Bulk Rate
U.S. Postage Paid
Permit No.1013
Foley, AL 36535

Friends of Perdido Bay
10738 Lillian Highway
Pensacola, FL 32506
850-453-5488

ADDRESS SERVICE REQUESTED

Tidings The Newsletter of the Friends of Perdido Bay

July/August 2014 Volume 27 Number 4 Jackie Lane -Editor
www.friendsofperdidobay.com

LIP SERVICE

Friends of Perdido Bay has been around a long time. We were incorporated in 1988 as a non-profit corporation to protect Perdido Bay and its watershed. We have challenged permits, challenged state rules, gone to civil trials, worked for better protection for wetlands and other natural resources surrounding Perdido Bay, written thousands and thousands of letters, and gone to thousands and thousands of meetings. Whether or not we have succeed in doing anything is questionable. But we certainly have generated a lot of paper, a lot of files. As I was looking through some of the files last week, I noticed a bunch of letters from local, federal and state politicians. All politicians expressed a desire to help us clean up our bay. In many cases, I believe that this desire was sincere. But realistically, there is only so much a politician can do. Can you expect a politician to advocate shutting down a paper mill and costing the community jobs? Not really.

Friends of Perdido Bay also never wanted to see the paper mill, now owned by International Paper, shut down. We had looked at many treatment options and consulted with many experts on the subject. We had advocated long ago, that the paper mill should add some additional end of pipe treatment - "constructed wetlands". We looked at this option and thought that it would remove enough of the BOD, solids and nutrients to be satisfactory for maintaining a healthy bay. Constructed wetlands would require continual maintenance by the paper mill to maintain certain levels of pollutants, which they would have to monitor upon release to Perdido Bay. Champion, the past owners of the mill, even went so far as to construct pilot, constructed wetlands. Friends of Perdido Bay's Board toured the constructed wetlands in 1992.

The wetlands which International Paper put into service in 2012 are not "constructed wetlands" - not even close. The IP wetlands are an overland flow to Perdido Bay which runs through wetlands. There is no cleaning out of accumulated plant material or organic material. Dying plants are allowed to die and the debris is flushed into Perdido Bay upon heavy rains. This adds to the organic load entering Perdido Bay. Perdido Bay is a bay which had already been overloaded with organic material from the paper mill. IP does no monitoring of the effluent as it leaves the wetlands. IP has no idea of the amount of carbonaceous material they

are adding to Perdido Bay. And they don't want to know. Neither do the environmental agencies. I believe that Alabama still has a biologist somewhere who samples a station occasionally. But not enough to find anything. Just enough to say they are monitoring. Florida does not even do that. The agencies don't want to know.

When we advocated for "constructed wetlands" there were several events we did not foresee happening. One event was that IP would double production at the mill. Another event was that IP would go to activated sludge. Another thing we did not see happening was that IP would turn down their aerators to save money. Doubling production certainly adds more pollution (TSS and BOD) to their waste stream. True, IP went to producing a different type of paper (liner board), but a third of their pulp is still bleached. Going to activated sludge was good in that some of the nutrients (nitrogen and phosphorus) are removed better. However, activated sludge produces solids which do not settle well. The end result is that the paper mill solids are continuously flowing through the wetlands and settling out on the bottom of the bay and even the Gulf. Have you noticed on calm mornings how the bottom of the bay looks black even in shallow water? Those are IP solids and they contain higher than normal amounts of heavy metals. Maybe they meet the state's metals standards, but paper mill lobbyists have gotten the standards adjusted sufficiently so that no violations occur.

The last unforeseen change in the paper mill production was the turning down of the aerators in the treatment pond, compared to the early 1990's and even 2001. The amount of pollution and toxicity associated with paper mill effluent is directly related to the amount of aeration in the treatment ponds - the less aeration, the more toxicity. This Spring when Perdido River was adding a lot of dilution to the bay because of the Spring floods, small clams began showing up in the sand at our beach. Also, artesian springs well up from the bottom in the shallow water and help with the dilution. As soon as the dilution lessened, the small clams at our beach disappeared. The same thing happened in 2008. As soon as dilution lessened, the baby clams disappeared. This is not a good sign. There is definitely a toxic component to the paper mill effluent, even if the paper mill passes their toxicity testing. Livingston found the same thing even though he blamed it on a bloom of toxic algae (See following article). Another component of the not-very-well treated paper mill effluent is herbicidal. While this maybe prevent algae from blooming at the beaches, it also prevents grass beds from growing. Where there is enough dilution, such as in certain tributaries to the bay, grass beds are still present. But not in the bay. This is sort of a diaster as it knocks out whole food chains and makes the bay very unproductive.

So, Friends of Perdido Bay back in 1990, did not foresee the potential changes that would occur with the paper mill. These changes have been devastating to our bay. We thought our environmental agencies would take care of the problem - would protect our bay. Were we ever wrong! I am also sure that most people thought that the environmental organizations, like ours would be long gone. Vicki Tschinkel, the old ex-secretary of DEP, once told me that most grass-roots environmental organizations only last three years on the average. I am sure that the polluters and compliant government employees were hoping this to be true. But many Perdido Bay residents have remained loyal to the cause and have allowed Friends of Perdido Bay to continue. Your dues pay for this newsletter, pay for limited testing and allow us to run ads in the

Lillian Newspaper. And we have changed our point of view concerning the solutions for the paper mill. We will not write our politicians, they are unable to do anything.

HOW DID THIS HAPPEN?

Friends of Perdido Bay also supported Escambia County Utility Authority's efforts to establish wetlands along the northern shore of Perdido Bay to dispose of domestic wastewater coming from the Avondale Sewage Treatment Plant. At the time (1992), the plant was putting out 2 million gallons a day. The plant now has a permit to discharge nearly 10 million gallons a day into wetlands surrounding Perdido Bay. This is too much. We opposed the increased discharge, but DEP issued the permit anyway. We are sure that, with heavy rains as have been occurring lately, the sewage is not getting "polished" sufficiently. Recent nutrient testing indicated that phosphate coming off the ECUA wetlands was higher than phosphate coming from the IP wetlands. Nitrogen coming from the IP wetlands was higher than ECUA's nitrogen. But don't worry, with the herbicidal properties of IP's effluent, there will not be any problem with algae blooms. ECUA is also pumping 10 million gallons of their effluent up the hill from Escambia Bay to the IP mill and disposing it through the IP wetlands. Five million is going directly to the wetlands and IP is using five million in the mill processes. This is absurd. How did this happen? For a bay that already had too many nutrients, according to Livingston, adding more through domestic wastewater doesn't make sense.

IP and ECUA will not have to worry about exceeding Florida's proposed nutrient rule for Perdido Bay. The proposed Total Phosphorous for Upper Perdido Bay is 0.102 mg/l and the proposed Total Nitrogen is 1.27 mg/l. These limits are twice as high as many other, local bays and estuaries. Upper Pensacola Bay has a Total Phosphorus limit of 0.084 mg/l and a Total Nitrogen limit of 0.77 mg/l. There is no justifiable reason for the disparity between limits in these two bays. In the 1980's, state biologists recommended a Total Phosphorus limit of 0.05 mg/l and Total Nitrogen limit of 0.36 mg/l for all local bays. Of course, these were only recommended limits. Now we have a rule which has enforceable limits - only the limits are so high it would be hard to exceed them. The rule has only made things worse. I guess we know why Perdido Bay has all domestic wastewater in Escambia County and IP's industrial waste, as well - it has the highest limits.

REALLY?

Blooms of toxic algae stimulated by too many nutrients (nitrogen and phosphorus) caused the slow death and destruction of Perdido Bay. This was the summary of Livingston's 17-year study of Perdido Bay. We didn't believe it then, we especially don't believe it now. The bloom organism was mainly Heterosigma akashiwo. This is a one-cell planktonic organism which can both produce its own food through photosynthesis and can also capture and eat other small one-celled organisms. It has been known to cause fish kills in the Pacific Northwest, in Delaware, and in Chile, New Zealand and Scotland. It lives off the entire coast of China and Japan but has not been associated with fish kills. Notice please, that all of these areas where it has occurred are temperate and not sub-tropical, like Perdido Bay. Also this organism has been associated with fish kills only, and does not appear to produce any toxin like the typical "red tide" organism of the Gulf of Mexico, Karenia brevis. A Karenia brevis bloom was reported off Wolf's Bay one summer, but Perdido Bay is usually too fresh for Karenia brevis. Looking at the salimity tolerances of Heterosigma, it would appear that Perdido Bay would also

be too fresh during certain times for Heterosigma to live. Livingston also found Heterosigma bloomed almost yearly from 1995 to 2006. This yearly blooming is very atypical of this species. In the state of Washington, blooms occur in sequential years separated by a 16-year interval. Plankton blooms cause mass mortalities of fish and other organisms. Mass mortalities are very visible. The blooms themselves cause large areas of discolored water. We didn't see large areas of discolored water, nor did we see mass mortalities of fish. One year we did see lots of dead catfish, but only catfish. No, it was something else which slowly killed life in Perdido Bay.

So the dilemma remains, where did these organisms come from? From Livingston's fertile imagination or were these organisms intentionally introduced into the Perdido system to hide the real source of toxicity - paper mill chemicals? I believe it was the latter.

REMEMBRANCES

Among the many volumes in the Livingston Study was a volume containing interviews with people who had lived on Perdido Bay a long time (20 to 65 years in 1990). These long term residents of Perdido Bay recall that prior to the mid-1940's (the paper mill started up in 1941), the bay contained extensive seagrass beds and water was "tea colored, but clear". Redfish, trout, blue crabs, shrimp and mullet were abundant and oysters were taken in various portions of upper Perdido Bay. Flounders were abundant on the white sandy bottom of the bay. There is some indication that prior to the opening of the mouth of the bay at Perdido Pass in the early 1900's, the bay was mainly a freshwater ecosystem. I have heard that the reason the bay was named "perdido"which means lost in Spanish, was because seafarers could not find the bay because there was no obvious mouth. I remember shrimping at night south of the Lillian Bridge. Before shrimp nets were band, our family would spend many evenings in the summer pulling the net. Too bad. We have definitely lost something very precious.

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.

☐ New

☐ Renewal Amt. Enclosed$____

_____
Name

_____
Address

_____

Phone (_____) _____

e-mail _____