University of Richmond Law Review

Volume 29 | Issue 3 Article 4

1995

Policy in Wake of the Incident

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POLICY IN WAKE OF THE INCIDENT*

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* Sandra Jackson and Dharma Patel assisted in the editing of these remarks for publication.

** Gerald McCarthy is Executive Director of the Virginia Environmental Endowment. Mr. McCarthy has been the Endowment's executive director since it was founded in 1977. Prior to that he served as the chairman of the Virginia Council on the Environment. Among the many professional honors received in a distinguished career devoted to environmental protection, he was named the Chesapeake Bay Foundation's Conservationist of the year in 1982 and was given the Friend of the James River Award in 1988.

The Honorable Tayloe Murphy is a member of the Virginia House of Delegates and has represented the 99th District on the Northern Neck of Virginia since 1981. He is deeply concerned about developing policies to protect the unique natural resources of Virginia, particularly the Chesapeake Bay and its tributaries. He has an intense interest in natural resource protection and coastal management programs.

Delegate Murphy was the author and chief patron of the Chesapeake Bay Preservation Act, the landmark act that sets out a framework for meeting the demands of economic growth in Virginia while preserving important natural areas. He serves as the Chairman of the Commission on Population Growth and Development charged with developing new proposals to accommodate the rapid growth expected in this region over the coming decades. Delegate Murphy is a graduate of the University of Virginia Law School. He has had a distinguished career in private law practice in Richmond and in Warsaw, Virginia.

Gerald Winegrad recently retired after a 16-year record of distinguished service in the Maryland House of Delegates and State Senate. He has been recognized as contributing more than any other legislator in Maryland, and indeed perhaps more than anyone else in the State of Maryland, to the development of environmental policy in Maryland during his career in the legislature. The Washington Post, reviewing his record of achievement, called Senator Winegrad the environmental conscience of the senate.

Senator Winegrad counts among his legislative successes measures on toxic waste reduction, agricultural pollution prevention, wetlands protection and legislation to ban phosphate detergents. During his legislative career, Senator Winegrad was selected legislator of the year or conservationist of the year by 12 conservation and public health groups.

Joel B. Eisen is an Assistant Professor of Law at the T.C. Williams School of Law, University of Richmond and is Director of the Robert R. Merhige Center of Environmental Law.

Professor Eisen: The goal of this panel was to examine the policies formed in the wake of the Kepone incident: the environmental laws, the regulations and policies that are designed to safeguard our natural resources to ensure that incidents such as the Kepone incident do not reoccur and if they do, to hold those responsible for environmental damage accountable for their actions.

State and federal environmental laws have matured substantially in the years since the Kepone incident. The legal mechanisms that exist to protect resources and to hold polluters accountable for the damage they cause to the environment are dramatically more developed. There have been great success in cleaning up our air and our water.

Concerned citizens and public officials have helped to make environmentalism a mainstream movement with broad public levels of acceptability. In the Chesapeake Bay region, we have the Chesapeake Bay Agreements, products of unprecedented interstate cooperation and the efforts of the members of this panel among others. These agreements, and the Virginia Chesapeake Bay Preservation Act,[1] *address pollution that does not respect the boundaries of political jurisdictions and represent innovative attempts to encourage environmental protection while accommodating economic growth.*

Mr. McCarthy: Ladies and gentlemen, it's a pleasure to be here, especially on a panel with two of the most important people who have influenced environmental public policy in the Chesapeake Bay region over the last decade or two.

It is a genuine honor for me, a civilian, to be part of that. We can only talk and encourage; they actually make policy. They have a lot of courage, and as you will hear about, it has been amply demonstrated over the years.

The Endowment—you have heard a little bit about that so I don't have to say too much—for those of you who like to keep track of figures, the Endowment did start with eight million dollars eighteen years ago. Over the years it has received five other federal court settlements, two of them in Virginia, but

1. VA. CODE ANN. §§ 10.1-2100 to -2115 (Repl. Vol. 1993).

others in Maryland and Ohio and West Virginia. We have given away approximately fourteen million dollars on projects with a total worth, with the matching funds that we always require, of about thirty-five million dollars worth of good work for the environment in Virginia, and still have approximately seventeen million dollars in the bank to continue this activity.

I would like to talk to you a little bit today about the climate that we are in, give a little perspective on where we have come from in the last twenty years since the Kepone incident burst upon the Virginia scene, and talk briefly about where we go from here.

The first thing that I recall happening after the Kepone incident was the Virginia legislature actually passing a Toxic Substances Information Act.[2] I don't really remember whether it was 1976 or '77. It was probably '77 or '78. It was, I think, just about the first one in the country. It certainly preceded the Toxic Substances Control Act[3] in the Congress. It was a direct result of the Kepone incident.

But since then a lot of other water has flowed under the bridge as it were, environmentally speaking. The Endowment has played a little bit of a role in that, I guess. I'd like to give you a few examples of some of the things that we have supported. I would also like to say that unlike most foundations in this country, our board actively chose a role of being involved in public policy. Let's face it, the Endowment was created in a public policy environmental disaster. It would hardly be proper for us to ignore the circumstances of our creation. And we were created in a flood of publicity that went on for some time as you heard about on the previous panel.

Right from day one, the board decided that environmental public policy in Virginia was its principal concern. Bringing the different parties together who are engaged in public policy was a major tactical direction for us and a focus on toxic substances was a particular subject matter focus for us.

In fact, we did fund a little bit of Kepone studies at the Medical College of Virginia only because nobody else, and I mean

2. VA. CODE ANN. §§ 32.1-239 to -245 (Repl. Vol. 1992).
3. Toxic Substances Control Act, 15 U.S.C. §§ 2601-2692 (1988 & Supp. V 1993).

nobody, was funding any Kepone research on the ultimate question involved in the Kepone case. That is: Is this stuff harmful to human beings and to human health? Nobody was putting up any money for that and we felt a moral obligation to do so even though we were skating on a little bit of thin ice with respect to Judge Merhige's mandate not to do anything that might in any way relieve anyone else's liability for the Kepone mess.

That's how we started and since then our issues have grown over the years starting with three types of things: action oriented work, public policy and scientific research work, and finally educational activities.

One of the first things we did, I guess, was to persuade the Chesapeake Bay Foundation to open a Virginia office. Believe it or not, for those of you who take the Bay Foundation for granted here in Virginia, they didn't exist here in Virginia in 1977 or '78. In 1979 we made them a loan as an inducement—that's all it took, a loan—and they came here, they opened an office and the rest is history.

They have been among the most effective, if not the most effective, non-profit organization in fighting to protect the Bay from all of the ills that you've heard about throughout today. We have subsequently funded their grassroots activities and their environmental education program, which was a significant change again for the State of Virginia, which did not really have any environmental education programs underway until the Bay Foundation launched theirs in Virginia. They liked it so much the state finally took it over, and I'm not sure what the status of it is now. But for many, many years the State of Virginia actually paid for a substantial share of the cost of the environmental education program.

We also brought in the Environmental Defense Fund (EDF), which did not have a presence here in Virginia. In fact, we had no capacity in Virginia in the non-profit sector to actively participate in the administrative rules and writing of regulations by the state government or really even to actively litigate; although the Endowment has never supported litigation and we never supported any of EDF's litigation. In fact, EDF did things the right way. They were so effective in their negotiating with government officials and their industrial counterparts, that they

really only had to go to court, I think, twice in maybe ten years or so, for which we're all very grateful.

Then we launched the Institute for Environmental Negotiation which may be one of the signal achievements of the Endowment's work. This is an alternative dispute resolution center that actively brings parties together to resolve their disputes in a constructive way. It started on a dispute by dispute basis, which it still does, but it also does public policy negotiations. In fact, one of the most important things that it did for the Bay was to serve as the facilitator for the Chesapeake Bay Land Use Round Table, which produced a report that led to the eventual passage with Delegate Murphy's leadership—and the active support of Governor Baliles and Former Secretary John Daniel—to get the Chesapeake Bay Preservation Act enacted in Virginia.

The idea of watershed management is an idea that has been kicking around for some years, too. Yet, it's really not actively practiced. We were able to fund the first river corridor study in Virginia, of the James River with the James River Association. That led to a watershed management plan which we hope will be implemented by the governments that are enabled to follow it. You can give them the water, as it were, but maybe not make them drink it. I could go on and on about that, but that's the sort of thing that should be at the heart of the Bay tributary strategy. The ability, the knowledge is there, but it's not happening just yet.

Scientific research—we funded some Virginia Institute of Marine Science (VIMS) research that led to the total ban of chlorine discharges out of sewage treatment plants in oyster bed areas. Well, that policy now, after many, many years of working successfully, the latest state water control board has indicated that it's going to revisit that policy because they think that perhaps it's unnecessary.

VIMS has produced the first CD ROM atlas of water quality data in the Chesapeake Bay. That is a phenomenally useful tool that has only just been out for a few months but has great promise for public policy.

Those of us who have been around this a while have heard many times legislators and scientists argue about how much

science you need to make good public policy. At least if you can get good evidence and information, you have a step in the right direction.

The state Heritage Program is a direct product of work with The Nature Conservancy back in the early '80s. There are some wonderful things that have happened, and the Endowment is really proud to have been a part of helping them at the germination stage. Fortunately, there have been good public servants and good legislators to make those things really happen, and active and involved citizenry for the most part in Virginia to keep the good things in place and fight off the bad things.

There have been significant changes for the better over the years. There have been wonderful educational programs that help bring about an informed populace which is so important.

You might say that while much has happened, it really does look like we have a rather firm foundation for future progress in the environment. Until fairly recently that's exactly the way it looked. In fact, so much so that we at the Endowment and others have been actively talking about is that we're really working toward something Peter Kostmayer referred to today with slightly different language, and that is the development of "sustainable communities," a place-based way of managing our environment.

These are communities where pollution prevention, natural resources conservation, and environmental literacy are the norms rather than the exception. We have a long-term program underway with The Nature Conservancy on the Eastern Shore of Virginia, the Conservancy and its economic partners, its farming partners, its social welfare partners. Just about every institution on the Eastern Shore, at least in Northampton County, is involved in trying to show what a sustainable community would look like if it ever existed. It's a very exciting program that we are hoping to learn enough lessons from to transplant to other parts of the state.

In fact, we're taking another cut at it with the Bay Foundation and the Rappahannock Initiative Committee in the lower Rappahannock Valley. I just heard the other day that the three planning district commissions in that area have agreed to actively work together with the Rappahannock Initiative Commit-

tee and finally move forward together and treat that valley as, in fact, a unit, with the river as its center rather than its dividing point.

We have also done a little bit of study work, where the Environmental Law Institute in Washington published a "Blueprint for Sustainable Development in Virginia"[4] last year. It makes a compelling case for the proposition that economic development is utterly dependent on environmental integrity.

Sustainability, of course, is part of our Virginia constitution. We have in Virginia, adopted in 1970, one of the first statements of sustainable development policy or at the very least, environmental policy. Article XI of Virginia's Constitution requires us to protect our air, water, land and other natural resources from pollution, impairment, or destruction. Every official of the Virginia government, whether elected or appointed, who swears to uphold the Constitution of Virginia swears to uphold Article XI as well.

Any rational person looking at our situation today would have to say that great progress has been made, and yet almost overnight the climate has changed, at least the rhetoric has changed, and it looks like maybe the upper hand has changed because, though the environment is a priority issue for people, a funny thing happened on the way to Nirvana—some place, some how the circle turned and environmentalists became known as the enemy. In this, if you will, theater of the absurd that we call our times, somehow the prop man handed out the white hats to the polluters and their defenders. The vast majority of the rest of us, and that is a vast majority, who care about the environment have been given the role of obstructionists, the zealots, the guys with the twirling mustaches ready to blow up the train. I mean, come on.

I don't think we can blame the prop man for this, but I do think we ought to look realistically at where we are and how we fell into this situation and what we're going to do about it. If you will, first, to borrow a phrase, it's the economy.

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4. ENVT'L L. INST., BLUEPRINT FOR SUSTAINABLE DEVELOPMENT IN VIRGINIA (1994).

We who are working for environmental sustainability are being portrayed as the enemy of development of jobs and of growth. We are being pilloried as regulation happy boa constrictors ready to squeeze the life and profit out of any project that might bend a blade of grass. That's patent nonsense and everybody in this room knows that.

We have to make it clear that we understand the economy. We are on the program for economic development, real opportunity and real economic vitality. In fact, rational environmental protection preserving what is best about Virginia and most important for us and for our children, is a fundamental basis for real and lasting economic growth.

Economic prosperity and environmental integrity go hand in hand. They are mutually reinforcing and we've got to make it clear to people in terms that they can understand that we're for that. For example, resisting our state's becoming the medical waste incinerator capital of the western world is not arguing against jobs; it is arguing for the quality of life in Virginia and our state's future.

Being pro-environment is being pro-economic development and sound environmental and development policies do go together and anybody who thinks otherwise, I would beg to differ with as strenuously as I know how.

The second fact of life today is that our issues are slipping. People say that eighty percent of the public supports environmental issues. You heard it again today. Most people want stronger laws, not weaker laws. Well, if that's true, why are we getting the election results we're getting in this respect. The fact is, the environment is not as important as jobs, welfare reform, crime and a couple of others issues perhaps that rank ahead of us right now. That means either the environment has got really terrifically better and everything else is much worse or we're failing to portray the real stakes involved accurately and dramatically. We need to tell our story better, as a matter of fact, because while the environment is still important to people, it is not, for most people, the most important issue and certainly not the deciding factor when they cast their votes.

So we shouldn't be surprised when the result is that we're electing people for whom the environment is not a high priority.

We have to tell the story and convince them that some of the things they are trying to do which sound absolutely wonderful—I mean, who could be against regulatory reform? Who could be against unfunded mandates? Who could be against all these things that make up the Contract with America? They're perfectly reasonable things until you look at the *consequences*. I would posit that if people looked at the consequences, they just might think a little bit differently about whether these things are so great and whether they're being brought about in the best possible way.

There are horror stories and the public needs to understand intellectually and in their gut what's at stake. We can't depend on anybody else to tell that story. We've got to tell it and make sure that the public understands.

Let me give you, in conclusion, what I call my big picture perspective, just to show you that I still am an optimist, you can't do this for as long as I have and not be. The long view is that in the 19th Century you could characterize it as pollution and destruction of natural resources without restraint or regulation for that matter. Similarly you might characterize the 20th Century by permission to pollute. They're called "permits" after all. You sign up and you get one. As long as you're not doing something gross, you'll probably get it.

For the 21st Century I would posit we have to invent a sustainable society characterized by pollution prevention, resources conservation and citizen participation in the decisions that affect them, which is, of course as we know in this state, harder to do than in some other states.

The pendulum is swinging pretty rapidly in reverse right now, and that may not be all so bad. Let's face it, there are regulatory excesses and they should be corrected. I believe like Jefferson and the founders, that the prerequisite to good public policy is an informed citizenry. If we do a better job of informing the citizen's discretion, I'm convinced that environmental sustainability would be the choice that they make.

We have the choice to be stewards, not spendthrifts; thrifty, not greedy; conservative, not irresponsible. It's a measure of how far we have yet to go that the conservative, thrifty stewards have been given the black hats these days.

Throughout its history the Endowment has emphasized and demonstrated, through the experience of the grantees it has supported, that protecting the environment and encouraging development are not irreconcilable goals. Our goal is not to block progress; it is to enhance it and we're very pleased at the opportunities we have been given to do that over the last 18 years. We're going to continue to reach out to every sector of the community and invite them to join with us, and we hope that all of you will work toward in the coming century, which is only five years away, the development of a sustainable society. If we can get through this temporary swinging of the pendulum, I think we'll get there in good shape. Thank you very much.

Senator Winegrad: Good evening. I am Gerald Winegrad and I'm pleased to be here with you this day in Richmond.

My colleague, Tayloe Murphy, who has really spearheaded a lot of the Bay cleanup in Virginia, and I, sit on the Chesapeake Bay Commission, or at least I sat on there until January. We've been together on that commission for 12 years, through a lot of struggles, to see that the Chesapeake Bay is restored and is indeed an international model for restoration that it's come to be.

We can't fail in our efforts. People are visiting us in the Bay states everyday from all over the world, all over the nation to see how we're doing. Wherever we go to conferences or meet with friends or colleagues, it's one of the topics all the time. People know about this estuarine effort all over the country and many places in the world.

Yogi Berra said it all when he said, "When you come to a fork in the road, take it." I think we have come to that fork in the road environmentally on this planet, as well as in the Bay region. I think the Bay is really a reflection of what's happening in this nation as well as globally. Population has flocked to the coastal areas. It's true all over the face of the globe, and indeed almost all of our coastal estuarine systems are stressed and in decline in the United States.

Having said that, my topic is going to be devoted to what we've done in toxic chemicals specifically. But to give an overview, when the questions are always asked, "How is the Chesa-

peake Bay doing? Are we recovering? Is it declining? Is it status quo?" The best thing to do is an analogy to a medical MRI of the patient. Let's just say we put the Bay in that MRI.

There are four key systems in the Bay: wetlands, forest and submerged aquatic vegetation (SAV) (the bay grasses), and the oysters. I call the wetlands the heart of the Bay. Without going into all of their functions, they even take up toxic chemicals.

Seventy-two percent of the wetlands in Maryland are gone. In the state of Virginia it's slightly less. We have lost over fifty percent of our forest cover since colonization, a tremendous amount. We saw an increase during the middle part of this century as people moved to urban areas and off the farms, but now again we're accelerating that loss because of rapid population growth and sprawl development.

The oyster populations in the Bay are devastated. They are at ninety percent of what they used to be 100 years ago. I call these the kidneys of the Bay. One hundred years ago they were able to filter all the waters in the Bay in about three to five days. Today it would take nearly a year, 330 to 340 days to filter the volume of the Bay, cleaning out nutrients and even some toxics.

The SAVs are the liver of the Bay with tremendous filtering capacity, holding in sediments as well as habitat value. From 1965 to 1980 they declined by eight-five percent, although there has been some restoration.

If you look at the patient, it is a very stressed and sick individual. The extremists are not those that would advocate that we not dredge or fill or disturb another wetland or cut anymore forests. The extremists are those that would fill the remainder of the twenty-eight percent of the wetlands in Maryland, or cut the remaining forty percent of the forest, the minimal amount of cover we have left. I don't want to say minimal, but minimal compared to the way the system worked.

With that as a background, it's important to note that with toxic chemicals we don't always have smoking guns like we did in the Kepone incident. That was a clear smoking gun. The people were caught. It was quick and dirty. It was a bad substance. The EPA banned the substance for use, period, in June of 1976. It was a pesticide. Most of it is was exported, over

ninety percent, to Puerto Rico and Latin America. It was also used as cockroach and ant bait, and in traps.

The Kepone still is in the James River, much of it. It's buried in sediments and whenever there is a violent storm or dredging, it is disturbed again. The fish ban has been lifted in the James River, but there is still a consumption advisory. The James River isn't unique. We had advisories, actual consumption warnings, and even bans on eating some fish, not harvesting but eating, in the Patapsco River and Lake Roland in Maryland because of Chlordane, another pesticide which has since been banned. We've also had advisories and warnings in the Potomac River because of Chlordane and PCBs, and in the upper Potomac because of Dioxin, mainly from a paper company producing the high quality opaque paper for National Geographic Magazine. When you make the link of reading National Geographic to Dioxin poisoning in the Potomac I think you understand how we are all part of this problem.

In the area of toxic chemicals, it is interesting that throughout the discussions, we have heard very little on the health effects of Kepone. I have read about some of those effects and two really struck me.

You heard Peter Kostmayer, the amazingly good administrator from Region III, speak about over-population. One of the things that Kepone does is cause reproductive failure. We have a multi-billion dollar industry in the United States concentrated on weight loss. The other thing Kepone can do is cause involuntary weight loss. So those are two positive things if you look at it from that perspective. Anyway, it was banned, and I thought that those two things were something that some people spend billions of dollars on artificially.

Our oysters can also be affected. You will hear industry folks and attorneys and representatives say, "How low do we have to go in these areas? How much is enough for us to remove Dioxin or some of the other highly toxic substances?"

Tayloe Murphy knows our story about Tributyltin (TBT). It was a commonly used anti-foulant paint for boats. That substance is toxic in the low parts-per-billion. It also causes problems in reproduction and defects in shellfish, particularly oysters. That's why foreign countries first started to ban it. In

fact, oysters are affected by a number of substances including Aldrin, a pesticide, in the low parts-per-billion.

With that as a background, we look at what we have done since the Kepone incident. It isn't that we have been inactive, despite the current lull caused by anti-regulatory fever. Right now we have a number of different Acts to respond to the over one thousand toxic substances that we find are being discharged into the Bay; one thousand of them, and that's only what we know from our inventories. There may be a great number more.

These include metals and pesticides and PAHs which are poly-chlorinated aromatic hydrocarbons caused mainly from our automobiles and power plants, again for our own electrical and automotive consumption. There was the National Urban Run-off Program;[5] we've had the Super Fund program;[6] we've had RCRA;[7] we've had ToSCA;[8] we've had SARA with Title III, the Right-to-Know legislation;[9] we've had FIFRA;[10] we've had LUST legislation,[11] which is the leaking underground storage tanks program aimed at petrochemical leaks.

It goes on and on. There's the 33-50 Voluntary Program to reduce seventeen toxic chemicals that the EPA has been promoting fairly successfully. There is also Presidential Executive Order 12856[12] which deals with federal facilities requiring them to report annually, just like any other industry, on their releases of toxic chemicals and to reduce those voluntarily by fifty percent.

There is an integrated pest management initiative that's been agreed to by the federal Department of Agriculture, the EPA

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5. *See* 49 Fed. Reg. 37,998, 38,016 (1984).

6. Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. §§ 9601-9875 (1988 & Supp. V. 1994).

7. Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901-6992 (1988 & Supp. V 1993).

8. Toxic Substances Control Act, 15 U.S.C. §§ 2601-2692 (1988 & Supp. V 1993).

9. Emergency Planning and Community Right-to-Know Act, 42 U.S.C. §§ 11001-11050 (1988).

10. Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §§ 136-136y (1994).

11. 26 U.S.C. §§ 4041(d), 4042, 4081, 9508 (1988 & Supp. V 1993).

12. Exec. Order No. 12586, 3 C.F.R. 616 (1994).

and the U.S. Food and Drug Administration, with the goal that by the year 2000, seventy-five percent of all agricultural land will be under integrated pest management. This involves better management of pesticides, using biological controls, and using scouts to determine whether there is a problem and the extent of that problem.

Enter into this equation the fact that we have over 6,000 point source discharges entering into the Bay system. Theoretically, you could argue if you're really designing a system to protect the Bay we would have no discharges. There would be either land application or proper treatment or recycling, but we have 6,000 permitted discharges going into the Chesapeake Bay.

The Bay agreements in December, 1987,[13] did give a brief mention to toxic chemicals, basically agreeing to reduce and prevent the entry of toxic chemicals into the Bay and to develop a strategy. That was the key thing. The strategy was developed in January of '89 when a Chesapeake Bay basin-wide toxic goal was developed with a reduction strategy. That was agreed to and signed by the Governors and the different stakeholders, the Environmental Protection Agency and the Chesapeake Bay Commission. That simply said that we will achieve a toxics-free Bay. The goal was by the year 2000.

That has been slightly modified with the last agreement that was signed in October, 1994. There were also a set of things leading up to toxic controls in the Bay that are very important and that we're really using in the Bay region that in some cases go well beyond federal requirements. In this strategy we are now committed to reducing toxic chemicals to levels that have no effect on human health or on any living resources, our fisheries, and our bay grasses. That is our goal now. The 2000 goal is off though. The deadline is somewhere out in the future but we still are committed to that.

The most recent document—if anyone is really interested in toxic chemicals and what's happening, you really should read

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13. U.S. Envt'l Protection Agency, District of Columbia, State of Maryland, Commonwealth of Virginia, Commonwealth of Pennsylvania & Chesapeake Bay Comm'n, 1987 Chesapeake Bay Agreement (on file with the *University of Richmond Law Review*).

this document—was just signed in October by the Governors of the different states, including Governor Allen of Virginia. It outlines the strategy that we're now employing in this document here. It's called the Chesapeake Bay Basin-Wide Toxics Reduction and Prevention Strategy.[14]

According to these agreements we first were to develop a toxics of concern list. We have developed a list of the toxic chemicals that we think are priority pollutants, that we see in the system that have toxicity effects, or because of their gross loadings, are creating problems or have the potential to.

We also created a secondary list. These lists are to be updated. The chemicals on there include the pesticides Atrazine, as well as Alachlor and Methalachlor. They are the three most heavily used pesticides in the Bay system.

There are also the PAHs that we're causing by our own automobile exhaust and by power plants, and there are also metals on the list including cadmium and chromium, copper, lead, and mercury. PCBs are also on here, as well as tributyltin.

A number of the pesticides on the list have been banned but they're still in the system. Chlordane is still out there. You can still find DDT out in the Bay system. Our goal is to try and bring these down significantly, or eliminate these toxics, in discharges, as well as deal with the problems of them in the sediment. They're sources of our toxic chemicals in the system, waste water treatment plants, point sources and industrial discharges, but it may not even be the number one source.

We have developed, as part of the agreement, another list which is an amazing document. It's got all the sources along with a technical index of where the toxic chemicals are coming from. It mentions specific plants, specific industries. It was one heck of a lot of work.

It was agreed, in the 1989 Bay agreement I mentioned, that the Toxics Loading Inventory would be done in January of 1990. This came out in March of 1994 and is helping drive the toxic cleanup effort. You can go into the James River, you can

14. State of Maryland, Commonwealth of Virginia, & Commonwealth of Pennsylvania, 1994 Chesapeake Bay Basin-Wide Toxics Reduction and Prevention Strategy.

go into rivers up in my area of Annapolis, you can go anywhere in the Bay system and find discreet sources, whether it is urban run-off, another key source, atmospheric deposition, or shipping. There is no real data on ground water, one of our unknown source of toxic chemicals. This document has been developed and it's part of the agreement that this would be updated. More research needs to be done.

In addition, the Toxics Loading Inventory gives you an idea of some of the discharges in the James. I use that because this symposium is centered around the Kepone incident and we're here in Richmond. Thirty-two percent of the total Arsenic loaded into the Bay comes from point sources in the James River. Zinc is twelve percent, and there's other elements in there. You can even get down to the pounds. So it's from A to Z, Arsenic to Zinc.

The problem with toxic chemicals are that we don't know enough. We spend a lot of money on nutrients, and believe me, it's been money well spent. We don't yet have the figures for toxic chemicals that are as detailed as we do for nutrients. We could do pie charts, bar graphs and show you discreet sources all over the Bay, even broken down into tributaries where the nutrients are coming from, using a five million dollar computer model. We don't have that yet for toxic chemicals.

The toxics strategy for the Bay is four-prong. One prong is that we have a regional focus. We know there are hot spots in the Bay and the idea is to attack and address those with regional action plans that would be implemented to lower toxic chemicals in Baltimore Harbor, in the Elizabeth River and in the Anacostia, three primary areas, as well as to look at other areas where we're seeing some toxic uptakes.

The second part of the plan is to do better toxic assessments: to look at what is out there, the discharge points, to do research on the acute and chronic toxicity. We don't even know that about a lot of these chemicals, and we're dealing with a thousand of them. We don't know for our oyster larvae, for our striped bass larvae, what has the potential to kill them in their larval stages, or cause reproductive problems over the long term. The acute effects are a little easier, but the chronic ones are much more difficult. It's even more difficult to get the syn-

ergistic effects of the toxic cocktail mix that's out in the Bay and many of its reaches.

I have talked to toxicologists that have done research in the Potomac and in many river systems in Maryland as well as Virginia, and they are telling me that they find toxic levels out in those river systems that are enough to have almost a hundred percent mortality, in forty-eight hours, for Rockfish larvae. This includes the Potomac spawning reaches, as well as spawning reaches on the Eastern Shore. They're very concerned, a couple of the toxicologists, Ph.Ds, that I've talked to. We have to get a better data base to drive the cleanup program on a more cost-efficient basis.

The third part of the four-prong program is the regulatory program. I will acknowledge that is one of the weaker points. Much of this is voluntary. Much of it says we'll build on existing federal and state laws. There is still a need, just like the nutrient control strategy with the forty percent goals which are a milestone in any estuarine cleanup, for a program to actually set and have states agree to a significant reduction for the toxic chemicals like the forty percent for nutrients with time lines.

There are, for the first time, some time lines for reducing toxic chemicals in the Bay system. In fact, the figures are very substantial. They use a list from the federal program of over 600 different chemical elements and that's under part of 3:13(c) of the Right-to-Know law. On all of those chemicals listed, the goal is to achieve a fifty percent reduction, by the year 2000, from all industries over the 1994 levels which have already had substantial reductions.

By the way, of all the chemicals reported under the Right-to-Know law in the Chesapeake Bay region there has been a fifty-two percent reduction from '87 through '91, at least as reported by industry.

In addition, under the Bay program, the 33-50 program with the seventeen highest priority chemicals would be expanded to include all the toxics of concern. So, we are asking our industries to go to the 33-50. We have also embraced and gone beyond the executive order requirements: for federal facilities we asked for a seventy-five percent reduction. For agricultural we keep the seventy-five percent voluntary participation rate for

integrated pest management to be achieved by the year 2000. So there are specific goals and they're driving this effort.

The final element of the strategy is pollution prevention, which is extremely important. This element will be incorporated into these goals and we'll be moving forward with pollution prevention initiatives. As a former legislator, I disagree with the voluntary approach and think it ought to be mandatory that any company, as a condition of the renewal of their air or water permit, would have to have a pollution prevention element where they show how they're reducing production, or recycling or actually neutralizing the chemicals before any discharge occurs. I don't think that that's a ground breaker, but we have great difficulty in this climate getting that legislation through. We had a bill similar to that for two years that passed the Senate. I managed it, but it got killed in our House of Delegates.

Finally, if you looked at this system in a holistic fashion, what do we need to do? What's still left? One, we need to focus more research, and that means some dollars and some more attention particularly on low-level concentrations and the effects over a long period of time, and in developing better inventories. That's one of the keystones of the Bay cleanup, the knowledge of nutrients; we know what's out there, and we know where it comes from. The mandatory pollution prevention absolutely needs to be done. The hot spots and the action plans are not being implemented, not being developed well with the involvement of the stakeholders; that is, the regulated community.

We need to do ground water studies. We've had studies done that do show pesticides in ground water on the Delmarva Peninsula, maybe less than four percent of the drinking water wells tested, but it's akin to Iowa. And in some cases it exceeds EPA safe drinking water standards, especially for Atrazine. Although it's only a small percentage, it may be coming out into our surface waters as well.

We need for EPA to act to develop the criteria for our toxic chemicals on the priority list, as well as our chemicals of concern, which hasn't been done. EPA is backing off some on that.

Agriculture must play a larger role both in nutrient management as well as in IPM. It saves money for the farmer to bet-

ter manage pesticides; it actually can increase the yield in crops, not decrease it.

In the Bay region alone, 2.3 million pounds of Atrazine was applied to the land, 2.3 million pounds just of that one pesticide.

Finally, it is our individual responsibility; the PAHs I mentioned from cars, our electrical consumption as well as our own production of household hazardous waste. It averages fifty pounds per capita in the United States. We're each producing household hazardous waste that is either discharged down your drain, which would go to the sewage treatment plant or right out in the Bay, or it's dumped down a storm sewer or put in the garbage where it may leak into the ground water at a landfill. Fifty pounds each—we need to reduce that ourselves.

Finally, I would add that with this beautiful ecosystem, this magnificent system that we're concentrating on, we all owe it to future generations to not leave this thing so despoiled with toxic chemicals and over-enrichment in nutrients and sediments that we leave only a legacy of Kepone incidents and the decline of one of the greatest resources in the United States. Keep things in perspective though about this current onslaught of anti-environmentalism and anti-regulatory fever.

I can say I went through a similar thing in the late '70s and early '80s when I was first elected as an environmentalist. I used to be the skunk at the garden party. Before my first election, I served on a bottle bill task force and we were sharply split. A state senator on the task force represented a steel union area of Baltimore and a can manufacturer and we had fought on this task force. I didn't fight with him individually, but we had fought over the issue. When I got in the legislature, he was in the Senate, I was in the House. We were out in the middle between the two chambers my first day, when he saw me, he said loudly, it echoes off the marble walls in front of everyone, "Oh, it's the ban-the-can man." That was my reception into the General Assembly.

So it took a while, through perseverance, until the Bay became an issue, and the environment was there for legislators to ask to co-sponsor bills. People were asking me "Do you have any bills I can put in?" and "Can the environmentalists help

me? I'm running next year, and really need help." It's become a much more popular issue. It's up to folks that are educated such as yourselves to keep pushing that.

I say, keep things in perspective. The environment as an issue is going to come back. It's never going to go away because of people's concerns. Toxic chemicals are unlike nutrients. The toxic chemicals also affect human health. Nutrients probably don't affect us unless the nitrate concentrates set too high in ground water and you drink it. Nutrients are mainly linked to a decline in the living resources. The toxic chemicals affect us, as well as the living resources, in many ways. Thank you.

Delegate Murphy: Frequently, when a person stands up to speak in today's world, he begins with, "Well, I have some good news and some bad news. Which do you want to hear first, the good news or the bad news?" This afternoon I don't have to give you that choice because in my judgment there is very little, if any, good news. It's all bad. I want to briefly tell you what I think we have to do if we are going to change the climate in which the environmental community is trying to make progress today.

There is a tremendous decline, in my judgment, in legislative will and in the regulatory process to protect our natural resources. Since the 1990s began, there has been a continuing decline in legislative commitment, both here in Virginia and at the national level. I think we have seen it in state legislatures around the country. The regulatory process is not protecting the environment as it should, and therefore, we need to look for other means, other processes, by which we can seek means of protecting our natural resources.

I would like to suggest that there are two approaches that we need to take, and I would like to comment on what we need to do in order to be able to utilize those processes. The first came up when the Commission on Population Growth and Development was deliberating the issue of growth and sprawl: how to accommodate the growth anticipated to take place in the Chesapeake Bay watershed, and at the same time protect that resource for the common benefit of the people of our region.

We were unable, in Virginia, to do what states like Oregon have done in terms of developing urban growth boundaries

through the regulatory process or instituting the kind of innovative land use policies that some other states have been able to do successfully. We just didn't think we were going to be able to do that in Virginia.

So after much deliberation we took the position that we could do a better job of protecting our environment if we did better planning and if we had a better base of information on which to do that planning. Therefore, we developed the Virginia Strategic Planning Act[15] and the Virginia Geographic Information Network. Unfortunately, the strategic planning aspect of the recommendations from the Growth Commission have not been successful. The bill was not passed at the 1995 session of the General Assembly, although it had been introduced in 1994 with thirty-nine co-patrons from the House of Delegates. We were unable to carry it forward successfully in 1994; therefore, the bill was carried over.

During the course of the year, we took another look at it. We made some amendments but essentially they were very minor. We amended the bill to bring in all of the areas of state government. In the original draft it covered only four Secretariats insofar as the planning process was concerned.

We did enlarge it to cover the entire spectrum of state government so that all Secretariats would have been involved in the strategic planning process. We added several goals to the general strategic goals to cover those other areas. But essentially the bill remained the same. It was reported to the floor of the House of Delegates and it was defeated; forty to fifty-three is my best recollection of the final tally on that. But, unfortunately, there were thirteen co-patrons who either didn't vote for the bill at all, just didn't vote, or voted against it. If those thirteen co-patrons had voted for the bill, it would have passed. So I think that shows us something. That shows us what we're up against. We're up against a very difficult lobby, a very difficult group of people who will misrepresent what something is. The Strategic Planning Act was not what it was claimed to be, another regulatory program. It did not set up another regulatory bureaucracy. It was strictly a strategic planning proposed.

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15. Va. H.B. 1068 (1994).

I believe a state planning document would have been of tremendous value to local government and to state agencies in developing programs that would ultimately not only protect the environment, but have a beneficial effect on the other areas of state government including economic development. Unfortunately, the bill is not law. As a result I think Virginia remains on the downside of the curve insofar as strategic state planning is concerned.

Funding for the Virginia Geographic Information Network took place in 1994, but that funding was not used by the Department of Planning and Budget under Governor Allen's administration to begin the process of developing the digital orthoquarterquads which are needed in order to be able to develop the geographic information system.

The recommendation from the Growth Commission was that the system should be developed at a one to 12,000 scale and some of the money, in fact about half of the money that was appropriated was used by this administration to develop a one to 24,000 GIS for economic development which was directly contrary to what the language of the budget bill asked the Department of Planning and Budget to do.

At this 1995 session the money from the general fund was withdrawn from the Department of Planning and Budget, and a joint legislative study was created to try to develop a recommendation to come back in 1996 with a means of developing a public private partnership through an authority or a foundation, an entity apart from state government that has local government and private sector input into the process of developing the Virginia Geographic Information Network as we have envisioned. It will be expensive, there is no question about that. But if it is done as we have recommended, it will provide a data base that I think will be extremely helpful to those who are planning not only for economic development, but for the protection of our natural resources as well. So I don't think all is lost; although I will have to say we have not made the kind of progress that I had hoped for.

In addition to better planning, which I think will help the environment, I think there is also the concept of the Public Trust Doctrine that we have got to try to utilize to a greater

extent. That can be utilized by the individual citizen. I'm sure that many of you know a lot more about the Public Trust Doctrine than I do, but it is, as stated in English common law, a very old doctrine in the law. In fact, it has its origins in the Roman law. I believe that it is a counterpart to the Riparian Doctrine. As you know, under English common law the riparian land owner has five basic rights: the right to continue to be a riparian owner; the right to have access to the water; the right to wharf out to reach navigable water; the right to accretion; and the right to make use of the water itself, i.e., the right to withdraw water. There is nothing in the riparian rights doctrine that says you have a right to discharge pollutants into the water. That's not a riparian right. The Public Trust Doctrine, on the other hand, provides that the title to tidal waters and navigable fresh waters and the lands beneath them, is held by the state in trust for the benefit of the people.

It establishes the right of the public to use and enjoy these trust lands and waters for a wide variety of recognized public uses. But it is a property right and when we deal with the process of regulation, we look at the state exercising its police power. Then you get involved in the doctrine of what is arbitrary and capricious, and you get limitations placed on the ability of the state to use the police power as a means of protecting our subaqueous lands and the waters above them.

If we look at the Public Trust Doctrine, then state management doesn't have to be by regulation only. The state can manage its own lands. It ought to have the right, in my judgment under the common law, to manage what it owns in the way that any other private landowner can manage what he or she owns.

I think that we have got to try to develop this doctrine. It has already been recognized in Virginia; it has been very rarely used however. I would call your attention to the case of *Taylor v. Commonwealth*.[16] In that case the Colonial Water Company leased subaqueous lands in the York River from the Commonwealth for the purpose of drilling a well to extract mineral water. The riparian owner of the adjoining lands claimed that

16. 102 Va. 759 (1904).

she was entitled to the proceeds from that mineral water because as the riparian owner, her right to the subaqueous lands extended to the channel. Therefore, anything that was extracted from those subaqueous lands, or was taken from them, belonged to her as the adjoining riparian owner.

The Supreme Court of Virginia said in response to her argument, which it rejected, that the title to the bed of the river in question, the York River, is held by the Commonwealth for the benefit of all of its citizens and that the riparian owner has certain rights with respect to it. Then it goes on to list the rights that I have mentioned, not one of which was to extract the mineral water from the subaqueous lands.

The Court went on to say, speaking of the plaintiff, that if the riparian land owner were the owner in fee simple of the subaqueous soil, entry upon it without consent would constitute a trespass, but having mere easements in the river, the riparian owner has no cause of complaint so long as he's permitted to full and undiminished enjoyment of those limited riparian rights.

So, the Virginia Supreme Court has clearly established, as does our Constitution, that these subaqueous lands are the property of the state, held by the state in trust for the benefit of the people. I believe the state has not only the right but the obligations any other landowner would have to protect that property from injury by others.

That leads me to the second point that I would like to make in regard to the use of the Public Trust Doctrine: that is giving access to the courts to individual citizens who may be damaged because of action to property in which they have an equitable interest.

If you look at it from a purely legal standpoint, the state is the trustee of these lands. You and I, and everyone else who has the right to use them, are the beneficiaries and we have an equitable title, and we ought to be able to protect that equitable title where it is being damaged and where our interests are being damaged.

Virginia "standing" laws are the most restrictive in the country. We ought not to restrict people, citizens of Virginia, to bring suits, not only under the regulatory process, but to bring

suits claiming interest in what the Commonwealth is doing with regard to the property that is held in trust for their benefit. I think there are ways that we can use this doctrine to help the environmental movement protect our natural resources that are not now being used.

It's going to be more available where the individual citizen who is injured or damaged, and can show that injury or damage to be able to use that doctrine to his or her benefit, and ultimately to the benefit of the public as a whole.

I think that we need to continue to try to develop the means for opening the judicial process to those individuals in the state who are damaged not only by direct action of the state, but by inaction of the state in protecting the resource that it has an affirmative obligation to protect.

I think we are seeing a constant erosion of the individual citizen's right to protect his own property interest. We saw it this year in the Environmental Audit Bill[17] and in the Remediation Bill.[18] In both bills, if the owner or operator, as the term was used in those bills, caused environmental degradation on adjoining property or the property of others, the innocent landowner who was injured has his rights diminished.

Under the Environmental Audit Bill, the innocent landowner has no right through the normal discovery process to seek information contained in the document that has been developed through the environmental audit.

The normal process of developing your case by going through the discovery process to find out what information there is, is denied to that individual. He is harmed in that way. Under the Environmental Remediation Bill, the on-site access provision gives the owner or operator who has created a problem on adjoining property the right to seek permission to go on the property from the landowner. If the landowner denies that permission, then the owner/operator has the right to go to the Department of Environmental Quality (DEQ). DEQ can then go to the landowner and say "You must allow your neighbor who has polluted and hurt or damaged your property to come on it for

17. Va. H.B. 968 (1994).
18. Va. H.B. 1847 (1995).

purposes of remediation." If that individual says no, then he waives his right to bring an action against the party who has caused the problem.

This, to me, is an outrageous denial of the rights of the individual who owns property, that has been injured through no fault of his own. He is placed in the position of having to allow somebody else, who may or may not come in and remediate the problem properly, do the job, or bear the cost himself. The proponents said that the adjacent landowner whose property has been damaged will extort unconscionable demands from the individual who is voluntarily attempting to remediate the problem.

Well, that may be true. There may be individuals out there who would try to extort or take advantage of the situation, but that doesn't mean, in my judgment, that you take the right of every landowner who may be in that situation away from him.

I think we are seeing not only an erosion in the commitment at the legislative level, and in the regulatory process, to protect the environment, but we are seeing a continued erosion of the right of the individual to protect his own property interest. It seems to me the site access provisions of the Remediation Bill are the ultimate denial of private property rights. We hear so much today about private property. We are told that we've got to pass legislation that strengthens the protections of the Fifth Amendment to the Constitution. Well, if you are going to tell an individual that he has got to allow somebody else on his property to do the cleanup, when he feels that the cleanup should be done more properly some other way, and you force him to do it or waive his rights to sue for the damages he sustained, to me that's the ultimate affront to property rights.

I just don't see that there is very much positive taking place at the legislative level or at the regulatory level and there is nothing taking place at the judicial level because nobody has the right of access to the judiciary at this point in time, at least in the State of Virginia. Therefore, I'm very pessimistic unless you in this room, and others who may share views that I have expressed, get out and do our homework and try to get more people involved in this process who will try to see not

only what is good for the resource itself, but also to protect the average citizen.

Litigation today is a very expensive process. The courts are not available to everyone because they simply don't have the money. They don't have the resources to go and hire a lawyer and to fight to protect their own property interests. To me we ought to make it easier for them to exercise this right where they can show damage than to try to make it more difficult. It seems to me what we're doing is putting obstacles in their way rather than trying to give them access to tribunals which can help them and in the process, help all of us who are interested in the collective protection of our natural resource base.

I thank you very much for inviting me. It's nice to be here and I appreciate having this chance to speak.

The panel then addressed questions from the audience.

Question: This is directed to Delegate Murphy and Senator Winegrad. Poll after poll suggests that a large majority of Americans want either a continuation or an expansion of the environmental policies we have developed over the past 25 years. Both of you are in a position to test the pulse of the public regularly. This being so, how is it that those who want to roll back environmental advances have gained the initiative or the upper hand in today's public debate?

Delegate Murphy: Two reasons, I think. The public relations, the Mary Matalins and the Jim Carvilles of the world control the political process and the highly funded lobbyists control the legislative process. The average citizen gets left out regardless of what his views may be.

Senator Winegrad: Tayloe is exactly right. I think it's the spin doctors. Many of them are paid and on the payroll of bogus groups such as the property rights groups. We have a group that's headquartered in Maryland called FLOC, Fairness to Landowners Committee. They all have very enticing titles. They wrap themselves in the Constitution on the Takings Clause. The problem is that they have hired very good PR people, very good media people. The groups that are fighting for property rights legislation in the Congress, I think it's being debated tomorrow in the House, those folks are an amalgam. They send out newsletters. I think they send it to every legisla-

tor. It's called Green Speak, and it's an anti-environmental diatribe using extreme cases. It goes out to probably tens of thousands of office holders, almost everybody in office, I would imagine. It's mining, timber interests, a lot of people out West, grazing interests, those that would profit from violating the public trust and from public lands and that don't want to see any regulation from endangered species to grazing fees.

The second aspect, too, is we've gotten into a phase of a mean attitude by people towards government—an anti-tax, anti-regulatory, anti-government.

Almost every politician I listened to running for office last year, at every level from the Congress to Governor to City Council, were always bad-mouthing government. For instance, Ellen Sauerbrey, who ran against our Governor on the Republican side, a conservative, she had been in the legislature for sixteen years. She was part of the government. They are the same people that have been career politicians that are saying how rotten everything in government is from our unemployment systems to the welfare system to environmental regulation going amuck—everything is rotten about government, but they've been in it for sixteen, twenty-two years, sometimes to the exclusion of any other employment.

So, I think it's that aspect, too; that we in office haven't stood up enough and said, there are a lot of good things in government and good things in this country and in the Bay region, too.

The final thing is the phenomenon of the ridiculousness of the way people are getting their news now and their perception of the world. Less and less people are reading. If you look at magazine publications and newspapers, their circulation is down. What people are getting into is TV or the radio news talkshows. People like the phenomenon of a Rush Limbaugh, who is decidedly anti-environment and lies all the time.

I have listened on a very few occasions. I didn't even know who he was until about a year and a half ago. I happened to be riding along at that hour, and when I listened to him for ten minutes, I found three things absolutely to be untrue. So I think it's these phenomenons, people getting their communications from these conservative right-wingers that are getting on

the radio much more, attacking environmentalism using just absolutely fraudulent cases. When they tell people about environmentalism and other things that are happening, those phenomenons, the anti-government phenomenon and the successful PR phenomenon, they've out-flanked us totally.