## BSI Canal Committee 2/10/2025

I recently responded to a comment posted by <u>Edward Parshall on NextDoor</u>, and thinking maybe a lot of people have the same questions, so I am posting my response to his concerns—

## Mr. Parshall writes:

"So, evidently the City of Punta Gorda doesn't care about making our neighborhood flood more during hurricanes. Instead of spreading the spoils from the lock widening they are shallowing out the canal by dumping the spoils in deep spots. For example: if you have a 1 gallon bucket and fill it halfway up with dirt it will only hold 1/2 gallon before spilling over. I know they aren't filling the canal up halfway but ANY swallowing will not allow as much water in the canals before they overtop. I'm sure they could have spread it on both sides of the lock thin enough not to effect looking through the lock for traffic. Also, make those deeper spots make the water there warmer and may affect fish. Just an opinion. "

## And my response:

ok-- let me try and take each question as you ask-- 1) filling in low spots in our canals does nothing to stop flooding during hurricanes.- the reason for this is that the flooding is determined by the top of the water column, not the bottom of the water column-- if you stop and think about this, the hole is already full of water, so therefore, holes in the bottom of the canals have absolutely no effect of flooding -- since they are already flooded. 2) your analogy of the bucket is true to the extent of the contents of the bucket, but as I have already explained, the top of the water column determines the extent of flooding-- so, in this case, the bucket is the worldwide sea level. -- so, the only deviation to this worldwide sea level are tides and storm surges (i.e. hurricanes.) but since the storm surge, itself is not contained to our limited canal system, it is determined primarily by the level of storm surge in the harbor and Gulf, so any amount of capacity in a canal hole (which is already filled with water anyway) would not have even a few seconds of capacity from flooding coming from the harbor and gulf. 3) although water temperature is slightly different from the top of our canal water column to the bottom, the tides act to normalize any deviations other than normal stratification. It is true that fish will settle into deeper holes, but in our canals, it is less to avoid temperature variations, but rather to hold (rest in still water-- less exertion for them) This then brings up my earlier comments that Melissa (Lockhart) picked up from some of my earlier comments, that our best defense to protecting our canal system is to ensure good tidal flows are maintained-- and that answers one of the other questions about why we don't have the same issues as many of the canals in Cape Coral-it is because of the active canal maintenance that Punta Gorda undertakes every day. And finally-- soil and water samples are taken on a regular basis by all parties involved. But I'll ask you, what do you think they might find? -- the area of the lock excavation is virgin ground (mangrove marsh land) -- i suspect they would find the same soil and water samples that will be found in the rest of the mangrove marsh.

And—as always---calm seas, warm breezes, and plenty two-handed fish—

Rick Daugherty, Vice Chairman, BSI Canal Committee