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Tidings The Newsletter of the Friends of Perdido Bay

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Jackie Lane -Editor

Happy Holidays and Thank You

As we end another year, we again want to say thank you for your support. Your support has allowed us to continue our sampling program. Without this information, we would not have tools and data to fight to clean up Perdido Bay. The sampling we do is very important because our environmental agencies simply don't want to know. Your dues and donations are extremely important and in the end, I believe we will prevail. This fight to save our bay from the ravages of paper mill pollution did not begin with us. It has been going on a very long time. It began way back in the 1960's with various people and groups fighting to make the environmental agencies do what they are supposed to do - protect our environments. But they haven't. Thank you for your support.

It Has Been Going On Too Long

Over the years we have come across some of this early correspondence which shows just how concerned people were about the bay. One letter, which I have been given permission by the family to use, was written by Harry Gamble, director of the Perdido Basin Anti-Pollution Association. The letter is dated June 29, 1971. Mr. Gamble, an attorney from Selma Alabama, has been dead twenty years, but his family still reside on Perdido Bay. The letter was written to Mr. Gaillard, Corps of Engineers, Mobile, Alabama.

“Dear Mr. Gaillard:

We were most happy to learn from recent newspaper reports that Cpl. Harry A. Griffith, Mobile District Engineers, has stated in a formal notice that industries discharging wastes into navigable streams have been reminded that they must apply for permits by July 1, 1971.

You advised us by letter dated August 25, 1970, that St. Regis Paper Company has neither requested nor been issued a permit for making discharges into Perdido Bay. We presume that such is the case, since this notorious polluter has apparently made no effort to reduce its daily contamination of these waters. The results have been and continue to be disastrous, as you know.

We were also advised by you, in your letter of October 2, 1970, that an application for a permit which may be filed in your office by St. Regis must be accompanied by a certification by the Florida Air and Water Pollution Control Commission in compliance with Section 21 (b) (1), Public Law 91-224. We don't see how St. Regis can obtain any such certification from the State of Florida since we understand they have been operating in violation of Florida water standards for quite some time.

Our question is this. Should St. Regis not file a proper application for permit by July 1, 1971, have you received from the Office of the Chief of Engineers in Washington definite procedures as to what action you will take?

You can appreciate our anxiety in the matter. In our view it has now become a matter of life or death for Perdido Bay

Thank you for your usual prompt attention”

Not much has changed in the 50 years since Mr. Gamble wrote this letter. The paper mill, now owned by International Paper, still can not get a permit because of its destruction of Perdido Bay. Production at the mill tripled in 2015 and then doubled just lately when International Paper closed one of their pulping lines (there were 2). It is the power of the timber interests, who are most concerned about having a market for their trees, which keep an OLD polluting paper mill operating. All the efforts of government to pass rules and give out permits simply don't matter. This must change.

What Can They Say

The Corps of Engineers did respond to Mr. Gamble. St Regis did eventually apply for a permit. St. Regis did eventually upgrade their treatment ponds but they also expanded production. At the time Mr. Gamble wrote his letter to the Corps of Engineers, St. Regis was making 700 tons of pulp a day. In 2015, IP was making 2400 tons of paper pulp a day. That number has declined since IP has closed one of their two pulping lines. Just what the production is today, I do not know. About one-third of that number is bleached. But the pollution situation has changed little since the St. Regis days.

Paper mills discharge huge amounts of organic material which use up oxygen. These fine organic fibers and refractory chemicals which are not caught in the treatment systems are discharged into the wetlands and then into the bay. In a good year in 2017, IP was discharging 26,000 pounds **per day** of chemical oxygen demand and up to 10,000 pounds per day of solids. This is a huge amount. True, some of it was being captured in the wetlands into which IP discharges. But a lot was coming out in Perdido Bay and settling on the bottom. For years, people who studied Perdido Bay noted that there was low dissolved oxygen in Perdido Bay, especially in the lower depths. Because Perdido Bay tended to become stratified with heavier salt water on the bottom and fresh water on top, the bottom waters were almost always low in dissolved oxygen.

Friends of Perdido Bay commissioned an ecological study in 2018 of three long-term monitoring stations in Upper Perdido Bay. As in past studies, the percent saturation of dissolved oxygen in bottom waters was low. At station #26 (Upper Bay in Florida) in 6 feet of water, the percent saturation of dissolved oxygen was 40% . At station #29 (Upper Bay Alabama) in seven feet of water, the water had only 31% dissolved oxygen. This was entirely consistent with past studies. There was also layering of fresh water on top of salt. On the next date for which Friends of Perdido Bay commissioned an ecological study, July 2021, the situation had changed - a lot. The percent saturation of dissolved oxygen from

top to bottom of the water column was at least 100% and over. Other researchers were finding the same thing. This was surprising. What could have happened? Were there less oxygen consuming substances being discharged to Perdido Bay? It didn't look like it, maybe there was even more, as the bay was even more turbid than before. It was a mystery - where was that dissolved oxygen coming from?

Goggle had the answer. One day, I goggled "What are the breakdown products of chlorine dioxide?" There it was. Chlorine dioxide in a unbuffered environment (very alkaline), breaks down into chlorate, chlorine, chlorine and **oxygen**. Chlorine dioxide is the bleaching chemical of the paper industry. Our recent testing had found residual chlorine in the bay and now that oxygen was showing up, chlorine dioxide must be the source of both chemicals. If two of the "breakdown products" of chlorine dioxide were present, what about the chemical chlorate? Chlorate is an herbicide. Our algal inhibition tests had indicated that algal growth in the Upper Bay was being inhibited. It is difficult to test for chlorine dioxide and chlorate in water which contains salts. So far, Friends of Perdido Bay has not found a testing firm willing to test for these chemicals in the salt water.

Right after the paper mill converted to chlorine dioxide in 1995, Friends of Perdido Bay tested for these chemicals in Elevenmile Creek. On two sampling dates in November 1995, we tested the creek at the place where the paper mill discharged into the creek and also where the creek entered the bay. On both sampling dates, we found chlorine dioxide present at concentrations of 0.4 mg/l at both the beginning and end of the creek. Various concentrations of chlorate were also present. Chlorine dioxide was remarkably stable from the beginning to the end of the Elevenmile Creek. It hadn't diminished at all.

Also in 1995, I was doing research in Upper Perdido Bay at our beach. I used to grow algae on glass plates and then introduce snails to the glass plates. I had been doing this since 1986 but in 1995, the algae stopped growing. I tried to grow algae for another year but finally gave up. I wrote to the EPA and DEP about the problem but they assured me there was nothing wrong. It was a cover-up.

So today we are finding two of the breakdown products of chlorine dioxide in the bay - chlorine and oxygen. There should be no residual chlorine found in the bay. I wrote to both the DEP and the EPA about these findings. On September 7, 2023, the DEP wrote that they were putting together a response to our findings. On November 24, 2023, Daniel Holliman from the EPA notified me that they were going to talk with the DEP and get back to me. So far, no response from either the DEP or the EPA. What can they say? Where is the chlorine coming from? And the oxygen? And what about the herbicide, chlorate?

If you would like to ask the EPA about the situation, send an e-mail to: holliman.daniel@epa.gov. The local DEP office is: Elizabeth.Orr@dep.state.fl.us. I also sent an email to the Washington Post about the breakdown products of chlorine dioxide and how they are affecting our bay. Finding high dissolved oxygen in a bay that had historically low dissolved oxygen was definitely a give away. What about all the other waterways and bays where the paper industry is discharging? They all converted to

chlorine dioxide at some point in the 1990's. Is the herbicide, chlorate present in all the bays? Could be. There is nothing wrong with dissolved oxygen, but the other breakdown products could cause real environmental damage and mess up the healthy primary production in the bays.

Not In Our Bay

I have often wondered if there wasn't a conspiracy to keep the paper mill pollution in Perdido Bay, and out of Escambia Bay. Back in 1999, I had read an article which said the paper mill in Cantonment, which was then owned by Champion, was going to Escambia Bay. That didn't happen even though Cantonment is right over the hill from Escambia Bay. I can't imagine the people in Gulf Breeze, who think that their end of town is the best, would ever allow the pollution to come to "their" bay. Linda Young, who spear headed the fight against chlorine bleaching and dioxin, lived in Milton. Her sidekick, Frances Dunham, who has since moved to Oregon, didn't want that paper mill effluent killing the beautiful grassbeds in Santa Rosa sound. And while Alabama might have stepped in and complained about their side of the bay being polluted from Florida, I was told that Alabama didn't dare complain about the paper mill pollution coming from Florida. Otherwise the Florida politicians would complain about the papermill pollution coming from Alabama. There is a papermill in Brewton Alabama which discharges to Escambia River. I have no idea what impact the papermill in Brewton, Alabama has on Escambia Bay.

Unfortunately, the new non- regulatory program, the Pensacola Perdido Bay Estuarine Program, is not going to make any waves and find any problems. Most of the local politicians who have gotten money for the estuarine program, live in Pensacola or Gulf Breeze. I notice that most of the studies which the estuarine program does seem to ignore the upper ends of both Escambia Bay and Perdido Bay. Similar to the environmental agencies which are regulatory, the estuarine program doesn't want to find any "bad stuff". Its all feel good. This is too bad because this area has some of the worst pollution problems in the state. A lot of money has been spent to gloss over the big problems.

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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