Atmospheric Deposition of Pollutants

MR. EHRMANN: Okay. Very good. Let's then go to the atmospheric deposition topic.

(Slide.)

COMMISSIONER SANDIFER: This is one that I did not personally get to spend a lot of time on because I was doing something else during the meetings. I was actually on the Hill. So bear with me as I work through this.
One of the more interesting linkages that apparently is not very well made to the public in most localities is a linkage between atmospheric pollution--that is, emissions that go into the air--and water quality impairment.

In many cases, it is nitrogen and a variety of toxins that go into the air and then come out into waters. And in fact, there is a fair amount of information to suggest that from 10 to 40 percent of what is termed "new nitrogen loading" in the East Coast and Gulf of Mexico estuarine to coastal waters is a result of atmospheric deposition.

There is also considerable literature now in the last several years on the contribution of atmospheric loading to mercury contamination, particularly in fish products that many of us like to consume, with the result that as of a few weeks ago the State of California imposed new requirements on...
food stores that they had to post health warnings at
the fish counter for consumption of fishery products
that might contain mercury.
So it is the sort of thing where there's
been a complete disconnect in the public’s mind in general between air pollution or emissions to the air and what comes out of the water. But it is something that is much more substantial than most people would imagine.

Therefore, we have dealt with it, and Dr. Muller-Karger has been one who has raised this to our attention on several occasions, and appropriately so.

The recommendations are for the Commission to urge the EPA to reduce emissions of nitrogen and toxins using available vehicles, both through the Clean Air Act and the Clean Water Act, and urge the Congress to amend the Clean Air Act to require significant reductions of nitrous oxide, sulfur oxides, and mercury for the express purpose of protecting water quality and related concerns.

Now we know that this would be
controversial, and we have not set specific standards at this point. But I do believe that it is important for us to set the case that these emissions result in very significant forms of water pollution, and all that we do to control land-based nonpoint source
discharges will not eliminate the problems,

particularly with things like mercury, if we do not

approach this area as well. Move to the next slide.

(Slide.)

We would urge the EPA, the state

Department, and others involved in international

efforts to address international air pollution. Some

of you who perhaps saw recent news reports in the

scientific literature, there is a pretty good

documentation now that air pollution that's generated

on Mainland China has had impacts on water quality in

Western States of the United States. There are

fairly good signatures apparently to demonstrate

this. So it is the sort of thing that needs some

significant attention in the international arena.

Moving from the international arena to the

state level:

To encourage states to enact and implement
state laws to regulate in-state air emissions for the purpose of protecting water quality.

In most cases, again, the emissions things have to do with air quality standards. They really
don't move far enough along to deal with the water quality standards, and I think what we are after is trying to make sure that, from the international to national and state levels, people become appreciative of and regulatory mechanisms take into account the impacts of air emissions on water quality.

And finally, to encourage the EPA and others in educating about atmospheric deposition of pollution. This is a significant element. I started out my presentation on this, a review on this topic, suggesting to you that the public really knows very, very little about it. This is an extremely important area to link water and air, and for the Ocean Commission to link oceans and atmospheres.

I'll stop there.

MR. EHRMANN: Thank you. Admiral Gaffney?

COMMISSIONER GAFFNEY: I'll admit I wasn't in the room for this one, either, but it is a pretty
interesting one.

COMMISSIONER SANDIFER: Was anybody in the room?

(Laughter.)
COMMISSIONER GAFFNEY: Unlike water monitoring and observing systems, there happens to be a very good infrastructure for atmospheric observing and modeling.

I think we just have to make sure that that system is actually monitoring these constituents that we're worried about. It ought to be part of the whole integrated ocean observing system.

You may find that the real problem in Chesapeake Bay in the summertime is atmospheric deposition and nonpoint source pollution for the Susquehanna River, or bad fishing practices by guys that live in Chesapeake Bay. We don't really know that yet.

So this really I think begs for monitoring and good scientific analysis.

MR. EHRMANN: Any other comments on this topic?
COMMISSIONER SANDIFER: That's an excellent point. Staff's got it.