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Tidings The Newsletter of the Friends of Perdido Bay

December 2014 Volume 27 Number 6 Jackie Lane -Editor
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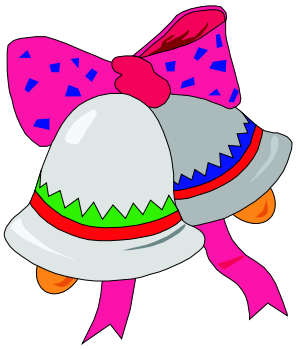
HAPPY HOLIDAYS

Friends of Perdido Bay wishes all our members a happy holiday and a healthy and Happy Year New. We look forward to continuing our work into 2015. The year 2015 will be the year, IP's permit and Consent Order expire. We will definitely oppose any renewal of that permit, if a renewal is proposed. The data which is coming from IP's wetland scientists, indicate that IP is causing violations of water quality standards in the wetland. We are also going to continue to point out the problems with the bay and do some limited testing. Your support has enabled us to continue our work. While we have not had much success in cleaning up Perdido Bay, hopefully we will have more luck in the future. If nothing is said about the problems in the bay, it will never be corrected. We know very well, our government is run by big money. It seems like the local authorities would like to put all the pollution into Perdido Bay. But we will continue to oppose any additional pollution and fight the stuff we have. We look forward to a better New Year.



CONTINUING DECLINE

The obfuscating of the truth about the health of Perdido Bay has been extremely frustrating for many of us who live here. We used to catch shrimp. We used to fish for flounder. The bay water used to be completely clear in the winter. We used to have clams paving the bottom of the bay. Grassbeds used to cover portions of the bay, even in the Upper Bay. The grassbed at Grassy Point was there for 30 years before it died in 2000. We used to catch lots of flounder and redfish in different parts of the bay. Crabs were always abundant and you could catch a dozen in a couple of days. It is no longer that way. The decline has really not been that slow. Even Dr. Livington, who was the

consultant for IP, was able to measure a great decline in the life in the bay. But nothing has been done. The paper mill which is known to have harmed the bay, was allowed to expand it production from 1,500 dry tons of pulp a day to 2,500 dry tons of pulp a day. This is a huge increase. International Paper converted the mill from 100% bleach to 2/3's brown paper and 1/3 bleach paper. So there is still bleaching occurring at the mill in Cantonment. While some local environmentalists and politicians keep hoping that, because IP no longer discharges directly to a water body, people will forget that it exists, the effects of the paper mill are obvious. The foam is better but the toxic effects of the paper mill effluent on life in the bay is very apparent, especially with lack of rainfall and dilution.

Amazingly, in spite of the fact Perdido Bay has been known to be a biologically impaired bay, it has not been listed by the state or federal environmental agencies as "impaired" for aquatic life. In 2007, Florida biologists sampled Perdido Bay for life in the bottom. They reported finding very little. Dr. Robert Livingston in his last sampling of Perdido Bay in 2007, also reported a very low level of life. But the environmental agencies refuse to list Perdido Bay as "impaired" for aquatic life. The environmental agencies continue the lie. They are protecting the paper mill and the tree growers. We can only surmise that the effects of money and the enormous political pressure conspired to create this lie. Unfortunately much of this damaging information about the degraded condition of Perdido Bay has been buried and hidden from the new crop of government scientists. In September, I attended a meeting of regulatory and environmental scientists. Very few of the "new" and younger scientists were aware of the problems of the bay. If the old timers who remember a more healthy Perdido Bay die, no one will be here to refute the lie and things will get no better - only worse.

A BENIGN APPROACH

In a recent report, we discovered that chlorine (Cl_2) had been found in Elevenmile Creek in 2011 and the first part of 2012. These dates are just prior to transfer of the IP effluent to the wetlands north of Perdido Bay. The source of the chlorine was determined to be International Paper. I have obtained the chlorine data through a Freedom of Information Act request. Most of the chlorine values were fairly low, although on some dates the values appeared high. Interestingly enough, some of the values were higher down stream from the outfall than at the outfall. What is the source of this chlorine? I have asked a DEP spokesperson this question several times. No reply. The DEP assured me, IP is not using elemental chlorine to bleach.

Chlorine is fairly volatile and dissipates rather quickly. Chlorine is also harmful to the environment. Just think about what it does for swimming pools. The local utility, ECUA, went from disinfecting their domestic wastewater effluents with chlorine to using U.V. light. It is against the rules to discharge chlorine into the environment. If domestic wastewater utilities do still use chlorine, they must de-chlorinate the effluent with sulfur

dioxide, prior to release into the environment. Those are the rules for domestic wastewater plants. But those are not the rules for paper mills. No, the EPA addressed the presence of chlorine in Elevenmile Creek in a less confrontational manner. In certain paragraphs in the permit issued in 2010, IP had to certify that elemental chlorine or hypochlorite were not being used in the bleaching processes. It is the "pretty please" approach. In recent tests for chlorine (2014), a DEP spokesperson said that the levels of chlorine were nearly not detectable using a very highly sensitive test. We have not been able to find a laboratory who is able to run such highly sensitive tests.

So what is the source of this chlorine in IP's effluent if they are not using elemental chlorine in their bleaching? I suspect that the chlorine is coming from chlorate and chlorine dioxide which is released in the effluent. The mill uses chlorine dioxide for bleaching instead of elemental chlorine. Chlorine dioxide is generated at the mill from sodium chlorate in a process which is not 100% efficient. In 1999, Friends of Perdido Bay ran a test in Elevenmile Creek for the presence of chlorate and chlorine dioxide. We found that chlorate levels were relatively high - 5100 µg/l chlorate in upper Elevenmile Creek and 1700 µg/l in lower Elevenmile Creek. So the chlorate probably breaks down releasing chlorine.

Chlorate is a potent herbicide. Historically, chlorate (ClO_3^-) was used for weed control in agriculture and as a defoliant. Ever since Champion instituted bleaching with chlorine dioxide, periphyton (small one celled algae) have not grown at our beach on Perdido Bay. The food chain which is depended on this periphyton for food was also knocked out. Grass beds which were growing at our beach at the end of 1999 and supported a whole fauna, also disappeared. Studies in the scientific literature indicate that algal species are effected at chlorate levels as low as 5.00 µg/l. Chlorate levels of this concentration could easily be realized in Perdido Bay especially if there is no dilution from rainfall. IP has also increased its tons of paper pulp bleached every day.

Unfortunately, the lab which ran our tests in 1999 for chlorate and chlorine dioxide no longer will no longer run our samples. So we can not test chlorate levels in Perdido Bay. Environmental agencies certainly are not going to test for this or open up this "can of worms" . The agencies blame budget cuts, but it is much more than that. It is political meddling.

SOME GOOD NEWS AND SOME BAD NEWS

Many of you will remember why the paper mills switched from using elemental chlorine to chlorine dioxide. Your are right - use of elemental chlorine in the bleaching of paper pulp produced dioxin - specifically 2,3,7,8 TCDD. This particular type of dioxin was extremely toxic and cause cancer, even in very, very low quantities. Dioxin was a very popular topic back in the late 1980's and 1990's. Greenpeace came to Perdido Bay and generated a lot of media attention to the issue. Across the U.S. the issue of dioxin was very "hot". The EPA studied it and studied it, until at some point they produced a report which said it was a very bad chemical. Paper mills which bleached with elemental chlorine, were some of the biggest producers of this 2,3,7,8 TCDD dioxin. At the time,

Champion International Paper Company had just taken over St. Regis, and had spent million of dollars modernizing the mill. Unfortunately, they converted the paper mill to 100% bleached paper. In spite of the fact that Champion installed a new technology for bleaching using oxygen deliginification, the mill was still putting out dioxin. We never could find out how much, but mullet found in lower Perdido Bay had dioxin levels of 25 ppt (parts per trillion). At this level, these fish were dangerous to eat. In 1995, Champion switched to chlorine dioxide bleaching. This was when we noticed the algae in Perdido Bay begin to die.

In 1999, we took sediment samples from Perdido Bay. The dangerous form of dioxin, 2,3,7,8 TCDD, was not found in the sediments. We figured the problem had been solved. However in 2004, after Hurricane Ivan washed sediment from Perdido Bay onto our properties, the dangerous form of dioxin appeared again. Levels of the 2,3,7,8 TCDD dioxin were in the 2 to 3 pg/g (parts per quadrillion) range. Friends also measured other sediment contaminants such as other forms of dioxins, furans, and PCB's. The laboratory calculated a total toxic equivalent of 33 to 24 pg/g in these 2004 sediments from Perdido Bay. One form of dioxin, OCDD, was high but not as toxic as 2,3,7,8, TCDD. The OCDD form of dioxin comes from the combustion of wood and coal. International Paper burns coal mixed with waste wood products as their source of energy. We think this is a step backwards from the St. Regis days when natural gas was used to power the paper making process.

Due to the presence of chlorine in IP's effluent, we wanted to check and make sure their was no "bad" dioxin being formed. It turns out that the dangerous form of dioxin, 2,3,7,8 TCDD was lower than 2004, but it was still present. We don't know why. Further, other forms of dioxins, furans and PCB's were also present. The total toxic equivalent in the sediments from Tee and Wicker Lakes was 7 pg/g compared to the 33 to 24 pg/g from 2004 sediments. Things are better but not great.

See you in 2015

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 $10.00 per **year per voting member**. To join or renew, fill out the coupon to the rightand 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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