



**Friends of Perdido Bay**

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**Tidings** The Newsletter of the Friends of Perdido Bay

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[www.friendsofperdidobay.com](http://www.friendsofperdidobay.com)

**Thank you for your support and why citizens can make a difference**

Without Friends of Perdido Bay, the Florida DEP would have tried to issue a new permit to International Paper to continue polluting our bay long ago. This is in spite of the fact that IP's discharges are killing our bay. For the last conditional permit which DEP issued to IP, IP was supposed to move their discharge to a wetland and then be in compliance with all state standards. IP moved their discharge to a wetland, but it has not complied with the requirement to comply with state standards. But now it meets the state standard for dissolved oxygen because the chemical, chlorine dioxide, which is used by IP, is a miraculous chemical which gives off oxygen. This is just what the paper industry, which releases huge amounts of oxygen consuming materials needs – a chemical which puts oxygen in the water. But it also has deleterious effects on the water body. The decomposition of chlorine dioxide produces oxygen but also harmful byproducts such as chlorate and hydrogen peroxide. Chlorate is a powerful herbicide and hydrogen peroxide is a disinfectant which can kill sensitive marine life. And I am sure that many other people beside me, know about this.

In order for this chemical reaction to work effectively, the paper industry had to separate the different industrial streams. IP currently discharges their main pulping discharge into a pipeline which goes to the wetland. This discharge is tested and must comply with the state's

standards, although it doesn't. The other discharge, which comes down Elevenmile Creek, is clear. It contains the effluent from the alkaline wet scrubbers on the power boilers. This effluent is not tested, and it is toxic.

We would not have known that this effluent is toxic unless Friends of Perdido Bay had not done certified toxicity tests on this effluent using mussel larval. The Florida DEP had no clue and IP wasn't going to report this as they are not required to test this effluent stream. We don't know what the toxic material is, but certain heavy metals like barium and arsenic, have been increasing in the bottom sediments of Perdido Bay. These heavy metals likely come from combustion products. But the polluters don't have to worry. Sediment standards have never been established for bottom sediments in the U.S. This means that polluters can dump as much of the toxic bottom materials as they wish. Placing limits on bottom sediments was a casualty of antiregulatory sentiments which are being pushed by regulated industries and recent budget cuts to environmental agencies. And you can expect more budget cuts. As the U.S. deficit explodes, the politicians are going to cut environmental programs. You can count on it. This means there will be less protection. This is why private money is so important.

Environmental programs are complex and unfortunately are expensive. Our fight to save our bay is a very good example of a "failed" environmental program. We have environmental programs, but they are not funded sufficiently to really protect the environment. This appears to be true of many facets of government, especially government oversight. I was reading about the Boeing problem and the lack of self-monitoring. When the budgets become tight, companies will cut corners. And someone will pay for the mistakes which are made.

There are loopholes in rules which are set both by Congress and by environmental agencies, which industries exploit. An example are the limits on conventional pollutants, Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS), which have been established for the paper industry and different types of pulping. These limits have been codified in the Clean Water Act and are based on the "best available technology" (BAT) which is now in use. Unfortunately, BAT's have not been updated since the 1980's, mostly because there have been no new paper mills built. These codified BAT's are based on production and do not consider the waterbody into which the pollution is being discharged. This is what happened to Champion when they came to Pensacola in 1984. Champion upgraded the mill to meet the

BAT limits but then they discharged into a small creek and the oxygen consuming pollutants (BOD) and other pollutants caused them to violate the state's water quality standards in Elevenmile Creek. Big Problem!! What do you do? Stall and look for answers.

This is when citizens on Perdido Bay entered the picture. The Perdido Bay Environmental Association was incorporated in 1986 and Friends of Perdido Bay in 1988. It wasn't hard for us to demonstrate that Champion was violating Florida's water quality standards in Elevenmile Creek. DEP's own biologists were taking the data, and the violations were there. Florida's DEP had intended to issue a new permit to Champion in 1986. They were ignoring the water quality violations, but then citizens got involved and the Florida DEP couldn't ignore the violations anymore. The environmental agency pulled the permit and issued a "temporary operating permit with a Consent Order". This has been the situation ever since 1987.

The Perdido Bay Environmental Association went to an administrative hearing in 1988 and 1989. The administrative hearing officer agreed that there were violations, but Champion needed time to figure out what to do. At that time, Champion had come to us and offered to do a 3-year study to find out what was wrong with our bay if we would hold off on going to a hearing. Some of us agreed with waiting. We became Friends of Perdido Bay. The remainder of the group was Perdido Bay Environmental Association and they went to the hearing. The Temporary Operating Permit and Consent Order expired after 5 years in 1994. No progress has been made since then but the mill has moved their main discharge to a wetland and Champion merged with International Paper in 2000.

When we agreed to work with Champion in 1988, they had put a lot of faith in a new bleaching chemical, chlorine dioxide. They had said that this was going to make a difference and solve their problems. Of course, we were clueless. We didn't know if switching to chlorine dioxide was going to make a difference or not. We waited to see. There was still scum and foam but the algae seemed to be growing fine. Champion was so sure chlorine dioxide was a good chemical; they went around to paper industry conferences promoting the chemical. And the EPA did adopt bleaching pulp using chlorine dioxide as BAT technology in 1998 when the "cluster rules" were finally passed. But Champion was still not able to meet the water quality standards in Elevenmile Creek as chlorine dioxide had not solved Champion's problem in Elevenmile Creek. The only difference I could see was in the research I was doing on snails and growing small one-celled algae on glass plates. This alga was called periphyton

and the snails I was studying ate this alga. I had been doing this research since the mid-1980's but in 1995 this alga stopped growing. At the time, I had no idea why? My research site was the upper reaches of Perdido Bay. Friends of Perdido Bay took water samples from the area where Champion discharged into Elevenmile Creek and at the mouth of the creek where it entered Perdido Bay ( 12 miles away) at two sampling dates in November 1995. The results were a little surprising. Chlorine dioxide was present at a constant 0.4 mg/l both at the beginning and end of the creek. Chlorate, was also present although it had diminished from the beginning to the end of the Creek. These results are on our website. It took many years before I understood the chemistry of chlorine dioxide.

Chlorine dioxide probably did not help Champion because it was combined with many other chemicals in the discharge effluent, especially ammonium chemicals. Plus, the effluent wasn't alkaline enough. It took a very alkaline medium for chlorine dioxide to release dissolved oxygen plus other chemicals, chlorate and hydrogen peroxide. When chlorine dioxide could be separated from the other chemicals and the pH raised, the magical release of dissolved oxygen would occur. I am sure I am not the only person aware of this.

**No Direct Comment**

Friends of Perdido Bay sent the study showing toxicity of Elevenmile Creek water to the environmental agencies many months ago. EPA said they would contact compliance/enforcement. That was 3 months ago. We haven't heard anything since that time. The DEP finally responded in March 2024. While the DEP didn't say anything about the illegal discharge to Elevenmile Creek, DEP did say that the pH of the IP wetland was too acidic to accept a very alkaline discharge like that from the wet alkaline air scrubbers!!

**Membership and Renewals**

Tidings is published six times a year by Friends of Perdido Bay and is mailed to members. To keep up with the latest news of happenings on Perdido Bay, become a member or renew your membership. For present members, your date for renewal is printed on your mailing label.

Membership is \$30.00 per year per **voting member**. To join or renew, fill out the coupon to the right and mail with your check to the address on the front.

Friends is a not-for-profit corporation, and all contributions are tax-deductible. Funds received are all used for projects to improve Perdido Bay. No money is paid to the Board of Directors, all of whom volunteer their time and effort.

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Renewal

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