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Stormwater Pond Conference

Today you will discuss stormwater, its effects and cures and stormwater ponds in particular, all of which relates to water quality which from the earliest days of our estuary has been critical to our inhabitants.

I would like to begin my comments with some personal recollections and observations.

I am a 5th generation Beaufortonian so my family memory goes back more than 150 years.

As recently as 1970 I can recall flushing a red rubber ball down a toilet in our house on the Beaufort River and rushing out to the river to watch it pop out of a pipe and float away.

In the Old Testament book of Job, the Devil tries to persuade Job to forsake his faith by visiting plagues, pestilence, famine, draught and locusts on him but the worst thing was boils. When I was a boy boils were almost as common as mosquito bites and Impatigo was also quite common – all from regularly swimming in raw sewerage. Dumping trash and garbage directly into the rivers and streams was quite common.

I have photographs of my home dating back to the 1920's and you can see as we entered the 1960's and 70's the Spanish moss began to disappear and by 1975 was almost gone. Landing at the Savannah Airport you could smell the rotten egg smell as you descended below 9,000 feet and in Beaufort you could smell it whenever the wind was coming from the south. This was Sulphur dioxide coming from Union Camp (now International Paper) and when combined with H₂O it formed sulfuric acid H₂SO₄ which killed the moss and no doubt had harmful effects on the rivers and streams. The moss only came back after Union Camp put scrubbers on their systems in the 1980's following relentless complaints from a group of us in Beaufort.

Hurricanes of 1893, 1940 and 1959 put hundreds of tons of waste in our rivers and streams. Much of the waste and trash from Hurricane Gracie in 1959 was dumped in the marsh behind what is now the County Government center. You could see the bubbling and smell the rancid odor for decades.

Prior to the 1930's the rivers and stream bottoms were covered with billions of oysters – many were huge singles. Large sail and later steam dredges plied our waters dredging up tons and tons of succulent single oysters from our river bottoms. But in the 1930's the Boring Sponge arrived, presumably on the bottom of a ship at Port Royal docks. Oystering in Beaufort County was forever changed. The borers attacked the calcium carbonate CaCO_2 in the oyster shells exposing the oysters and causing them to die. It wasn't long before all oysters below mean low water were dead and gone. These borers are hermaphrodites that release their eggs and sperm at different times to prevent self-fertilization. These borers prefer high salinity because they use the NaCl Salt to manufacture HCl Hydrochloric acid to penetrate oyster shells.

In my grandparents and parents time there were numerous natural freshwater springs around the county that pushed up from the Florida aquifer. Unfortunately, Savannah, and Union Camp in particular pulled billions and billions of gallons of fresh water from the aquifer, rather than using the plentiful Savannah River water, causing saltwater intrusion into the aquifer and drying up the springs.

Even though we are an estuary with no freshwater rivers running into us, the natural springs provided freshwater into the estuary before Savannah and Union camp depleted it. I have always believed that this, combined with additional stormwater runoff from development altered the salinity enough to make our waters more attractive to borers and less attractive to blue crabs whose favorite foods is, or was, oyster larvae. So in came the borers, out went the oysters below mean low water and blue crabs have been slowly migrating upstream to lower salinity waters.

Oysters are bi-valves and a 3" oyster can purify up to 60 gallons of water in a day. Imagine what a few billion oysters living on our river and sound floors could do in our estuary or in the Chesapeake Bay for that matter.

The ideas you will hear today are all important to managing our ever increasing volume of stormwater. I would add to what you hear today that we should also seriously consider funding additional research at DNR, NOAA and locally at the Wardell Mariculture center to bring back oysters to our river and sound beds by learning more about these borers and how to control, neutralize or eliminate them.

Thank you