president of the organization beginning in 1989. RFF is a nonprofit and nonpartisan organization that conducts independent research on environmental, energy, and natural resource issues. It was founded in 1952 with headquarters in Washington, D.C.

**A. James Barnes** is a professor at the School of Public and Environmental Affairs and an adjunct professor at the IU School of Law. He is also a former dean of SPEA. Barnes was appointed deputy administrator of the EPA from 1985 to 1988 by President Ronald Reagan. Barnes served as assistant to William Ruckelshaus from 1970 to 1973 and was a member of general counsel for the EPA as well as the U.S. Department of Agriculture. He began his federal service in 1969 at the Department of Justice where he was a trial attorney and special assistant to the head of the Civil Division.



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