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Tidings

The Newsletter of the Friends of Perdido Bay

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www.friendsofperdidobay.com

Thank You for Your Support

Every newsletter is begun with a “Thank you” to our members. Your encouragement and financial support over the years has helped our organization remain active and kept the issue of a polluted Perdido Bay before the public. I am sure that our elected officials and the people that support the paper mill would rather that we disappear. But we will continue to cause some discomfort to our leaders, elected officials, and polluters who support the elected officials by pointing out the facts surrounding Perdido Bay’s pollution. Again, thank you and Happy New Year.

More than ever, it is still the paper mill

So many environmental meetings about Perdido Bay are attended by people who work for the Alabama and Florida environmental agencies. Those people have learned to keep their mouths shut about the real causes of pollution on our bodies of water. No more whistle blowers like the DEP biologists in the late 1980's. They were reprimanded and never promoted for telling the truth and identifying the paper mill as the major source of pollution into Perdido Bay. It is easy to point the finger at storm water runoff, septic tanks, and run off from farms as sources of pollution in our water bodies. True, some pollution is coming from these sources, collectively called non-point source pollution. But, in Perdido Bay, the major pollution source is still the paper mill. How do I know this? An old study by the Florida and Alabama environmental agencies in the early 1990's tried to measure the contribution from these non-point sources. What they concluded was that the contribution from all the non-point sources was minuscule compared with the pollution from the paper mill in Cantonment Florida. One scientist told me it was the worse case of pollution that he had ever seen. Why? Because Perdido Bay does not flush out the pollution like other bays with wider mouths and more freshwater flushing. Also paper mills are massive polluters which discharge huge amounts of organic material. These discharges are much less environmentally harmful when located on large rivers with lots of turbulence. A source of pollution which discharges a biological oxygen demand (BOD) equivalent to a discharge from 350,000 people, like International Paper in Cantonment, is obviously going to have an impact, especially on a bay which does not flush. Add to this a melange of chemicals ,

and you have a mix which is toxic to many forms of life. Oysters should grow in Perdido Bay, even in the upper reaches, but don't. The little clams, Rangia, which were so numerous that they literally paved the bottom of the bay in the 1980's, are rarely seen. When you find one, they are the very old ones. The demise of the clams is unfortunate because they helped to filter the water in the bay and deposit the suspended material on the bottom.

Why do I know that the paper mill is still the major source of pollution into Perdido Bay? Because not much has changed over the years in the Perdido water shed. The only major change between 1980's and today in the Perdido watershed is the production from the paper mill has nearly doubled along with its polluting discharge. Development has slowed in the Perdido watershed. The Perdido land use maps of the 1990's are nearly identical with the current land use maps. In the early 1990's, the paper mill was producing (and discharging wastes) 1400 tons of air dried pulp a day. Today the paper mill is producing 2500 tons of pulp a day with all that added chemicals and wastes associated with the increase. True, International Paper is no longer doing 100% bleached paper, but about 1/3 of the production is still bleached. This is all doing enormous damage to the Perdido Bay ecosystem. There have been no new studies since the late 1980's and 1990's by independent scientists. Matter of fact, the state of Florida has stopped monitoring Perdido Bay completely. Alabama still has a few water quality monitoring sites, but it is very limited. The paper mill has been monitoring Perdido Bay since the early 1970's. But, the studies by the paper mill scientists have always been very biased and slanted. Remember Dr. Livingston's study which showed that the pollution in Perdido Bay was coming from the Gulf of Mexico. It didn't take the Florida DEP biologists long to refute this conclusion. IP is still taking a few water quality sample in Perdido Bay but it is limited. IP's next biological report is due in February. It is amazing to me how long this pollution can go on.

A Hellish Place

A recent trip by boat into Tee and Wicker Lakes and the surrounding waters was disgusting. Tee and Wicker Lakes are the final stops before the paper mill effluent makes its way into Perdido Bay. According to the IP permit, about 75% of the effluent is supposed to flow through these small lakes with the remainder going back into Elevenmile Creek about one mile from the mouth. It is obvious that International Paper is making no (or very little) attempt to remove color or suspended material from the effluent. The effluent is completely black and very turbid where it enters Perdido Bay. The smell is terrible. It is truly a "hellish place". The neighborhoods closest to the outfall into Perdido Bay, Bay Forest and Ramsey Beach, are being terribly impacted. After the effluent is released into Perdido Bay, the river does not flush the effluent out. Rather the effluent backs up in this upper area of Perdido Bay and smells and looks terrible. Hopefully, the people in these neighborhoods are complaining loudly to the DEP and government officials, because their property and quality of life are being degraded by the IP discharges. IP must be saving a lot of money by not having to pay for chemicals to remove the color and suspended solids from the effluent. IP is also saving money by not having to pump out settling ponds. They are just letting "nature" carry away their solids into the bay. The neighborhoods closest to the discharge are paying the price. The 400 jobs this mill provides are not worth the damage to others property.

For the rest of us who are further removed from the discharges, we see the effects of the discharge especially after rains. The effluent is ponded up behind four berms in the wetland. Rains wash the sludges and other material which has collected behind the berms into the bay.

After heavy rains, the organic material washed from the IP wetlands, turns the bottom of the bay at our beach into a black ooze. If no rain occurs for awhile, this black ooze eventually disappears. Duckweed grows in the ponds behind the berms. You can see the green floating duckweed in Google earth maps. Occasionally after a rain, duckweed can be found in tidal windrows on our beach. I have put a photo of duckweed on our beach on our website.



While not in color, this is what duckweed on our beach looks like.

Spreading heavy metals far and wide

One of the problems with paper mill effluent is the contamination from heavy metals. Paper mills dissolve wood chips in a very alkali solution of sodium sulfate in high heat under pressure - like a pressure cooker. This is called the Kraft process and it was developed in Norway about 100 years ago. The wood chips are cooked until the wood fibers are freed from the plant bonding material. The time of cooking is pretty exact or else, the wood fibers begin to disintegrate as well. The wood fibers are screened from the cooking liquor. The cooking liquor is recycled and the wood fibers are washed and washed and then pressed into paper. This is a very simplified version of papermaking. The cooking liquor which contains most of the sodium sulfate and the plant material which bonds the wood fibers together, is burned in the recovery furnace and reused. This is the famous back liquor for which the paper makers received millions of dollars in tax rebates for alternative energy. Some of the cooking chemicals and plant-filler material (lignin) are lost in the wash water. We see the “lost” chemicals. The lost cooking salts are what make the effluent salty and the amount of loss is not insignificant. A couple of years ago, we calculated the loss of sulfate at 100,000 pounds per day and the sodium at 60,000 pounds a day. We don’t know what they are today, but they are probably higher.

These cooking salts are not reagent grade salts - they are industrial grade which means they are contaminated with heavy metals and other chemicals. So the salts which come out in the effluent have heavy metals associated with them. These salts may be by-products from other chemical processes and be contaminated with the chemicals from those processes. I noticed that China is selling a lot of these industrial chemicals to U.S. companies.

At the end of October, I was sampling Tee and Wicker Lakes- taking sediment samples looking for heavy metals. I found them. The levels of heavy metals in the deposited sediments of Tee Lake are not above the regulatory limits on heavy metals the EPA has set for sludges applied to soils. The limits the EPA has set for sludges applied to soils is very high. An example is arsenic. The maximum arsenic concentration the EPA allows in sludges is 75 ppm. The arsenic concentration which I found in Perdido Bay sediments was 14 ppm. This arsenic value was higher than the arsenic value found on January 7, 2005 in the sediments of upper Perdido Bay which was 5.1 ppm. The current values for the other heavy metals found in Tee Lake sediments were higher than found in previous samplings from Perdido Bay sediments but were lower than EPA limits. Lead was 22 ppm which was about twice as high as previous samples, but well below the EPA limit of 420 ppm.

Just why the EPA limits are so high is puzzling. I guess the EPA did not anticipate heavy metals being generally broadcast over a wide area as is happening with the sludges from the paper mill. Several years ago levels of arsenic became a hot topic. Medical studies associated arsenic with cancer and certain diseases in children. At that time Florida’s recommended arsenic limit for soil cleanup was 0.8 ppm. This number is much lower than the 14 ppm we found in the sediments of Tee Lake. The federal arsenic limit for soil clean up was 30 ppm. Because of the negative publicity about arsenic, the treatment of poles using CCA (that A stands for arsenic) treatment, has changed.

We anticipate doing some dioxin testing of Perdido Bay sediments in the future.

Flood Insurance

As expected, the public outcry from the increase cost of flood insurance has gotten lots of attention. But, I haven't seen any real solutions yet. Congress does not seem interested in rescinding the Biggert-Waters Act. In September 2013, the Mississippi Insurance Commissioner filed a lawsuit to try and stop the rate increases from taking effect. Mississippi claimed that FEMA was required to do an affordability study before the Biggert-Waters Act was implemented. The studies have not been completed and probably will not be until 2015. FEMA does not agree that studies were required before the increased insurance rates could take effect. So now a judge must decide if the Act required studies before implementation.

In another attempt to keep rates from going up, state representatives in several counties in Florida are trying to get the state to assume the flood insurance program. I don't know if this proposal is going to happen either. When the public begins to put the heat on their politicians, you will see a scurry of activity without much results. In the meantime, FEMA has moved forward with phasing out flood insurance subsidies. The phasing out of grandfathering provisions is expected in late 2014.

Citizen Input

While we like to think that citizen input matters, I certainly have my doubts. Most government action requires citizen input. Yet after spending 25+ years going to meetings, and writing hundreds of comment letters, I can't say that my opinion has changed many government decisions. Even going to meetings with lots of people who are well prepared to present facts has had limited impact. Linda Young of the Clean Water Network was excellent at getting citizens to attend meetings in Tallahassee to present the environmentalist point of view. She occasionally had a victory or two in setting stricter standards. But the polluters always came back. It is hard to keep citizens interested year in and year out, especially if all are volunteers. The polluters know this.

Many governmental decisions are made before citizens have a say. What the citizens say will make very little difference. The decision to allow Champion to come in and take the papermill over from St. Regis was made before citizens got involved. No matter how many meetings we had or protests we had, the decision to allow Champion to go to 100% bleached paper had been made (most likely in Washington).

Our protests were not going to change things. Our government officials were just waiting for us to go away. But we are still here. **Happy New Year**

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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