



Bulk Rate  
U.S. Postage Paid  
Permit No. 1013  
Foley, AL 36535

---

**Friends of Perdido Bay**  
10738 Lillian Highway  
Pensacola, FL 32506  
850-453-5488

---

ADDRESS SERVICE REQUESTED

**Tidings** The Newsletter of the Friends of Perdido Bay

Enormous

---

October 2016

Volume 29 Number 5

Jackie Lane -Editor

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

---

**AGAIN, THANK YOU FOR YOUR SUPPORT**

We have to continue thanking you for your support. I am always amazed at how people have continued to support us through the years. Because of your support, we have been able to continue Friends of Perdido Bay. I think we all agree, it is very important. Our bay has not gotten any better. Maybe it is even worse. But we all have the hope that one day our bay will be better. I think we all know what is causing the deterioration in our bay - the paper mill. This is not hard to understand. What is hard to understand, is why our government has not stepped up and enforced its laws. For 30 years, the paper mill has been allowed to operate without meeting the state laws. They have been allowed to operate on promises of “clean-up” which never happened. I have come to the conclusion, the real “clean-up” which would have to be a “closed loop” or “zero discharge” is not going to happen. But we will see. The new rules for paper mills, which the EPA passed in 1998, said the paper industry should be able to go to eliminating their harmful discharges by 2016. We are waiting. Certainly paper mills should not be able to discharge the enormous amounts of pollutants which they discharge. We are hoping for better times.

**OH! THOSE PIPELINES**

Recently we got a call from a supporter who said that there were sewer pipelines being laid along U.S. 98 in Alabama and they were heading north, up County road 91. The sewer lines were coming from the Spanish Cove Wastewater Treatment plant. So to get a straight story about the sewer pipes, I called ADEM who said to call Baldwin County Sewer Service (BCSS). Yep, the BCSS knew all about the sewer pipelines. It was their project and they sent me a synopsis of the project. Here it is.

Baldwin County Sewer took over the Spanish Cove Wastewater Treatment Plant, maybe 15 years ago (I am not sure about this time frame). The sewer plant has had some problems over the years, especially when it rains hard. The discharge was originally “to the ground”, but much of the “stuff” would get into Peterson Branch Creek which runs

along Spanish Cove and then directly into Perdido Bay. Over the years, fecal coliform counts have been elevated in Perdido Bay at the place where Peterson Branch discharges into Perdido Bay, especially after hard rains. The Spanish Cove plant originally just took sewage from Spanish Cove. But like all good business enterprises, it expanded. Today, the Spanish Cove Wastewater Treatment Plant, which is owned by Baldwin County Sewer, treats wastes from Lillian, Elberta and Perdido Beach, as well as Spanish Cove. Because of the increase in customers, the sewer plant has had to expand. So besides laying pipeline, the sewer plant is building some additional ponds and expanding its discharge from 250,000 gallons a day to 500,000 gallons a day. They are seeking permits for this expanded discharge. In the small information sheet, BCSS sent me, I learned that one good thing they are installing is U.V. disinfection, instead of chlorine. U.V. is better for the environment, once the effluent is discharged.

Because 500,000 gallons a day of treated sewage is probably too much to discharge to Peterson Branch, given all the problems they have had in the past, BSCC is to pipe the treated sewage to a more suitable spot. Hence the laying of 10" pipe. The pipeline is going from Spanish Cove north: up County 99 to U.S. 98 to County 91. The pipe is going to be laid all the way up County 91 to the small Creek called Narrow Gap Creek (a new bridge has just been built there). This is going to be the discharge point for the 500,000 gallons of treated sewage.

This discharge point into Narrow Gap Creek is, according to topo maps from Baldwin County, about a little less than one mile from where Narrow Gap Creek discharges into the Blackwater River. It is also pretty swampy along the junction of Narrow Gap Creek and the Blackwater River. Blackwater River then discharges into Perdido River about a mile away. While I hate to see anymore discharges into the Perdido River, I think this is probably a better discharge site than the old Peterson Branch site. The site is removed from the bay and the nutrients which are in the sewage would have time to be naturally used up by plants in the creek. Whether or not the additional nutrients will cause harm to little Narrow Gap Creek remains to be seen. It is a creek which is used for fishing. A lot depends on whether the Creek has sufficient flow and how well the sewage is being treated. But, this is the story behind those pipes on U.S. 98.

## **WE ARE WATCHING**

Another project which we had been watching over the years is the ECUA's wetland discharge into Bayou Marcus Wetland area on the Florida side. In the mid-1990's Friends of Perdido Bay, supported this project. But that was when the Bayou Marcus wastewater treatment plant was only supposed to discharge 2 million gallons a day (four times the Spanish Cove Plant) of wastewater. At the time, we thought that protecting wetlands along the northern end of the bay and polishing the well treated wastewater through wetlands was a good idea. Two tracts of land were available to discharge this wastewater - one on the north side (large parcel) and one on the south side of Bayou Marcus Creek. The total number of acres was 1000. ECUA turned the

northern tract into a wildlife sanctuary and built a boardwalk. The mile and ½ boardwalk is open during daylight hours usually 7 days a week. It is very nice walk and people use the boardwalk quite a bit. All types of wetland wildlife can be seen and it is very peaceful. Access to the ECUA boardwalk is off Fayal Drive off Blue Angel Parkway. There is a parking area.

BUT, the effluent which ECUA applies to this wetland, has increased substantially over the years. The discharge went from 2 to 4 to 6 million gallons a day of effluent. Several years ago, the ECUA opened the southern portion of the wetland. The effluent from this southern portion dribbles back into Bayou Marcus near its mouth and also into a little canal behind the La Paz subdivision. The little canal behind LaPaz subdivision is protected from direct discharges of ECUA effluent by a raised berm which is a relict railroad bed from the little railroad which ran from Perdido Bay (Millview) to the Port of Pensacola in the late 1800's. But, this little canal is rather enclosed and might begin to show problems with enrichment. One of the residents who lives on the canal told me, that springs are near by which may bring freshwater into the canal. Barnacles rarely grow on boats kept in the canal. But the canal appears to be susceptible to accumulation of nutrients.

Another thing which must be taken into account with wetland discharges is that wetlands absorb nutrients for awhile, especially phosphorus. But with time, wetlands begin to export nutrients. Phosphorus is taken up in wetlands by absorption to soil particles. When all the sites on soil particles have been used for absorption, wetlands will no longer absorb phosphorus. Also the nutrients will stimulate plant growth, and unless the plants are harvested, will export this plant growth. It can be quite a mess. So any wetland discharge to remove nutrients will only be temporary. This includes the International Paper wetlands as well.

Because the little canal behind LaPaz is enclosed, it is a good place to measure the impact of the ECUA effluent coming off the southern portion of the wetland, the newest portion. The event that triggered Friends of Perdido Bay sampling in this little canal was an encounter with another sampling group, the Bream Fisherman's Group. This is a group which has been sampling this area's freshwaters for 50 years. They sampled the little canal behind LaPaz and found a very high fecal coliform count. I went out a week later and sampled the little canal for fecal coliforms and nutrients. I also sampled Perdido Bay, by the old pilings, as well. The fecal coliforms in the canal were 330 colonies/100 ml. This is a little higher than the 200 colonies/1000 ml of state law, but the number which we found, was consistent with the number ECUA was reporting in the area. The fecal coliform number from Perdido Bay (pilings) was 56. The lower fecal coliform number in Perdido Bay could have been due to the higher salinity in the bay. High salinity usually inhibits coliforms. The salinity in the surface water in the canal behind LaPaz was 2.4 parts per thousand. This is nearly freshwater. The salinity in the surface waters of the bay was 8.0 parts per thousand which is about 1/4th full strength sea water. Some of the freshwater in the canal could have been coming from the ECUA discharge.

Comparison of nutrient data from the canal and from Perdido Bay at the pilings is where we saw influence of nutrients coming from Bayou Marcus. One form of nitrogen, called nitrate, is characteristic of effluent from domestic wastewater treatment plants. It

is a labile form of nitrogen which plants can easily take up. In order for plants to grown they also need the other nutrient, phosphate. So what we found was a nitrate nitrogen of 0.25 ppm in the canal water and 0.027 in Perdido Bay water at the pilings. The canal water was nearly 10 times higher in nitrate. (The nitrate could also have come from lawn fertilizer.) Fortunately for the canal, the phosphorus was practically not detectable in both the canal water and in Perdido Bay water. Otherwise we would have algae growing.

In spite of the low level of nitrate in Perdido Bay water, there was a very high concentration of another form of nitrogen - TKN or Total Kjeldahl nitrogen. TKN is the nitrogen found in organic material which has not been broken down. This nitrogen is found in the material brought down the Perdido River and especially in the solids from the paper mill. The TKN value from the canal was 0.72 ppm. The TKN value from Perdido Bay was 0.93 ppm. The lower value from the canal was due to the dilution of Perdido Bay water by fresh (ECUA) water. The large contribution of the nitrogen in paper mill solids is one reason Perdido Bay has such a high standard for total nitrogen in the nutrient standards. This TKN form of nitrogen will not cause algae blooms until biological processes convert it to a more labile form - either ammonia nitrogen or nitrate. This usually occurs on the bottom of Perdido Bay. This biological conversion process also uses up oxygen. To show you just how much TKN nitrogen is put into Perdido Bay by the paper mill solids, the average nitrogen value of the Perdido River water (without paper mill effluent) at Barrineu Park runs about 0.5 ppm. The additional 0.43 ppm is added by the paper mill solids. So about 46 % of the nitrogen in Perdido Bay comes from the paper mill. I think this is just too much. It is just GROSS.

**VOTE AGAINST AMENDMENT 1 IN FLORIDA.** This tricky amendment was sponsored by the power companies in Florida to limit the amount of solar power they can buy. It will help kill solar power in Florida

**VOTE FOR AMENDMENT 2 IN ALABAMA.** This amendment requires Alabama to put the fees earned by the state parks into a special fund to run the state parks. Right now, the fees earned by the state parks go back into the General Fund in Alabama.

<p><b>Membership and Renewals</b></p> <p>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.</p> <p>Membership is \$10.00 per <b>year per voting member</b>. To join or renew, fill out the coupon to the right and mail with your check to the address on the front.</p> <p>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.</p>	<p><input type="checkbox"/> New</p> <p><input type="checkbox"/> Renewal</p> <p>Amt. Enclosed \$ _____</p> <p>_____</p> <p>Name</p> <p>_____</p> <p>Address</p> <p>_____</p> <p>Phone (      ) _____</p> <p>e-mail _____</p>
---	---