



HEADLINES

ARCHIVE

► ENVIRONMENT

REAL X-FILES

SCIENCE

ABOUT US

ADVERTISE

CONTACT US

CONTRIBUTORS

EARTHFILES SHOP

SEARCH IN DEPTH

SUBSCRIPTION

LOGIN

LOGOUT

HELP

Printer Friendly
Page

Hurricane Floyd Runoff Suffocating North Carolina Estuary

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October 10, 1999 New Bern, North Carolina On Friday, October 8th, the non-profit North Carolina Coastal Foundation met in Raleigh to discuss how effective coastal management has been. The impact of Hurricane Floyd dominated the discussion. Dr. Hans Paerl, a marine scientist at the University of North Carolina said, "What we're seeing is an ecological event on the catastrophic scale."

Hurricane Floyd dumped twenty inches of rain on eastern North Carolina on September 16th. The water killed about fifty people as it filled the river basins to overflowing. The flood waters tore through houses, hog lagoons and sewer plants that had been constructed along the Neuse and Tar Rivers. Everything was dumped into Albemarle-Pamlico Sounds, the second largest estuary in the United States.

Dr. Paerl said the human and animal waste flowing into Albemarle-Pamlico Sounds is now laying on top of the salt water like a blanket, suffocating marine life as it robs the water of oxygen and salt.

These are the same estuary waters that the fish-eating dinoflagellate, *Pfiesteria*, has infested and scientists are now worried that this flood of human and animal waste along with pesticides and fertilizers will set up the perfect conditions for the plant/animal algae to thrive next year and beyond.

This weekend I talked to the Neuse River Keeper, Rick Dove. He has been working with the Neuse River Foundation trying to sustain the estuary and fishing industries against the onslaught of uncontrolled industrial and residential development in flood plains where no farms and houses should ever have been allowed in the first place.

Interview:

Rick Dove, Neuse River Keeper, New Bern, North Carolina: "The first time we flew was right after the rains had stopped. It was the 17th of September. And when I got up in the air, I expected to find what we had seen on two other occasions when the Neuse had flooded her banks back after Hurricane Fran back in 1996 and again in the winter rains of 1998. But I never, ever expected to see what was out there! The first feelings I had when I began to look at it were just feelings of absolute anger. And then frustration and then finally I just turned to shooting pictures and videos because there was just nothing else to do. But it was terrible!

Everywhere we flew, the flood waters had washed over these huge hog lagoons and chicken houses, turkey houses. These lagoons they are open cesspools. They call them "lagoons," but they are open cesspools. They store months and months worth of raw animal waste. I mean millions and millions and millions of gallons. They had all gotten washed out and the flood waters had inundated the

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cesspools and the barns. Some of the waters were up to the roof tops of the barns. The animals were still inside.



Copyright 1999, Rick Dove, Neuse Riverkeeper, all rights reserved
Photograph © 1999 by Rick Dove of Hurricane Floyd flood
waters lapping at hog barn roof tops, Neuse River flood plain.

WITH ALL OF THIS ANIMAL FECES FLOATING IN THE WATER?

Oh, you can see it. If you take a look at our web site, <http://www.neuseriver.com>, you'll actually see pictures of exactly what I've described, and the audience is welcome to take a look at those pictures. And there were sewage treatment plants that were under water. You could see the raw sewage being discharged. Junk yards that were under water with gas and oil and antifreeze and what have you just washing down the river. It was a terrible, terrible sight.

And you know, our governor said, "Gee whiz, this is a one in five hundred year flood. There is nothing we could have done." That's not correct. You know, we had located all of these hazardous materials in the flood plain. I mean, our forefathers called it a flood plain for a reason because that's where Nature voids the water when it comes in with these storms.

YET THE STATE HAD ALLOWED THE SWINE FARMS AND ALL OF THIS TO GROW RIGHT ALONG INSIDE THE FLOOD PLAIN.

They did. And they can't say we didn't tell them that this was coming. We had seen, as I said earlier, on two other occasions in the recent past. And each time, we sent them video and complained that while this wasn't a major flooding event, that one would surely come and it would be much worse. So, they were on notice that this was going to happen!

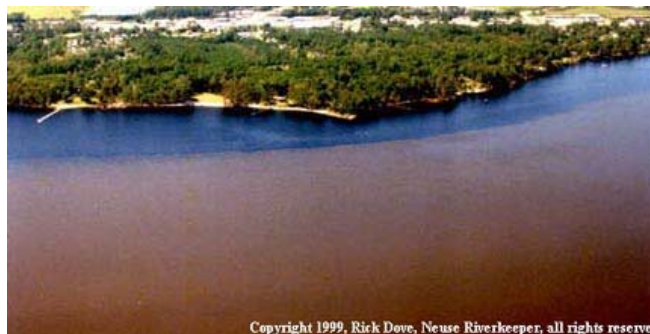
SO WE GET HURRICANE FLOYD AND WHAT EXACTLY IS THE STATUS NOW OF THE ESTUARIES AND WHAT THEY'RE SAYING ARE DEAD ZONES IN THE OCEAN OFF THE COAST OF NORTH CAROLINA?

Well, I don't know that the dead zones are in the ocean yet, but the Neuse River and the Tar-Pamlico River and the Chowan, Roanoke and Alligator they all drain into the Albemarle-Pamlico Sound. The Albemarle-Pamlico Sound is the second largest estuary in the country and the number one fish nursery in the country. Very, very valuable resource for fish nurseries for fish that go up and down the coast. That Albemarle-Pamlico Sound is dammed in by the Outer Banks, so when these flood waters came over these lagoons and sprayed fields and barns and waste water treatment plants and junk yards, it didn't flush to the ocean. It went down to the Albemarle-Pamlico Sound and it got trapped there. And this very, very important resource is now very seriously threatened with all of this we call it "muck" it's a witch's brew of all this terrible stuff!

PESTICIDES AND FERTILIZERS, ANIMAL AND HUMAN FECES.

All of that is in there. And you can see it. When we watched it come

downstream, it came down as a pinkish-brown color. And we could actually watch it moving downstream and then when it got to New Bern and went under the new Neuse River Bridge, you could see the normal color of the river on each of the sides of the river and this muck was coming down the center of the river and you could watch it. And it went all the way out to the Albemarle-Pamlico Sound. And you can actually see it even today while boats operate on the water, you can see them churning through this brown muck.



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Photograph © 1999 by Rick Dove taken October 3, 1999 as floodwaters loaded with pollution make their way past Johnson Point on the south shore of the Neuse River below New Bern. The normally clear water is blue along the shore in contrast to the polluted thick, brown muck in the middle.

THE DEAD ZONE THEN IS STILL INSIDE THE ESTUARY BOUNDARY?

Yeah, and it's not a complete dead zone. What the scientists are saying Dr. Paerl and scientists from Duke University. Dr. Joanne Burkholder has been down with her crew and what they are all saying is that it's in the process of happening that the oxygen levels are dropping and the very same thing that they saw coming into the Gulf from the flooding of the Mississippi is starting to happen out there. The fish are starting to be effected. The oxygen levels are dropping. In fairness, we don't really know how bad it will be because the river can only answer that question. And the Sounds can only answer that question. There is nothing we can do now except just get out there and look at it and document what's about to happen.

YOU HOPE THAT THE GOVERNOR AND THE LEGISLATURE IN THE STATE OF NORTH CAROLINA WILL TAKE THIS SERIOUSLY.

You know, Linda, that is the only good thing that can come out of this. There's been terrible suffering here in North Carolina. People have died, lost their houses not just their houses and money and things but they have lost their family photo albums. They have lost everything! And the only good thing that can come out of this is if we learn from this to never let this happen again. We know the flood waters are coming again because we get hurricanes. We know that. But to get all of these bad things out of the flood plain and we can DO that. And if we don't, then shame on us.

HOW DO YOU THINK ALL OF THIS WILL RELATE TO WHAT HAPPENS WITH *PFIESTERIA* WHICH, I GUESS, THE WHOLE CYCLE WAS INTERRUPTED ACTUALLY BY THE HURRICANE. HOW DO YOU PROJECT INTO THE NEXT YEAR INTO 2000? WHAT DO YOU THINK WILL HAPPEN WITH *PFIESTERIA*?

Well, we've got so many nutrients washed down here that the short term effects of this will be measured from one to five years. Long term effects will probably be measured over the next century. But for *Pfiesteria*, when we get all this fresh water, it typically pushes *Pfiesteria* out towards the Sounds and then it takes *Pfiesteria* awhile to react to the nutrients and then to bloom back up into the parts of the estuary. So, probably over the next one to three years all these nutrients are going to promote the growth of the *Pfiesteria*. And we'll just have to wait to see what the river says about all that. I'm not optimistic.

SO, IT'S A KIND OF CONFUSING SITUATION WITH ALL OF THE RAIN AND THE HURRICANE STIRRING THINGS UP, EVEN

THOUGH THERE IS THIS MASSIVE DISCHARGE OF ANIMAL, FERTILIZER, HUMAN WASTE AND PESTICIDES INTO THE RIVERS AND ESTUARIES, IT IS SO MUCH IN TURMOIL THAT IT IS DIFFICULT TO PREDICT WHAT WILL HAPPEN?

That's exactly right. And I think anybody who does predict is making a bad mistake. We just simply need to wait to see what the river has to say about all this and what the Sounds have to say. We know it's catastrophic! I mean, there's no way we're going to come away from this without serious problems for the estuary. But what are they? When will they appear? And how long will it take Nature to react to this event? That's what we don't know, Linda.

The Governor and others have called this a one in five hundred year event, like we're not going to see it for another five hundred years. That's nonsense. We have changed the landscape in North Carolina, especially in the flood plain. We have cut down the forests, we've cut down the buffers, we've filled about 50% of the wetlands which act as sponges, these forests and wetlands are sponges. And in their place, we have built shopping centers and houses and parking lots and roads and all these impervious surfaces. So, when Mother Nature rolled in here this time with this storm and dropped this rain, she didn't recognize the landscape anymore. And all this water rushed to the river and the river is even more shallow than it used to be for all the mud we've put into it through development, the sediments, so when this water had nowhere to go but the river, the river became flatter and wider and it flooded a much larger area.

So, it's a mistake to think it's going to be another five hundred years before we see this again. Whenever we get this rain event again which typically would come in with hurricanes, we're likely to see the very same thing. So, it's important for us to learn from this lesson and to not fill anymore wetlands or cut down any more forests and put in all these impervious surfaces. And especially not to put all these bad, harmful things like these cesspools and things in the flood plain.

AND SWINE FARMS.

Yes, absolutely. They've got to come out. These intensive livestock operations they've got to come out of the flood plain along with these waste water treatment plants, these junk yards and these chemical factories, and all the rest.



Photograph © 1999 by Rick Dove, drowned swine along Neuse River.

IF THEY DID, IT MIGHT ACTUALLY BEGIN TO SOLVE THE PFIESTERIA PROBLEM.

Absolutely. It would help a lot. We need to restore the wetlands, not just protect what we've got. We've got to restore the wetlands that used to be there. And in the place of those wetlands (right now) there are a lot of these activities I just named.

RIGHT. AND SO FAR, HAS THE GOVERNOR MADE ANY COMMENT ABOUT GETTING BEHIND AN ACTUAL HUGE CHANGE ON RESTRICTING THE WETLANDS FROM HUMAN AND ANIMAL HABITATION?

Yes, we're very encouraged with some of the statements that Governor Hunt has made. His proposal to Congress for federal aid right now is based on getting a lot of these activities out of the flood plain. But the talk is cheap, the action is expensive. We need to make sure that we follow through on this. Everybody in

North Carolina is in favor of the aid to help the farmers and the livestock producers and even the people who own the junkyards and everything else, and the people who lost their houses. We want as much help as we can get for our citizens. But that help has to come in the right way so we don't repeat these mistakes. We've got to get these polluting activities out of the flood plain.

FOR NORTH CAROLINA RESIDENTS WHO ARE LISTENING TO THIS PROGRAM AND THEY WANT TO MAKE THEIR VOICES KNOWN TO THE GOVERNMENT IN NORTH CAROLINA, WHAT IS THE BEST THING FOR THEM TO DO?

To contact their representatives, the state representatives and their federal representatives and the governor and let them know their feelings what they think is important and what they want."

More Information:

The Neuse River Foundation phone number is: **252-637-7972.**

Websites:

<http://www.neuseriver.com/>

Credits

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