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# Tidings

The Newsletter of the Friends of Perdido Bay

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[www.friendsofperdidobay.com](http://www.friendsofperdidobay.com)

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## **IT'S A NEW YEAR AND IP'S PERMIT AND CONSENT ORDER HAVE EXPIRED**

Friends of Perdido Bay rang in the New Year with a bunch of new year's resolutions - one of which was keeping tabs on IP's permit and Consent Order. We had gone to an administrative hearing (actually two administrative hearings) on this permit and Consent Order starting in 2006. The permit and Consent Order which are currently in effect, were issued March 2010. IP and IP's predecessor, Champion, had been operating on a permit and Consent Order issued in 1989. According to Florida rules, permits and Consent Order's are only supposed to be good for 5 years. That would have meant that the permit and Consent Order issued in 1989, should have expired in 1994. It did not. Through a series of administrative slight-of-hands, the permit and Consent Order were administratively continued until 2010. For 15 years or so, the paper mill operated in administrative limbo. Did it matter to the paper mill that they were operating on an expired permit? I don't know. When IP bought the mill from Champion in 2000, DEP simply transferred the old expired permit to IP. More over, the DEP began re-interpreting what the old permit said. According to DEP (Jeb Bush's DEP Secretary David Struhs), the old permit and Consent Order did not require compliance with Florida standards in Perdido Bay or in Elevenmile Creek, only at the end of their discharge pipe, which no one can access. Therefore, there were no fines for years of violations. There was really no impetus to do anything different than what they had already been doing - polluting Perdido Bay and Elevenmile Creek. However every ten years or so, the paper mill must upgrade their equipment. They also wanted to increase production.

After Hurricane Ivan in the Fall of 2004 and after much delay, the DEP issued the new permit in April 2005. Friends of Perdido Bay had been following the wangling in this permit. When IP's idea for a wetland treatment was first announced in 2000, Friends of Perdido Bay was very supportive. However, that was when we heard that it was going to be an engineered, wetland treatment and comprise 4000 acres. We would know exactly

what was coming out of the wetlands. Then the plan continued to change. By the time the permit was finally issued in April 2005, it was nothing like what we had originally heard, it was just an overland flow to Perdido Bay. In its final form, the effluent once it left the transmission pipe, took less than 12-hours to reach the bay. This is hardly enough time to remove anything. IP also changed their treatment system so that treatment bacteria would be continuously added to their treatment ponds. This helps to increase removal of nutrients, but as we found out later, it also increases the solids which were hard to settle in this type of system. There certainly was no need for secondary settling ponds as they would probably be ineffective. Just let those solids be filtered out in the wetlands. The thing about paper mill solids is - they are slow to degrade (over 120 days). Much of the solids are small wood fibers which pass through the screens in the paper making process. Any rainfall would be sure to wash those decaying fibers into the bay.

So for the next five years, Friends of Perdido Bay was involved in holding up the actual implementation of the permit. Of course the whole time we hoped that the permit would change, or it would be denied and IP would do something else. We actually won the first go around. The Hearing Officer sided with us and denied the permit. IP got a stay thereby blocking the ruling and applied for a permit again. The second time around, they won. The permit and Consent Order went into effect March 15, 2010.

While the permit and Consent Order have on their face expired, IP was given 9 years to try and get alternative criteria for their discharge to the wetland. ***The paper mill has not complied with Florida (and Alabama) water quality standards since 1986 and maybe never.*** This is the reason a permit has been issued with a Consent Order. The Consent Order is basically a plan to bring them into compliance. It is supposed to be based on good modeling and engineering plans, but I can tell you, the DEP would give the paper mills a permit, if they turned in cartoons. However, now that third parties, like us, are involved, their science has to be slightly more honest. IP went to the wetland, hoping (I am not sure IP was hoping) that they could get lowered criteria for their wetland discharge. This would, in fact, allow them to finally meet Florida standards (if the standards were lowered). There are rules that they have to follow for getting lowered standards. I will be very surprised if IP can demonstrate that they deserve lowered standards, especially in Tee and Wicker Lakes. Even with the dilution from the ECUA effluent (there is now 10 million gallons a day of ECUA effluent), IP's effluent, I am sure, still depresses the dissolved oxygen. Not only that, it is toxic. The last time I flew over the IP wetlands, it looked like a bunch of trees were dying. This is not surprising either. In the trial wetlands which Champion had constructed in the 1990's, only about 2% of the trees lived. We pointed this out at the hearings, but to no avail. Maybe IP was hoping that with the dilution from the ECUA effluent and the natural artesian springs on the IP wetlands (about 13 million gallons a day), the toxicity of the effluent would be sufficiently diluted. That does not appear to be the case. But we will see. We will continue to follow this issue.

## **IP's Discharge Monitoring Reports**

All dischargers in the U.S. must turn in monthly reports of what is in their effluent and the quantities of the specific pollutants. These are called Discharge Monitoring Reports or DMR's. Before the "cluster" rules went into effect for the paper industry in the mid-1990's, the DMR's were simple with only a few parameters required. Today, the paper industry must measure and report what is in their discharge. I am sure that this type of self surveillance is costly for them. The industry would probably like to drop these tests, but it is instructive to see what chemicals are allowed by the environmental agencies. The December 2015 DMR for International Paper is about 14 pages long. I will try and just give you a summary and then explain what some of these chemicals are.

### **International Paper's December 2015 DMR**

<b><u>Parameter</u></b>	<b><u>Monthly Average</u></b>	<b><u>Daily Maximum</u></b>	<b><u>Units</u></b>
Flow at discharge	27.9	43.3	Million gallons per day - MGD
Biochemical oxygen Demand - BOD	3,905 (5100)	8,998 (10,200)	lbs/day
Total Suspended Solids - TSS	6,931 (8000)	13,120 (16,000)	lbs/day
Adsorbable Halides - AOX	79 (623)	125 (951)	lbs/day
Total Nitrogen	1,328	6,095	lbs/day
Total Phosphorus	154 (184)	227	lbs/day
Chemical Oxygen Demand - COD	36,287	41,201	lbs/day
Chloroform	0.12 (4.1)	0.19 (6.9)	Lbs/day

(The numbers in parentheses are the permit limits. If there are no parentheses, there are no permit limits for this parameter.)

The flow of the effluent is understandable. This is the flow at the monitoring site on the IP grounds before the effluent enters the pipeline to the wetlands. Because ECUA is also adding 5 MGD, after the monitoring site, the actual flow to the wetlands is 5 MGD higher. It is interesting to note that the daily maximum flow was 43.3 MGD. This is a greater volume than the pipeline (37.5 MGD) can hold. So the pipeline volume was exceeded because of "significant rainfall" events on December 30 and 31, 2015. Anything over a 0.45" of rainfall/ hour will exceed the mill's capacity to collect and impound the storm water (according to their report). Therefore, on December 30 and 31, approximately 2.9 and 9.2 Million gallons of wastewater flowed down Elevenmile Creek. Because of the rainfall, the effluent was probably not well treated. This was the reason we saw lots of foam in the first week of January 2016 (see our website for the pictures). I also think that a 0.45" of rain per hour is a fairly light rainfall, especially given our rainfall patterns here. I certainly would not like to live at the bottom of the hill from IP. If you drive along Kingsfield Road, you can see where IP has problems with "blow outs".

The Biochemical Oxygen Demand or BOD is a measure of the oxygen consuming potential of the effluent due to organic matter. This BOD is only measured for 5-days. Paper mill effluent requires at least 120 days of oxygen measurements to get the true value. The 120-day is usually about 4 times greater than the 5 day BOD which would add enormously to the oxygen depletion capability of the effluent.

The Chemical Oxygen Demand or COD is even a much bigger number. This number represents the oxidation of chemicals in the effluent. I don't know what the chemicals are which would consume so much oxygen - perhaps sulfur, which IP puts out in huge quantities (300,000 pounds/day ?). Whatever, it is just disgusting, because we are swimming in this.

Total suspended solids (TSS) is an enormous number as well. These are the famous sludges from the paper companies. Actually, this paper mill in Cantonment, FL is probably one of the better mills as far as TSS. Domestic wastewater treatment plants filter their effluents through sand filters to remove the TSS. But paper companies don't want the expense of having to deal with these filtered sludges. So they just release these sludges into the environment, and keep getting sympathetic politicians elected. The problem is - these sludges contain heavy metals, dioxin (we measured them), much of the nitrogen and phosphorus, and the nasty organic chemicals. They settle to the bottom and kill most of the marine life, as has been done in Perdido Bay. I am sure IP hoped that the wetland would trap some of these sludges, and I am sure they do. However when it rains hard, which it does here, that material washes off the wetlands and onto the beaches of nearby residents.

Not listed in the table above, are the results of whole effluent toxicity tests. Amazingly enough, the effluent is not acutely (immediately) toxic to the water flea and fat head minnow. But there are chronic (over 7 days) effects seen in the reproduction of the water flea. These little critters must be some tough animals! And look at the chloroform. Would you swim in this?

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