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Tidings The Newsletter of the Friends of Perdido Bay

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Jackie Lane -Editor

Happy Springtime

We hope you are enjoying the warm springtime weather. (It has turned cooler since I began writing this newsletter.) I keep hoping to see the bay come back to life in the Spring, but no luck. We used to put our crab traps out in the spring, but it seems like this would be futile. It is obvious that the small larval forms of life are being killed. Several years ago I put several cement blocks into the water and waited for the barnacles to settle on them. Barnacles have a water-borne larvae. Nothing. I scraped barnacles off two sides of a 4x4. The two scraped sides are still without barnacles. The complete elimination of the larval forms of life from this part of the bay is just recent. I think that the paper mill bleaching agent, chlorine dioxide, is being converted to hydrogen peroxide and oxygen. Hydrogen peroxide is toxic to small forms of life. But the bay is well oxygenated. No problem there.

A Little Short

We have been participating in the drive to get a Green Amendment on the Florida election ballot. Many of you have sent in signed ballots and we had one member collect 25 signed ballots. Thank you all for your efforts. It certainly would be nice to get some action so that we could get our bay brought back to life. The committee which is running the Green Amendment drive has until November 2023 to submit all the petitions. About 900,000 petitions are necessary to get the amendment on the Florida ballot for 2024. So far only 25,000 have been collected and verified. This is less than the organizers had hoped for but the organizing committee is not giving up. There is still time to get to the 900,000 mark and the organizing committee is doubling down on getting everyone involved. So if you are a Florida resident and haven't signed the petition, download the petition from our website, www.friendsofperdidobay.com, sign it and send it to the Ft. Meyers, FL address. It sure would be nice to get some action.

Underfunded

We are not the only bay where polluters have a free reign. Almost every body of water has pollution problems which are not being addressed. Why? Lack of enforcement by the environmental agencies. Both the state environmental agencies and the EPA lack the funds and the political will to go out and collect the data necessary to pinpoint the problems and file suits against the polluters. It is very sad. These environmental agencies are toothless tigers. When we first started in 1980's, the Florida DEP had three biologists who would go out and collect data. They knew what the problems were in Northwest Florida and who was causing them. We used their knowledge in several of our administrative hearings. Those biologists have long disappeared. Basically, if you want to know what the problems are, you have to hire your own consultants and be prepared to fight the polluters in court. This is a do-it-yourself deal and you can not depend on your government. There is no political will to fight the few industries we have left in this country. So unfortunately, Perdido Bay residents are at the end of the pipe. Basically our politicians wish that we would just go away and stop making life difficult for our polluting industries. I am sorry but I can not do that. I think these industries should have cleaned up long ago. Perdido Bay is a valuable resource both for tourism and for the fishing industry. There is no reason that one paper mill should be allowed to destroy a bay while our government looks the other way.

With the budget problems that we have in this country, I don't think the situation is going to get any better. There is definitely an anti-regulation agenda with certain politicians. This is anti-regulation for industries and people pay the price by getting a polluted environment. Industries have gone to the trouble to make things look better, like dumping an herbicidal chemical in the water. No algae, things are great! Except algae is the base of the food chain and life depends on algae for food. We will just have to keep fighting. International Paper may just decide it is not worth trying to keep up an old mill which can not get a permit. Old paper mills are closing. The Canton, North Carolina mill closed and so did the Panama City, Florida mill. The Panama City Florida mill was owned by West Rock and was the oldest paper mill in Florida. It began in 1931.

A Great Lie

A recent train derailment in West Palestine Ohio made headlines for many days. The rail cars which contained vinyl chloride ignited and the heat converted the vinyl chloride to other toxic chemicals - one of them being dioxin. The residents were naturally upset because they didn't want dioxin contaminating their water supply and soil. According to the EPA, dioxin is the most dangerous chemical known to man. In the train derailment, the EPA spokesperson said not to worry, dioxin was a thing of the past. It is not around anymore. That statement is very wrong. Paper mills still produce dioxin and the EPA is still permitting its release. In International Paper's most recent discharge monitoring report, IP is permitted to release 10.0 pg/L of 2,3,7,8, TCDD dioxin and 31.9 pg/L of 2,3,7,8 TCDF furan from their bleach plant. Now this may sound like a very small number, but it is really a huge amount. Converting the 10.0 pg/L (picograms/Liter) to picograms /ml or ppt or parts per trillion gives

you 1000 picograms/milliliter or 1000 ppt. The state target cleanup for soils contaminated with dioxin is 7 ppt. So the DEP is allowing IP to discharge over 100 more dioxin than what Florida allows in soils as the safe level.

Furthermore, only the 2,3,7,8 TCDD dioxin is regulated. There are about 10 other types of dioxin called congeneres which have no regulation at all. IP releases many of these other forms of dioxin which at certain concentrations, are just as lethal as 2,3,7,8 TCDD. The good news in all of this is - IP only reported releasing 18 ppt. In April 2021, Friends of Perdido Bay measured the dioxins in the sludges of the Upper Bay. These sludges are part of the 8,000 pounds per day which IP is allowed to release into the environments. The sludges of Upper Perdido Bay contained 14.2 ppt of lethal dioxins and a total of 4030 ppt dioxin total in April 2021. So EPA's statement that dioxin was a product of historic releases is wrong. Maybe EPA forgot they are still allowing dioxin to be released. I object to this chemical being released into our bay. When we have hurricanes and the muck on the bottom of Perdido Bay is stirred up, this dioxin muck washes onto our properties.

Should Never Have Been Allowed

Dioxin is produced because the element chloride is part of the bleaching chemical chlorine dioxide. If there were no chloride, no dioxin would be produced. We should have listened to Greenpeace when they came to Perdido Bay in 1990 and demonstrated for using hydrogen peroxide. If the paper industry had adopted hydrogen peroxide as a bleaching agent instead of chlorine dioxide, dioxin would have been eliminated. Totally chlorine free, instead of elemental chlorine free. But we were told that chlorine dioxide was a much safer chemical. But was it?

We have been measuring dioxin in the sediments of Perdido Bay for a long time. In 1999, we measured sediments in three places in Perdido Bay - center of Upper Bay, bay off Spanish Cove and mid-bay off Tarkiln Point. All values were less than 1ppt. The next sampling was done in 2003 and 2004. We began to see high values for dioxin - 30 ppt. These values were after Champion or IP had converted to chlorine dioxide. The levels of dioxin had risen dramatically after the conversion to chlorine dioxide.

Further chlorine dioxide is herbicidal, in spite of EPA's denial. In 1995, when Champion converted their mill to 100% chlorine dioxide bleaching, I was doing studies at our beach in the Upper Bay. I would grow scum algae on glass plates and let the little snails which I was studying, feed on the scum algae which grew on the glass plates. I had been doing these studies since 1982. Then in 1995, when the scum algae would not grow, I was shocked. What happened? Champion's conversion to 100% chlorine dioxide was the only change I could see. But how could their bleaching agent be causing algae not to grow? In November 1995, Champion was discharging into Elevenmile Creek. It was easy to go take samples of the creek water. Twice in November 1995, I took samples of Elevenmile Creek water at the Champion outfall and in the lower Creek. I sent these samples to a laboratory which analyzed water for chlorine dioxide and other components. On both sampling days in November 1995, Elevenmile Creek showed a constant level of chlorine dioxide at 0.4 mg/l at both the headwaters and in the lower creek. The lab also reported chlorate present at 8.7 mg/l of at the headwaters and 3.5 mg/l at in the lower Elevenmile. Chlorate was decreasing from the

beginning of the creek to the end. Chlorate is an herbicide. It is used to kill troublesome weeds. I could immediately see how chlorate would be very useful to the paper industry to offset any nutrient problems they caused. Nutrients were supposedly the problem in Perdido Bay, according to the researcher who studied Perdido Bay for a very longtime for the papermill. This wasn't true either.

We have written the EPA several times, about the herbicidal properties of chlorine dioxide. The first time, EPA sent a "certified" letter denying that chlorine dioxide was herbicidal. The EPA believed the scientific reports which the paper industries research arm published. There were three papers which the National Council for Air and Stream Improvement gave to the EPA showing that chlorine dioxide did not cause problems. NCASI is the research arm of the forest products industry. Yet, papers put out by European researchers told a different tale. At least four scientific papers showed that chlorine dioxide degraded into chlorate and that chlorate was very harmful to certain forms of algae. These European researchers said that chlorate had to be removed. It is odd that EPA did not do some of their own research but believed the science from the paper industry. Many of the government agencies "believe" industry experts instead of doing independent research. That is a problem.

Chlorine dioxide is also a disinfectant. It is used in certain countries to disinfect water supplies. The EPA kept saying that chlorine dioxide broke down rapidly. But from our studies in Elevenmile Creek in 1995, chlorine dioxide was a very persistent and stable gas. It was the same concentration from the beginning to the end of Elevenmile Creek - 0.4 mg/l. The concentration used for disinfection is about 0.8 mg/l. This is also the maximum level which EPA allows in drinking water. So the level which we measured in Elevenmile Creek was about half the disinfection level. Our bay is being disinfected which could also kill larvae.

UWF studies should show the problem

The University of West Florida got a grant from the Pensacola Perdido Bay Estuarine Program to study the zooplankton in Perdido Bay. Larval forms of life are part of the zooplankton. If the study is done right, it should become obvious that certain larval forms of life are missing from the zooplankton. The last sampling date is April 2023. Friends of Perdido Bay is also planning on doing larval survival studies. We will report on the results.

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