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Tidings The Newsletter of the Friends of Perdido Bay

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Maybe It Was A Mistake

Many years ago when the owners of the paper mill (Champion) suggested running a pipe to Escambia Bay, Friends of Perdido Bay supported that position. Our reasoning was that it was a bigger bay with more flushing and could handle the paper mill pollution better. We did not want to see jobs lost and we thought that going to a bigger bay with more dilution would be better. What we did not consider was the pollution coming from the other “stakeholders” on Escambia Bay, and their objections to another polluter coming into Escambia Bay. We knew that Escambia Bay was a fairly polluted bay. We had not delved into the pollution problems on Escambia Bay although from time to time you read about the pollution problems. The metal contamination of the sediments in Escambia Bay seemed relatively high. That was the extent of what we knew.

Recently, in anticipation of the nutrient limits which are going to be established for Escambia Bay by either the EPA or the DEP (who will decide is still up in the air), EPA developed a TMDL (Total Maximum Daily Load) model including nutrients for Escambia Bay. Alas, the EPA model indicated that most of the dischargers to Escambia Bay are going to have to reduce their nutrient discharges to Escambia Bay by one half. This is going to cost those dischargers some money, which of course they are going to fight. The Escambia Bay “stakeholders” are saying that the EPA doesn’t know what it is doing; that EPA’s science is influenced by politics, etc. This is much the same story which we heard before the paper mill hired Dr. Skip Livingston to spin the science their way. At any rate, the “stakeholders” are thinking of hiring Hydroqual to redo a nutrient model for Escambia Bay which undoubtedly will side with the their (“the stakeholders”) position. Hydroqual was the company which developed the model for Perdido Bay which corroborated Dr. Livingston assertions that the paper mill’s discharges were having very little impact on Perdido Bay. Of course the Hydroqual model of Perdido Bay totally ignored the 10,000 pounds of sludges which the paper mill was (and still is) discharging to Perdido Bay. So from our past experience, we do know that Hydroqual’s model will be favorable to industry. But we are not getting involved in Escambia Bay issues.

The stakeholders on Escambia Bay turn out to be Gulf Power, Georgia-Pacific (the paper mill in Brewton, AL), ECUA and Taminco (previously Air Products). The surprising

“stakeholder” in this group was Georgia-Pacific. Georgia-Pacific took over the paper mill in Brewton, AL from Stone Container in 2007. It employs about 450 and makes container and bleached container board products. It discharges into the Conecuh River which becomes part of the Escambia River. I had always thought that the paper mill in Brewton, AL was too far away to have much impact on Escambia Bay. Apparently I was wrong. Because Brewton AL is a very small town which is heavily dependent on forest industry jobs for its existence, I can understand why government officials would support the mill in Brewton. Brewton, AL has given the mill breaks on both property taxes and sales taxes. Georgia-Pacific also bought the Alabama River Mill and Pine Pulp Mill in Perdue, AL which employ 1,000 people. Employing 1,500 Alabamians is definitely going to give Georgia-Pacific some clout with local politicians in southwestern Alabama. Is this one reason Alabamians living on Perdido Bay have had little luck in getting their politicians interested in the plight on Perdido Bay? If Alabama politicians start attacking the paper mill in Cantonment FL, Florida politicians will just start attacking the paper mill in Brewton, AL which I now realize is a significant polluter of Escambia Bay. It is the old interstate paper mill problem - I won't say anything about your mill if you don't say anything about mine.

So what does this mean for Perdido Bay? It appears that more and more of Escambia county's pollution is coming to Perdido Bay. ECUA has diverted 10 million gallons per day (MGD) of domestic wastewater to the Bayou Marcus wetlands. ECUA is anticipating sending 10 MGD (right now it is 5.1 MGD) of treated domestic wastewater to IP for industrial re-use. This water will end up in the Perdido Bay watershed. So instead of Perdido Bay getting cleaner, it looks like things are getting worse. Barring a major disaster to the Cantonment paper mill, like a hurricane or an explosion, Perdido Bay will most likely get more polluted. Politicians from the major political parties are ignoring the problem. The local lawyers are just too compromised to sue, and the environmental agencies, heavily influenced by wealthy power brokers, are hapless. Not a happy assessment.

Absolutely No Teeth

For years we have watched as one requirement after the other put forth by environmental agencies has been ignored by International Paper. The most recent requirement that International Paper reduce its use of ground water to 20.63 million gallons a day (MGD) by 2011 has been totally ignored. The agency charged with regulating ground water use in this area is the Northwest Florida Water Management District (NFWFMD). The Northwest Florida Water Management issues permits for wells. It keeps track of water uses and ground water contamination. It has developed a giant ground water model to help in regulating water use. This is an important function. Since the local utility (ECUA) withdraws all the drinking water from the ground for the Escambia County and the local area, there must be sufficient supply to ensue a source of good water. The Northwest Florida Water Management District also checks to make sure that permits for irrigation wells are not going to tap into contaminated water or cause salt water intrusion, if placed too close to the coast.

For years, the Northwest Florida Water Management District has known about the severe cone of ground water depression which the paper mill in Cantonment Florida has created by pumping ground water for paper making. While most paper mills are located on large rivers, and use river water in paper making, and then discharge it back into the river, albeit a lot dirtier, the Cantonment mill has used ground water. According to the paper industry folks, this is one thing this mill has going for it - it has a good supply of clean water. The last permit issued to IP for their 27 or so wells was issued in May 2005. In that permit, IP was required to reduce their use of ground water by 25% by the year 2011 to 20.63 MGD. The building of the new domestic wastewater treatment facilities on Escambia Bay with industrial re-use of reclaimed water was one

of the reasons this facility was located there. IP was supposed to use up to 5 MGD of this reclaimed water in its manufacturing operation to offset its withdrawal of ground water. At that time, IP was only making 1,500 tons of paper a day.

Here we are at 2012. IP wants to increase its production to 2,500 tons of pulp per day. It needs more water. The required 25% reduction is long forgotten by the staff at the Northwest Florida Water Management District. It has just recently issued a permit for an average annual withdrawal of 26.5 MGD, with a maximum daily withdrawal of 34.8 MGD. This permit is good for 10 years. Industry gets what it wants and the cone of depression will only get bigger. The ground water contamination under IP's ponds will only get worse as the cone of depression sucks the contamination deeper and deeper. Why won't NFWFMD correct this obvious problem? Political pressure? In addition, IP is now requesting 10 MGD of reclaimed water from ECUA's domestic wastewater plant on Escambia Bay. Right now IP is using 5.1 MGD. So let's do the math. If IP on any one day decided to use the maximum 34 MGD and it is getting 10 MGD from ECUA, that is 44 MGD. That amount is 10 MGD more than can fit in a 35 MGD pipeline going to the wetlands. What do you think is going to happen?

NFWFMD may not do a good job of regulating industry, however it does try to protect the rivers and streams in this area by buying land along the waterways. Recently, the water management district issued a draft Surface Water Improvement and Management (SWIM) plan for Perdido River and Bay. The report summarizes all the current information about the Perdido Watershed, including lands which have been purchased or are in the process of being purchased for preservation in the Perdido watershed in both Florida and Alabama. There are currently over 15,000 acres of land in conservation and several thousand more are being proposed. Much of the land in the Lillian Swamp has been purchased for conservation and the AIG/Reeder Lake property is being considered for purchase. Hooray! The report is very informative. Here is the link if you want to read it - http://www.nwfwmd.state.fl.us/pubs/Perdido/Draft_Perdido_SWIM_plan4-2-2012.pdf. We will put this link on our website.

It Was a Sham

Friends of Perdido Bay fought the permit for International Paper to go to the wetlands. We considered this permit was just an overland flow to Perdido Bay where no standards needed to be met. IP was getting out of Elevenmile Creek where they could not meet standards (IP's own words) and going to a wetland where they would not have to meet standards, at least for 9 years. IP sold the community on the vision that the wetlands would take up the pollutants from the IP effluent and the water would come out of the wetlands much cleaner. IP was supposed to be totally out of Elevenmile Creek by March 2013. Is this scenario going to happen? We will see. For starters, IP installed a new treatment system called activated sludge. Activated sludge is much more efficient at treating Biochemical Oxygen Demand (BOD) in paper mill effluent. Whereas to reduce BOD in the effluent using the old treatment took days, the new treatment only takes hours. This is the most cost effective way IP had of increasing its production while treating its effluent. The bad part about this new treatment called activated sludge, is that it produces a sludge which does not settle. Mills which have activated sludge treatment, have very large settling ponds. Well, IP did not have room for a very large settling pond. So what did it decide to do? It took out all but one of its settling ponds. The one pond is necessary to recycle the active sludge. By taking out its settling ponds, IP no longer has to clean out its settling ponds. This was always an onerous job which was messy and required a land fill to dispose of the solids. The solids are not settling in the wetland either. They are coming out into Perdido Bay where they are a significant source of nitrogen and organic pollution. The bay has been extremely turbid since the start up of this new treatment. Just spread out the pollution.

To date IP has only diverted 25% of their effluent to the wetland, even though the pipeline has been built for nearly a year and a half. According to their permit, they are supposed to divert 100% of their effluent to the wetland by March 2013 and not have any direct discharge of industrial effluent into Elevenmile Creek. Why haven't they diverted more by now? Problems with the wetlands? Their effluent killed trees in their experimental wetland in 1995.

Last summer, Friends of Perdido Bay began testing for sulfate in Elevenmile Creek. Sulfate was one pollutant known to come from paper mills pulping with the Kraft process (the process the paper mill in Cantonment uses). Early permits issued to paper mills contained a sulfate limit. In 1971, the proposed limit for sulfate issued to St. Regis was 6,300 pounds per day. Sulfate is one parameter which has been quietly dropped from paper mill permits. The concentration of sulfate which Friends of Perdido Bay measured in summer 2011 in Elevenmile Creek at 297A was 540 mg/l. Considering the flow in the creek, the total amount of sulfate delivered to Perdido Bay would be 100,000 pounds per day (versus 6,300 pounds in 1971). While this seems like an astronomical amount, the oceans have a high concentration of sulfate. According to a marine chemistry book I have, a normal concentration of sulfate in ocean water is 2,712 mg/liter. We measured a sulfate concentration of 2,700 mg/l at Johnson's Beach.

When I originally saw the high sulfate level in Elevenmile Creek, I thought that this was the cause of the toxicity in Perdido Bay. There is an obvious source of toxicity in Perdido Bay. While adult animals can still survive, many larval forms of life can not live in Perdido Bay water. The clams which should have re-colonized the bottom of Perdido Bay have not. Small crabs and shrimp are not present. Barnacles will not grow at our beach on Upper Perdido Bay. This is scary. There is an obvious source of toxicity, but sulfate would not be the culprit, at least in salty water.

DEP provided Friends of Perdido Bay with historical levels of sulfate in Elevenmile Creek. There is no doubt that the levels of sulfate have been going up. In 1988, sulfate at the same location in Elevenmile Creek that we tested was 242 mg/l; in 1996, it was 260 mg/l; in 1999, sulfate was 370 mg/l. Sulfate in tributaries to Elevenmile only measure about 3 mg/l, at least 100 times less than Elevenmile; in the Perdido River above Muscogee Bridge, sulfate was 9.7 mg/l. Sulfate is a bi-product of the paper making process and is found in various chemicals which the mill uses. IP may use excessive concentrations of sulfate to control foaming. From a sulfate standpoint, whether IP goes to 100 % wetland discharge will make little difference to the water quality in Perdido Bay, as sulfate is a salt which will not settle in the wetlands. It is also doubtful that the IP's sludges will settle. However, the salts (including the sulfates) in IP's effluent and what ever the toxicity component is in the effluent will be harmful to plants in the wetlands.

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 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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