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Text: Environmental Policy Speech by EPA Designee Whitman

(New Jersey governor talks to scientists on ocean pollution)

New Jersey Governor Christine Todd Whitman -- designated by President-elect George W. Bush to head of the U.S. Environmental Protection Agency -- emphasized in a recent speech the important role that science has played in improving the nation's environment.

Like other designees for Cabinet-level posts, Whitman will need Senate confirmation before taking the job of EPA administrator, and will soon be called on to express her policy views before a Senate hearing. Those hearings on Cabinet designees began on January 4 -- one day after the convening of the 107th Congress.

Bush announced his choice for EPA administrator on December 22, fulfilling speculation that the Republican second-term governor from the mid-Atlantic coast would be invited to join the new administration. Bush will be sworn into office on January 20.

Regarding environmental issues in her state, Whitman advocated adoption of a land preservation campaign for New Jersey, and endorsed federal regulatory changes to reduce the allowable amounts of sulfur emitted from diesel fuel.

As governor of a coastal state, Whitman has also dealt with a variety of issues relating to ocean water quality and pollution problems. She addressed that activity in an October 13 speech entitled "Effective Policy Making: The Role of Good Science," delivered to the National Academies of Science and Engineering. In the speech, Whitman said the great challenge for policy makers is to strike the proper balance between fulfilling a region's industrial needs and preserving the environment. Public officials must support scientific research in order to achieve that balance, the New Jersey governor said. She further recommended that policy makers take a precautionary approach to environmental protection.

"By this I mean we must: 1) acknowledge that uncertainty is inherent in managing natural resources; 2) recognize it is usually easier to prevent environmental damage than to repair it later; and 3) shift the burden of proof away from those advocating protection toward those proposing an action that may be harmful," Whitman said at the National Academy of Science symposium on nutrient over-enrichment of coastal waters.

Following is the speech as prepared for delivery:
(begin text)

Office of the New Jersey Governor

REMARKS OF GOVERNOR CHRISTINE TODD WHITMAN "EFFECTIVE POLICY MAKING: THE ROLE OF GOOD SCIENCE" SYMPOSIUM ON NUTRIENT OVER-ENRICHMENT OF COASTAL WATERS WASHINGTON, D.C. FRIDAY, OCTOBER 13, 2000

Good morning. I want to thank the National Academies for convening this symposium and for asking me to speak to you this morning.

Before I discuss the subject at hand, I want to take a moment to ask one favor of you, since there is such a large group gathered here of scientists and policymakers who focus on nutrient pollution and its effects: Please stop referring to that big area of oxygen depletion in the Gulf of Mexico as New Jersey-sized! I think the press sometimes confuses "New Jersey-sized" with New Jersey itself, and we get the blame. I understand the area is smaller this year, maybe only the size of Connecticut or Delaware, although I hate to foist off the moniker on another state.

In all seriousness, I am pleased to be here as one who makes public policy to talk about how science informs and shapes critical policy decisions.

Science has played a vital role in improving America's environment -- from targeting toxic and point source pollution to designing control strategies. More recently, science has helped us recognize the causes of nonpoint pollution and the damage it does along our coasts. You were the first to sound the alarm about nutrient pollution along our coasts. Clearly, the role of environmental science is becoming more critical than ever.

"Part of the solution lies with you, the scientific community. You must continue to help policymakers and the public understand the treasures provided by nature that society has for so long taken for granted: clean air, clean water, fish from the sea."

As you may know, I chair the Pew Oceans Commission, which encourages policies and practices to restore and protect living marine resources in U.S. waters. A colleague on that commission, Dr. Jane Lubchenco, has written eloquently about the need to recognize and account for how humans dominate the world's ecosystem. That, to me, is the great challenge for environmental policy. How can we make this work -- how can we fulfill our industrial needs without jeopardizing the health of our environment and, ultimately, ourselves?

Part of the solution lies with you, the scientific community. You must continue to help policymakers and the public understand the treasures provided by nature that society has for so long taken for granted: clean air, clean water, fish from the sea.

You must also show us how our activities are harming the ecosystems on which we depend for these services. Last, and this is the hard part, you need to help prioritize the threats and come up with cost-effective strategies to address them. This will be critical if we

policymakers are to maintain public trust for the actions that we take.

What must policymakers do to hold up our part of the bargain?

First, we need to acknowledge that better information does not come for free. We have an obligation to provide more institutional and financial support for environmental research, without wasting money on duplicative efforts. We also need to better identify emerging policy issues so you can tell us what resources you will need to do the research before it's too late.

As a policymaker, I am proud of how New Jersey has responded to the environmental challenges that science has identified.

We have cleaned up the Delaware River to the point that the shad population is up more than 300% from its low point in the 1970s. Over 87% of available shellfish beds are open to harvesting, up from 75% in 1977. Ocean beach closings are down from more than 800 in 1988 to less than 20 per year in the past few years. And New Jersey led the way in the push to end ocean dumping of sewage sludge and establish uniform national beach water quality standards.

Of course, there are still problems. Many of our rivers and streams, for example, are still stressed. We need to do more to combat nonpoint source pollution and the sprawl development that exacerbates it.

To that end, New Jersey has in place one of the nation's most comprehensive smart growth plans. Among other benefits, our plan will save well over 100,000 acres of open space by channeling development into planned growth areas and away from farmland and sensitive ecological areas.

Has my state made progress? Yes. Do we still have far to go to reach the health we want for our rivers, coasts, and oceans? Absolutely. But we're not alone. I'm dwelling on New Jersey's experience because I know it best, but also because to a large extent it mirrors what is going on around our nation.

In a sense, we have already harvested the low-hanging fruit. By controlling direct sources of air and water pollution, we have greatly improved environmental quality and rescued some species from the brink of extinction.

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Now the work gets harder and more complex. We face challenges such as controlling diffuse sources of air and water pollution. Limiting disturbances of wildlife habitat. Restoring degraded habitat and depleted species. A key to our success will be how well we manage growth, especially along our coasts where we are seeing the greatest population increase.

We've made a start in my state. Earlier this year, New Jersey adopted new rules to regulate major development along our coast by encouraging development in centers and discouraging or prohibiting it in environmentally sensitive areas.

Now we plan to revamp the state's water quality and watershed management rules. Under our proposal, future decisions on extending sewer lines and septic systems in New Jersey will depend on water quality and quantity assessments and how those projects integrate with our State development plan. These changes, I hope, will enable New Jersey to slow sprawl, protect sensitive lands, and improve water quality -- including the input of nutrients.

As states like New Jersey enter a new era of public policy, with science playing such an important role, I believe policymakers need to take a precautionary approach to environmental protection. By this I mean we must 1) acknowledge that uncertainty is inherent in managing natural resources, 2) recognize it is usually easier to prevent environmental damage than to repair it later, and 3) shift the burden of proof away from those advocating protection toward those proposing an action that may be harmful.

For too long, we have waited until a crisis occurs before we respond. How do we break this boom-and-bust cycle? What criteria should policymakers use in applying a precautionary approach? How much of a margin of safety needs to be built in? Let me talk about these issues in terms of three recent problems in coastal environmental management.

First example: dredging. The disposal of dredged material has long been a national problem, and particularly acute in northern New Jersey. By the early 1990s, we had reached an impasse between the need to dredge the Port of New York/New Jersey, which supports tens of thousands of jobs, and concerns about the harm caused by dredged material being disposed off the New Jersey coast.

The public was tired of our ocean being a dumpsite for contaminated sediment. People were also worried that toxins in the sediment were working their way up the food chain to human beings. But the economy of the region depended on a viable port.

In 1996, a deal was brokered among the federal agencies involved in dredging that closed the Mud Dump Site to materials unsuitable for ocean disposal. Under this agreement, clean dredged material would be used to cap the contaminated sediment, and we'd look for other ways to dispose of contaminated material still being dredged from the Port.

The question became how clean is clean enough? Unfortunately, while various groups debated this point, we often lost sight of the need to cap the contaminated mud dump.

Anyone who follows dredging issues knows that the science is both complicated and murky in this area. Complex protocols have been developed to assess the potential for bioaccumulation of toxins in marine life. But it is not clear how well these tests relate to what actually goes on in the marine environment, nor how well they relate to the potential for human beings to be exposed to these toxins through the food chain. In short, results are very open to interpretation.

Nonetheless, after a lengthy review, EPA announced two weeks ago that it was reducing the sediment standard for bioaccumulation

of PCBs in bottom-dwelling worms -- a key benchmark -- from 400 parts per billion to 113.

Everyone got very excited about this decision, with environmentalists saying all dredged material should go upland and with some in the labor and the port community questioning the science. There's been no official reaction yet from the worms. But given the uncertainty of the science and the level of insult that the marine environment has already received from years of ocean dumping, I certainly support a change that builds in an additional margin of safety.

At the same time, I recognize the frustration that people feel. It took four years to reach agreement on PCBs in worms, but the EPA still hasn't reached consensus on new standards for mercury, dioxin, lead, and other contaminants -- and won't for at least another year. The EPA says we can rely on existing standards until then, and so we will, but that leaves policymakers in a difficult position of approving permits for dumping materials that a year from now might be declared unsafe.

Another example outside of New Jersey but familiar to most of you concerns harmful algal blooms such as the outbreaks of the toxic microbe *Pfiesteria* that have occurred in recent years. This organism has a unique and complicated biology, and the understanding of its life history and toxicity are still evolving.

At the time of outbreaks of the microbe in the Chesapeake Bay in 1997, some waters were closed to fishing in an attempt to limit human contact with *Pfiesteria* or seafood contaminated with it. The fishery closures prevented a small number of fish from being caught. But the real economic damage was the slump in seafood sales because of public perceptions that seafood coming from those waters might be unsafe to eat.

Later studies indicated no effect on seafood safety from *Pfiesteria*. But does that mean that the actions taken in 1997 were inappropriate? Based on the information available, I believe it was prudent to err on the side of public health. Further, had waters not been closed and someone became gravely ill from direct contact or from contaminated seafood, the long-term damage to the seafood and tourist industries would have been much worse.

Science and public policy operate on different time scales. Scientists could not instantly produce results about the toxicity of seafood exposed to *Pfiesteria*, or determine when and where *Pfiesteria* would become toxic just because that research was suddenly required for public health decisions. Nonetheless, public health officials could not wait for this information; they had to act based on the best information available at the time.

A third example involves the horseshoe crab fishery. These creatures have for eons spawned in the sandy beaches of estuaries, and probably for those same eons shorebirds have feasted on their rich eggs. They are also important in the diet of the threatened Atlantic loggerhead turtle.

Horseshoe crabs are harvested in limited amounts for the biomedical industry, which uses their blood to test the safety of new drugs, and they are also harvested for bait in the conch and eel fisheries. In recent years, the harvest for bait has grown as the conch and eel fisheries have expanded.

Scientists have found a decline in the horseshoe crab population. However, without better scientific data, it's hard to know the full significance of the decline. What we do know about the life history of horseshoe crabs, combined with historical evidence from when they were harvested for use as fertilizer, suggests that they are vulnerable to overfishing and that when the population does crash, it takes decades to recover. Policymakers decided that these considerations, combined with a concern about the effects on shorebirds and other species, warranted a conservative strategy.

After reviewing the best available information, and citing these concerns, the Atlantic States Marine Fisheries Commission ordered a 25% reduction for each state in the horseshoe crab bait fishery. It also recommended that Maryland and New Jersey continue voluntary additional reductions in the catch.

Some took the view that until the science can show that the fishery is harming the horseshoe crab population, the harvest ought to continue at current levels. This is the inverse of the precautionary approach, but it reflects the real concerns of commercial fishermen and all those whom their employment affects -- from the local banker who holds their mortgage to the people who repair the boats to the grocers in their neighborhoods.

I've been vocal on this issue. I have strongly supported the Commission's recommendations and asked the National Marine Fisheries Service to help reduce the horseshoe crab catch by closing a substantial area off Delaware Bay to the offshore fishery before the fall conch fishery reaches its peak.

What's more, I have said we need better science on the issue -- and must pay for it. That's why I enlisted the governors of Maryland and Delaware to share with me the cost of supporting \$125,000 in new research on the horseshoe crab. Our goal is to obtain better information on which to base a sustainable fishery and to make sure there are enough crabs left over for the animals that also depend on them.

What lessons can we learn from these examples? One is that the real world application of the precautionary approach is not what some would like it to be. The absence of certainty is not an excuse to do nothing. In the case of *Pfiesteria*, the protection of public health could not wait for conclusive results. Although economic damage had to be considered when deciding the horseshoe crab issue, it was not the deciding factor. In the case of dredging, we can't afford to shut down our ports to wait for scientific certainty.

A second lesson is that we should build in a margin of safety based on the level of uncertainty surrounding our information. We must account for the damage that might be caused by miscalculating.

Regarding *Pfiesteria*, further investigation showed a very small risk of contaminated seafood -- but no one knew that when the decision had to be made. When the horseshoe crab population crashed in the 1940s, it was decades before it came back even in the near-absence of fishing pressure. What's more, we now understand how shorebirds depend on these crabs, which adds another factor

urging caution.

Last, we must realize that science and public policy proceed at fundamentally different time lines. If we want good science, we cannot rush it. (Indeed, that's why my state is developing a coastal research agenda to identify short- and long-term research needs.) However, environmental policy should always be based on the soundest information available at the time. If we keep these factors in mind as we face the challenges of this new century, I believe we will emerge with a much more effective, sustainable environmental policy.

The good news for science is that people increasingly recognize a healthy environment is inseparable from economic well-being and quality of life. However, the demands on our natural resources are also increasing. We need good science more than ever so we can use and sustain natural resources while maintaining the public trust and the integrity of our world's ecosystem.

To do that will require a partnership. We who make policy need to give you the tools, especially funding, to do your job, and we need to let you know clearly and early about emerging research needs. And, as I've said before, you must help policymakers sort through all the scientific uncertainties and all the demands on our environment to prioritize the information we do have at any given time. In New Jersey, our partnership is growing. I hope it's a partnership that grows stronger by the year.

Thank you, and keep up the good work.

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