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Tidings

The Newsletter of the Friends of Perdido Bay

June 2019

Volume 32 Number 3

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www.friendsofperdidobay.com

A Toxic Environment

Since the last newsletter in April, several substantial events have occurred which may affect the outcome of our fight to save our bay. One big piece of news is that the Pensacola News Journal in Pensacola has joined our fight. In May, Andy Marlette, the excellent cartoonist for the Pensacola News Journal, ran two cartoons and a Sunday newspaper story about the polluting IP paper mill. The gist of his cartoon was “is this papermill which only employees 450 people worth the pollution it produces when we have another employer in town which employees 5,000 and produces very little pollution?” Of course, I think he is right. When I talked to Andy, he said there is interest in Pensacola to make it a healthier place to live. I agree. Escambia County Florida ranks in the top twenty most polluted counties in the country based on the release of toxic pollutants in both the air and water, mostly from International Paper and Ascend Chemicals (formerly Monsanto). This is not healthy and not something which the Chamber of Commerce wants to advertize.

An article in the Pensacola News Journal (by Kevin Robinson) in March reported several positive improvements in quality of life in Escambia County but also reported that the physical environment in Escambia County had declined due to increasing air pollution levels. There was also an increase in deaths due to tumors in Escambia County. I immediately thought of International Paper and their increasing production which has definitely caused life in Perdido Bay to decline. We report these observations to our environmental agency, Florida DEP; we send them our studies showing very poor quality of life in Upper Perdido Bay, but nothing seems to happen. And what is worse, this has been going on for a very long time, over 30 years We hope this situation changes, but it may not change without a fight.

Incredible Numbers

The annual air emission reports from International Paper show why Escambia County’s air is getting worse and why Escambia County is ranked high in toxic emissions. I had not seen these reports for several years, since challenging air-permit renewals is a

useless undertaking. The production limits for the entire mill are found in their air permits, and not in their water permits. There is a reason for this. The air rules are not at all stringent and really limit very little. I have not reviewed the air permit rules lately but I know that more stringent rules were supposed to go into effect in 2012, but did not due to pressure from the industries.

In the air permit rules, each smokestack or area which has air emissions is permitted. International Paper has 38 emission units and has to get a permit for each of these units. Some of these are not smokestacks but areas, like the wood yard. Some of these areas have limits but others don't. The bleach plant was one area which had limits while other emission unit limits depend on ambient air quality, i.e. ozone. I have tried to summarize all 38 air emission units in a spread sheet for the years 2017 and 2018 which I have posted on our website (www.friendsofperdidobay.com). The values are given as tons of air pollutants per year and in many cases are huge. I will try and summarize some of the total tons from the different air pollution sources at the mill. Total Production in 2017 was **1,900** air dried tons of unbleached pulp/day. In 2018, production at IP's Cantonment mill was **2,035** air dried tons of unbleached pulp/day. Bleach pulp production in 2017 was **492** air dried tons of bleached pulp/day, and in 2018, IP produced **485** air dried tons of bleached pulp/day. Some of the air pollution coming from these levels of production are given in the table below.

<u>Air pollutant - tons/year</u>	2017	2018
Carbon Monoxide	1,713.67	2,100.78
Acetaldehyde	11.35	15.16
Formaldehyde	5.17	5.2
Hydrochloric Acid	29.53	30.80
Methanol	341.71	332.51
Hazardous Air Pollutants	462.48	239.99
Nitrous Oxides	1,160.44	1211.31
Particulate Matter	338.79	284.48
Total Reduced Sulfur	93.90	59.03
Volatile Organic Carbon	1042	985
Sulfur Dioxide	73.5	69.9
Ammonia	58.8	64.9

The emissions of combustion pollutants, carbon monoxide and nitrous oxides, are very large. Carbon monoxide comes from the two recovery furnaces which burn the black liquor to recapture the salts. Pine tree residues are also burned. Black liquor is the stuff which comes out of the wood digesters, and after evaporating off some of the water

to concentrate the black liquor, it is burned in these recovery furnaces. The black liquor is a fuel which burns, once it is started with natural gas. The paper industry was claiming this as an alternative fuel in 2008 and 2009 and getting large tax rebates.

The other large contributor to carbon monoxide emission is the power boiler which burns bark mixed with coal. Anything which burns wood waste is a big polluter. The recovery furnaces are big contributors to nitrous oxides, hazardous air pollutants and two pollutants which should not be emitted at all, acetaldehyde and formaldehyde. These air emissions are a testament to the weakness of the air pollution rules. This mill should have limited production long ago to protect the health of people living around the mill but because of the paper industry's political clout, it did not have to limit production. DEP can not do anything unless they have the rules to back them up. It is the EPA and Congress who set these rules.

In the late 2000's, the University of West Florida and Georgia Institute of Technology did an epidemiological study of cancer and found clusters of cancer around the chemical plants in North Santa Rosa County and around International Paper. I suspect the incidence of cancer is getting worse around IP. They emit more toxic and cancer causing chemicals now than they did then. Also more and more subdivisions are being built closer to the mill and more people are exposed to their air chemicals.

IP should be given credit for some of the improvements they have made to their power generation system. They are using mostly natural gas in their power boilers and have reduced their emissions of sulfur. Natural gas is a much cleaner burning fuel than coal which had been used previously. Many of the heavy metals which showed up in Perdido Bay sediments came from the washing of the coal/wood ash from their power boilers. Now IP only burns wood/coal mixture in one boiler.

The decrease in sulfur in the air is interesting. Sulfur compounds give paper mills their characteristic rotten egg smell. Have you noticed that the paper mill in Cantonment smells better? I have. I even went to Brewton, Alabama to smell the Georgia Pacific mill. They smell better also. So the industry, at least locally, has improved their "smell". Just how they have done this is unknown. I wonder if they are using a certain air scrubber to remove the sulfur/carbon compounds. If the scrubber is a "wet" scrubber, they are probably disposing of the scrubbed material into their effluent which comes into Perdido Bay. The smell is better, but where did the sulfur chemicals go?

More Production Means More Toxicity

As I look back at the production of the IP mill, it looks like the decline in our bay can be closely matched with IP's production. The mill in Cantonment produced about 900 air dried unbleached tons per day with about 200 being bleached pulp. This was the production level from 1955 until 1982 when production shot up to 1200 tons of unbleached pulp per day. In 1984, when Champion took over the mill, 100% of the unbleached pulp became bleached; **1400 tons per day of bleached pulp**. Along with this increase in bleach production, Champion installed a new technology called "oxygen delignification" It reduced the paper mill's use of chlorine by some amount, but there were still a bunch of nasty chemicals coming from the mill, especially dioxin. The market for white, free-sheet paper declined and the prospects did not look bright for the white paper market. In 2000, International Paper took over the mill and converted the mill to brown paper in 2007. Another Champion mill which was bought by IP, the Courtland, AL

mill, was not as lucky and not converted to brown paper. It had 1,100 employees and closed in 2014.

After IP converted the mill to brown paper, production slowly started to rise. What also started to rise was the use of ground water to wash their pulp and the use of our air and water to dispose of their chemicals. Today their production is 2,035 air-dried tons of unbleached pulp per day and 485 air-dried tons per day of bleach. To make this amount of pulp they discharge **29 million gallons of water a day (MGD)** full of all types of nasty chemicals. This 29 MGD is mixed with 2 MGD from ECUA's wastewater treatment plant so that 32 MGD is flowing through the pipe into the wetlands. Some of the nasty chemicals which have been increasing are grouped together in a measurement called chemical oxygen demand (COD). COD has also been increasing and is not regulated. According to the EPA, COD is a measure of the quantity of chemically oxidizable material present in the wastewater. Some of the COD degrades in the treatment but part is resistant to degradation. It comes from the spent pulping liquor, and correlates with the toxic organic pollutants. In 2016, IP was putting out 21,976 pounds of this toxic stuff. Today, the toxic chemicals have risen to 37,952 pounds/ day which is being discharged to the wetlands and Perdido Bay.

How are those Wetlands?

According to IP's annual Wetlands Report, the wetlands are removing some of the sludges in the discharge. The BOD, TSS and nutrients are being removed at an impressive rate (>90%) in the wetlands. Apparently, what is not being removed however is the toxicity associated with the effluent (COD). IP is not required to test for this parameter. The vegetation in the wetlands is not doing so well either. The wetlands had lost a lot of their trees in spite of the fact that IP had planted over 160,000 canopy trees. Perhaps another problem with the effluent is that it has become rather acidic. IP used to report their effluent pH at about 7.2. Now they are reporting a pH of 6.2. It takes a lot of sulfuric acid to change the pH by one whole unit. But if that sulfuric acid is also taking the sulfur smell out of the air, then maybe the industry can justify the expense. The increased acidity of the effluent would also dampen the foam problem and the algae problem. We are also seeing less foam. Perdido Bay is just like a swimming pool for IP. It is being shocked!

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.

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