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Friends of Perdido Bay
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Tidings

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Jackie Lane -Editor

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More Impaired Meetings

The second round of public meetings on Florida's draft list of what water quality standards are being met and what standards are not being met in the Perdido Basin will be held June 30, 2011 from 9:30 am to noon at the University of West Florida, Building Number 22, Conference Room s B and C. Florida's DEP is proposing to take upper and lower Perdido Bay off the impaired waters list for nutrients. The DEP is also removing lower Perdido Bay from the impaired list for dissolved oxygen. Perdido River in the stream segment is being removed from the impaired list for nutrients and dissolved oxygen.

In 1988, Florida reviewed "all" the water quality data for all its water bodies. Those water bodies which were found to not meet standards were placed on a list of "impaired" waters for those water quality standards. Once a water body is designated "impaired," a Total Maximum Daily Load (TMDL) is determined for each pollutant causing impairment for that water body. A TMDL establishes a limit on the amount of each pollutant that a particular water body can accept without causing a violation of water quality standards. Depending on the priority placed on the impairment, Florida's Department of Environmental Protection may not get around to doing the TMDL for several years. The 1988 list of "impaired waters" was very long.

In first round of evaluations which took place in 2007 and 2008, DEP listed Perdido Bay as "impaired" due to nutrients. Florida started to do a TMDL for nutrients on Perdido Bay. The DEP contracted out with a national engineering firm to do a model of Perdido Bay in preparation for setting nutrients limits in Perdido Bay. The results of the model, which I had gotten through a Freedom of Information Act request, were, in my estimation, pretty accurate. There were some flaws and values which were underestimates, but on the whole it depicted the conditions in the bay accurately. It was nothing like the Skip Livingston/Tom Gallagher model which totally ignored the 10,000 pound per day contribution of biodegradable solids from the IP paper mill to

the bay. Unfortunately, this model of nutrient loading in Perdido Bay was quietly dropped. A formal TMDL for nutrients in Perdido Bay was never issued. DEP is apparently not going to use this nutrient model.

Another bureaucratic slight of hand occurred with the dissolved oxygen standard in Perdido Bay. In the first round of TMDL determinations, DEP had proposed to “delist” upper Perdido Bay for impairment due to dissolved oxygen. For a year, I went out in a boat on the bay and took dissolved oxygen measurements for the first round of TMDL’s on Perdido Bay. There were many sampling days when Perdido Bay did not meet the minimum dissolved oxygen limit of 4 mg/l, especially near the bottom. I was not the only person to find very low dissolved oxygen levels in the bay. These violations of the dissolved oxygen standard were supposed to be included in the analysis of whether Perdido Bay met the dissolved oxygen standard. They were not. A DEP employee who actually did the impairment evaluations (he has since retired from DEP) told me that he was told to ignore my data and only concentrate on the data with high oxygen values. As a result of DEP’s faulty dissolved oxygen analysis, Perdido Bay was not considered impaired. DEP had proposed to “delist” Upper Perdido Bay in the first round. I requested an administrative hearing because I knew I could show that DEP’s analysis was faulty. DEP has never scheduled a hearing or even acknowledged that I requested one. Our government is ignoring their own rules.

So based on my experience with DEP and how it decides what is impaired or not, I really don’t have much faith in this process. The Impaired waters rule which finally went into effect in 2002 (after we challenged it), was full of loopholes allowing environmental problems to be ignored. Florida has since revised the rule and made it easier for them to say a body of water is not impaired when it really is. So while DEP merrily goes around the state holding these meetings and “delisting” water bodies for certain parameters, Florida’s waters do not get any better. They just get less protection.

What is Alabama doing about the impaired waters in Perdido Bay? Nothing really. I don’t know if Alabama has a rule to identify impaired waters, but Alabama standards are usually less stringent than Florida’s.

The Nutrient Rules

Swimming in algae at our beaches on the Gulf or in the bays, or canoeing in rivers chocked with water weeds and algae has unfortunately turned Florida’s natural assets into liabilities. The algae is caused by too much nutrients - nitrogen and phosphorus. These nutrients may come from domestic sewage, livestock, fertilization of yards and fields, etc. For years, Florida has been trying to establish numerical standards for the amount of total nitrogen and total phosphorus a body of water should have. It has been nearly impossible to do. All the various interest groups have fought for “their” numbers. Currently, Florida uses what is called a narrative standard to regulate nutrients - “in no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural populations of aquatic flora and fauna”. Well, one person’s subjective opinion about what constitutes an imbalance is different from another person’s. DEP turns a blind eye to obvious imbalances. In Perdido Bay in the mid-1990’s, we experienced massive amounts of algae at our beaches. This algae covered our crab traps and made fishing from our beaches nearly impossible. The local DEP never considered this a violation of the nutrient standard, or at least they never did anything about it. If there had been a limit for the amount of total nitrogen and phosphorus it would have been easier to convince DEP that there was a problem. So you can see the advantage of actually having a number.

Due to DEP's inaction at setting numerical standards, Sierra Club and several other environmental groups sued the EPA in July 2008. The environmental groups claimed that because DEP had failed to act to correct the nutrient problem in Florida, the Clean Water Act allowed EPA to step in and set standards. In August 2009, EPA and Florida settled the lawsuit with a consent decree. EPA would develop nutrient standards for Florida. EPA scientists collected all the available data that they could find and put together numbers which they considered would allow water bodies to be protected from over-enrichment. EPA promulgated nutrient standards for fresh water, taking comments from anybody who wished to comment over about a year and a half. The freshwater rules were finalized last Fall and are supposed to go into effect in Spring 2012. Nutrient standards for estuaries are still under development. The nutrient standards for freshwater were not great but they were passable and would help to solve the nutrient problem.

The uproar over these standards reached a fever pitch last fall. Agricultural interests, domestic sewage treatment plants (ECUA included), paper mills, power plants - all the big and small polluters, said this was going to cost them millions of dollars. They would be put out of business, etc. They could not meet these standards. Some, including our own utility, Emerald Coast Utilities, sued the EPA. Other polluters leaned on their politicians heavily, who in turn leaned on DEP. The result - the state of Florida has filed a lawsuit against the EPA alleging that the EPA usurped its authority by establishing limits within Florida's waters. This lawsuit was filed December 7, 2010. Since lawsuits take years, can we expect numerical nutrient standards anytime soon? I doubt it. Undaunted, DEP has decided to try and establish its own nutrient rules once again. DEP is once again holding meetings and taking comments from interested parties. If you want to comment, the e-mail address is: <http://floridadep.nutrient-criteria-rule-feedback.sgizmo.com/s3/>. DEP's rule is very much like the EPA's standards however DEP has added additional loopholes and is proposing lowering the standard for dissolved oxygen to hopefully sweeten the pot for the big polluters. This whole exercise is a good example of how difficult environmental protection has become.

DEP is also still developing nutrient standards for estuaries, including Perdido Bay. It appears that each estuary will have its own set of standards. Guess who is developing the standards for Perdido Bay - Skip Livingston and Tom Gallagher. These are the same guys who testified in court that their models showed that IP's discharges were having "de minimus" impact on Perdido Bay. They never considered the impact on the bottom from the 10,000 pounds per day of solids which is allowed to be discharge by the paper mill. It has now become apparent why a TMDL for nutrients was never adopted for Perdido Bay. It has allowed DEP time to collect new data and determine Perdido Bay is no longer impaired due to nutrients. It will therefore allow the same group of cheating scientists the opportunity to set standards which the paper mill will have no problem meeting.

Linda Young of the Clean Water Network has been following the rule making shenanigans and is more knowable about all the loopholes in the rule. She also puts out a weekly e-mail update. If you are interested in keeping abreast of the nutrient rule her e-mail address is: llyoung2@earthlink.net. E-mail her and ask to be placed on her e-mail list. Her address is Clean Water Network of Florida, P.O. Box 5124, Navarre, FL 32566. She also accepts donations.

Were Nutrients the Problem?

Even though Perdido Bay was listed as impaired for nutrients in the first list of impaired waters, I always had a hard time believing that nutrients were too high in Perdido Bay. To begin with, the Perdido River which supplies approximately 80% of the water to Perdido Bay is a very clean river with very low levels of nitrogen and phosphorus. Paper mill effluent is generally poor

in nitrogen and phosphorus and these nutrients must be added to their treatment ponds to attain maximum breakdown of the carbonaceous material. All the algae we saw on our beaches in the mid 1990's was due solely to an excess of phosphorus poured into the paper mill's treatment ponds. I often wondered if the excessive addition of phosphorus was not intentional. The addition of phosphorus started in 1993, peaked in 1995 and declined in 1997 in nearly a perfect bell-shaped curve. The algae that these excessive amounts of phosphorus produced helped corroborate Livingston's argument that it was excessive nutrients which stimulated frequent blooms of toxic algae which killed life in the bay. I believed that life in the bay was harmed, but not by excessive nutrients or by the supposedly toxic algae. It was the new bleaching chemicals that the paper mill used after 1995, such as chlorate, which killed life in the bay. Chlorate was known to be a potent herbicide. We tested Elevenmile Creek and found the presence of chlorate. Toxicity tests showed an impact on the small algae. The "blooms" of toxic algae never produced any fish kills or any other obvious signs that toxic algae normally produce. Rather it was as Livingston described it - "the bay just slipped away". This was a sure sign of a toxic chemical.

Today, nutrients in Perdido Bay are not a problem, according to DEP. What is the problem then? Life in Perdido Bay has not returned. The huge population of clams which I studied in the 1980's have not returned. Why? Recently we measured several parameters in Elevenmile Creek. The dissolved oxygen in the creek was below standards as usual. The various pollutants which the paper mill puts out were a little lower than usual. We found one chemical which was being added (dumped) into the creek in excessive amounts - calcium. Calcium carbonate (lime) is a by-product of the paper making process. If the paper mill doesn't reuse it, it is sold to farmers to lime their fields. IP must have an excessive amount; they are dumping it into the bay. The concentration of calcium in Elevenmile Creek was 31 mg/l which equates to about 6,000 pounds of calcium a day that IP is dumping into the bay. The concentration of calcium in Perdido River was only 1.2 mg/l at the Muscogee Bridge. While lime itself is not toxic, these concentrations are undoubtedly having an impact. It is increasing turbidity in the bay and filter feeding animals are most likely starving since calcium provides no calories. What lime does do however, is prevent foam from forming. So we haven't seen much foam this summer. Will the environmental agencies help us? Is it against the law to dump great quantities of a non-toxic chemical which is probably laden with trace amounts of heavy metals into a water body? Probably not. Enjoy the rest of your summer!

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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