

TOWN OF SOUTH BETHANY

Minutes – Canal Water Quality Committee Meeting October 26, 2012 (10:00am) at the South Bethany Town Hall

- **Meeting Called to Order At 10:05 am** – (George was late) Members present were George Junkin, Al Rae, Jim Gross, Dave Wilson, Al Allenspach, Sue Callaway, Pat Voveris, Lloyd Hughes and property owner, Ralph Romeo.
- **Minutes from May 18, 2012 Meeting** – George presented the minutes.
- **Tidal Pump – Review Ralph Romeo’s Six Stage Proposal to construct a gravity flow system to exchange canal waters with ocean tides**
 - George pointed out that the Gravity Flow System was identical to Lloyd’s Tidal Pump. It only had a different name because there is no actual “Pump” in the system. George pointed out that if we change the name we will have to re-educate a lot of people.
 - Ralph Romeo presented his six stage approach as summarized below and asked that the Canal Water Quality Committee support it and forward it to the Town Council.

SYNOPSIS OF THE PROPOSAL TO CONSTRUCT A GRAVITY FLOW SYSTEM

TO EXCHANGE THE CANAL WATERS WITH THE OCEAN TIDES

This is a **SIX STAGE PROPOSAL** that can take 5 years to carry out.

- **STAGE I** October - December, 2012. A **survey** of town property owners to see if they would be willing to support this project.
- **STAGE II** January - March, 2013. A **"yes" vote** will allow the Town Council to act on a resolution to proceed.
- **STAGE III** April - December, 2013. Creation of a **multi-agency advisory council** to advise the town on issues pertaining to this project and to explore methods to finance the project.
- **STAGE IV** January - December, 2014. The Town Council can act on a **second resolution** to undertake a preliminary design, cost estimate, and funding sources.
- **STAGE V** January - April, 2015. The Town Council can offer a **public referendum** on whether or not to proceed.
- **STAGE VI** May, 2015 - June, 2016. A **"yes" vote** will allow the Town Council to proceed with the **final engineering plans** and cost estimate, and to issue the project for bids, make awards, and start/complete construction.

- George pointed out that in '06-'07 we lobbied DNREC to get their support since Gerald Hocker told us that we needed the DNREC support to move forward.
- George added that in May of 2007 DNREC said they could not support the Tidal Pump. See below.

**Delaware Department of Natural Resources and Environmental Control Review of
South Bethany Canals Tidal Pump System - Preliminary Engineering Study Report,
May 2007**

Conclusions

- Based on the items discussed above we anticipate that introducing cleaner ocean water to the South Bethany canals will improve water quality in the canals, unless the expected improvement in clarity triggers explosive growth of macro algae and the ensuing serious ecological and human use problems that have long been occurring in other areas of the Inland Bays. We remain concerned that the analysis performed to date is not comprehensive enough to ensure that the system will work as designed. We caution that the system could face potentially large operation and maintenance problems. Finally, considering the cost of the project as well as other issues regarding permitting, construction, and operation/maintenance of the system, we are not convinced that building the tidal pumping system is the best management action that can be taken for improving water quality of the South Bethany canals system.

- George added that we then presented to the Joint Permitting Processing (JPP) Committee since DNREC informed us they were the ones who would tell us what we would need to do to move the Tidal Pump forward. The presentation is documented in www.southbethany.org/cwq/2008-07-17-JPP-Final-1.pdf. The result from that meeting was that we needed to get a consultant on board and an environmental study would be required to answer the questions posed by DNREC.
- Dave Wilson asked Ralph what information would be supplied with the survey in STAGE I above. Would cost be included? Ralph said that costs would not be included because he (Ralph) felt that we did not have good cost data. George said that he felt that we had good cost data from the Oceaneering/KCI report that we paid \$50,000 for. Ralph said that the survey was only to find out if the homeowners were interested in pursuing the planning process. Dave felt that we should have more information to supply with the survey before going forward with a survey.
- Jim Gross asked how much money would be required to get to STAGE IV. Ralph responded that you would have to spend funds for the consultant and environmental study, possibly 6% to 7% of the construction cost.
- Ralph suggested that grants may be available for planning. George pointed out that in his experience grants were not available for planning. They were available for implementation.
- Lloyd commented that the US Army Corps of Engineers told him many years ago that we needed DNREC on board for the Corps to help us.
- George pointed out that the Town has spent \$65,000 to prove that the Tidal Pump will move the water, that the Tidal Pump is feasible to construct, that it

would cost \$6 to \$7 million for design, permitting and construction and that it could be completed in about 2 years.

- The consensus of the committee was
 - We should not go forward with the STAGE I survey until we had the data needed for homeowners to make an educated decision.
 - It would be very difficult to execute the STAGE III multi-agency advisory committee even if we had an environmental impact study.
 - We are all in favor of a Tidal Pump, but not Ralph's approach to it.
 - We would not go forward to the Town Council with his six stage proposal.
 - All agreed that we should get Jack Whitney's inputs on the subject.

- **Canal Water Quality Monitoring** – Dave presented the following two charts showing the water quality data summaries for 2009 through 2012. He noted that the water quality at canal ends is consistently worse than the water quality at the mid points or points closer to Snap Gut.

South Bethany Canal Dissolved Oxygen Summary (2009-2012)									
Number of <u>Mornings</u> DO < 4 mg/l June- August									
Site	2009		2010		2011		2012		
	#Samples	# <4mg/l	#Samples	# <4mg/l	#Samples	# <4mg/l	#Sample	#<4mg/l	
SB01 (E. End of Anch)	12	58%	14	100%	13	100%	13	85%	
SB02 (Mid Anchor.)	12	25%	14	50%	13	62%	13	62%	
SB04 (E. End Peth.)	12	58%	14	86%	13	92%	13	77%	
SB05 (Mid Peth.)	12	17%	14	43%	13	54%	13	38%	
SB06 (E End Brandy.)	N/A		N/A		N/A		13	62%	
SB07 (Mid Layton)	12	25%	14	21%	13	62%	13	46%	
SB09 (S End of Carl.)	12	50%	14	71%	13	85%	13	85%	
SB10E (E End of Russ)	12	58%	14	79%	13	77%	13	85%	
SB10W (W.End Russ)	12	58%	14	86%	13	69%	13	77%	
SB12 (S End of Jeff.)	12	25%	14	43%	13	54%	13	38%	
Total Rainfall Jun-Aug		11.2"		9.4"		14.8"		13.5"	
Avg Temp Jun-Aug		73.2F		76.3F		75.3F		75.7F	
#Days>90F		11		22		17		22	
#Wks 9 sites <4mg/l		3		4		6		5	
First Date All Sites <4mg/l		28-Jul		6-Jul		14-Jun		10-Jul	

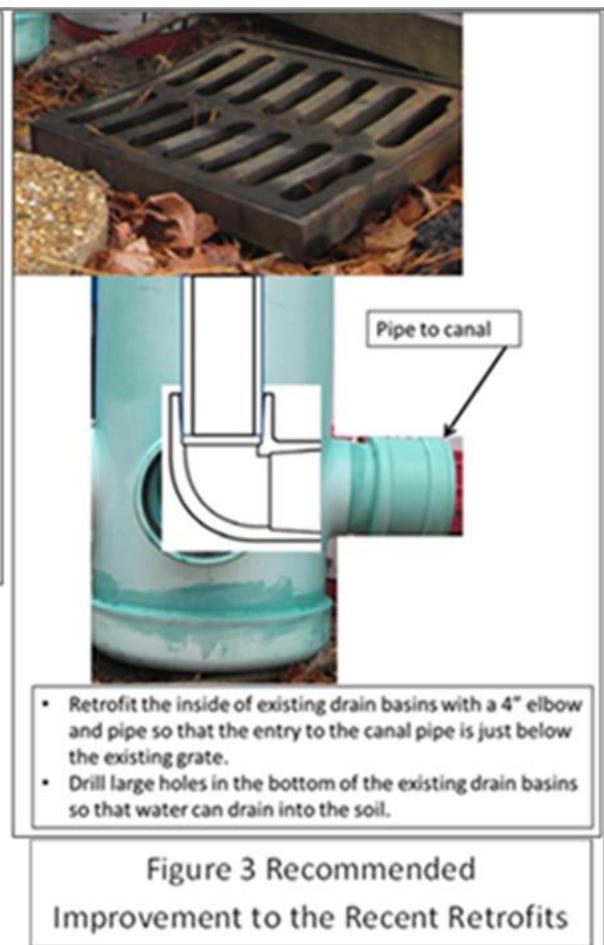
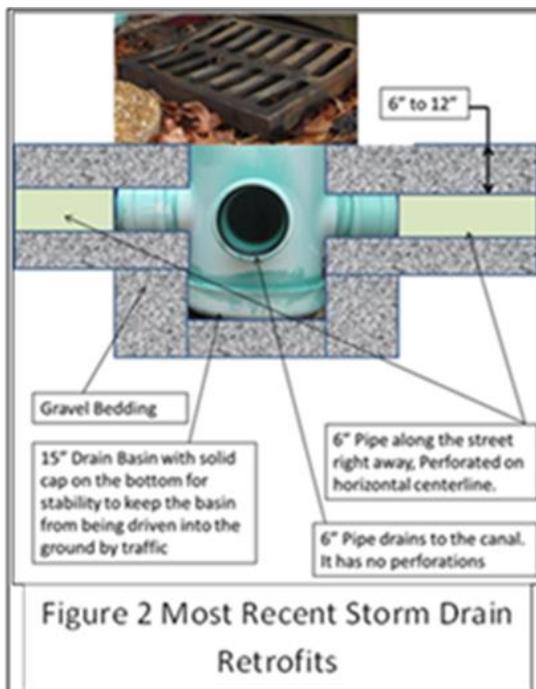
<u>South Bethany Canal Bacteria Count 2009-2012</u>								
Total Enterococcus Geometric Mean								
Swimming Standard for Geometric Mean < 35 Colonies/100mL								
Site	<u>8/25/2009 Count</u>		<u>8/31/2010 Count</u>		<u>8/23/2011 Count</u>		<u>8/28/2012</u>	
	# Samples	Col/100mL	# Samples	Colonies/100mL	# Samples	Colonies/100mL	#Samples	Col/100mL
SB01 (E End of Anch)	8	337	8	38	8	86	10	40
SB04 (E End of Peth)	8	161	8	86	8	189	10	132
SB07 (Mid Layton)	8	24	8	22	8	34	10	31
SB06 (E End of Brand)	N/A		N/A		N/A		8	75
Rainfall Jun-Aug		11.2"		9.4"		14.8"		13.5"
Bacteria over swimming standard for the season at canal ends.								
Bacteria under swimming standard for the season at mid canal.								

- **Oyster Gardening –**
 - Al Allenspach reported that oyster gardening was going well and that new baskets that do not require the white float have been introduced by E.J. Chalabala. Al likes the old baskets better because the new baskets have wires that need to be removed to open them. George suggested that Al use the old baskets without the white float and just hang the basket instead of floating it.
 - Al also guessed that there were about 80 to 100 gardeners in the area. He said he has sent about 20 names to E.J. and that we should get a good list of participants from E.J.
 - Al added that the CIB is very interested in getting commercial oyster men back into the Inland Bays.
 - George asked if this was the year that the CIB bought spat and Al responded that it was. Also the spat that they are getting from Rutgers is more disease resistant.

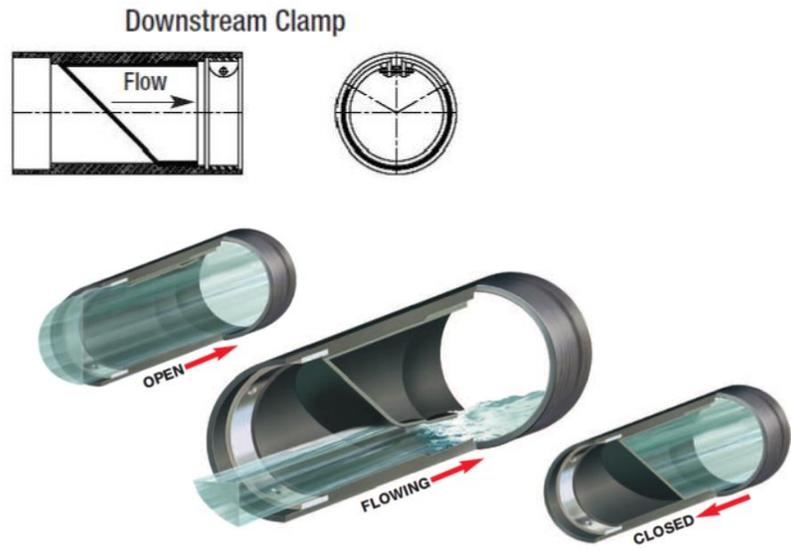
- **Status of Diffuser Pilot Project –** George reported that Envirotech is under contract and has sent letters to DNREC and the US Army Corps of Engineers showing what is planned and stating that permits should not be required because there is not interference with boat traffic and the diffusers can be easily removed. Six diffusers should be in place by early spring in the Petherton Canal. One would be 100' from the east end of the canal and the next 5 spaced 200' apart with the 6th one at 1,300' from the east end.

- **Status of CIB Proposal for East Side Bio-Retention Areas –**
 - The proposal from the CIB is submitted. The CIB expects to hear if it has been awarded in December.
 - Since the drains on the east side are so low, they would have to be raised in order to create the bio-retention areas.

- **Inspection/Recommendations/Documentation W. Side Storm Drains –**
 - George reported that he, Dave Wilson and Frank McNeice had completed the survey of 106 drains in Town of South Bethany right-of-ways and that George had given the results to Don Chrobot to get estimates on the cost to implement the recommendations.
 - George summarized the findings and showed pictures of the drains.
 - The recommendations consisted of
 - Putting stand pipes at the inlet to the canal pipe and perforating the bottoms of some of the catch basins.



- Putting check valves in the canal ends of some of the pipes that drain into the canal to keep high tides from back-flowing into the streets.
 - The Checkmate Valve designed for inline service fits inside the existing pipe and does not protrude into the canal. Its cracking pressure is less than 2 inches of head pressure.



- Making no changes to the existing drain basins.
- **Home Owner Education Program**
 - Voluntary Disconnection – Outside Showers & Rain Water Down Spouts
 - Committee agreed that there should be a survey along all canals to identify homes that had pipes leading to the canals. George volunteered his boat. Pat volunteered to be the data recorder. George guessed that there were at least 100 pipes that ran into the canals from properties along the canals.
 - The committee agreed that the disconnection flyer should be mailed to all addresses with pipes leading into the canals.
 - Impervious Surfaces
 - The committee agreed that the impervious flyer should be sent to all property owners.
 - Turf Lawns
 - The committee felt that the turf lawn flyer only needed to be sent to owners that are located on the canals.
- **Status of “Volunteers for Cleaner Canals” Program**
 - George reported that Jack Whitney had volunteers to collect trash on all canals.
 - Diann Nazarian sent in a written complaint about pine needles in the Russel Canal. Diann asked if the Volunteers for Cleaner Canals would be able to clean up the needles.
 - George replied that that was not in their current task statement and that collecting needles might be difficult and that they probably would only be

floating for a short time. After they sink you need a rake or other tool to harvest them. Dave said that “skimming” would have to be done on a regular basis to be effective. Al suggested that we should request individual owners along the affected canals to watch out for this.

- The committee asked about over hanging pine tree limbs. The current ordinance §125-2 (3) requires that “Tree **branches** more than 2 feet, seaward from the bulkhead, over canals are allowed, but must be no lower than 12 feet above the height of the bulkhead.”
 - The committee asked if we should consider eliminating all over hanging limbs with a code change. There are very large trees that overhang the canals.
 - The committee agreed that we should look more into this issue.
- **Budget Requests for Next Year** – The following suggestions were made by the committee:
 - \$1,000 to the CIB for oyster spat.
 - \$10,000 for matching commitment for the CIB east side proposal.
 - \$10,000 for future potential grant that may require matching funds.
 - Money for flyer printing and mailing. Pat suggested that this might be combined with CEC mailing to save mailing costs.
 - Al Alenspach suggested that George be allowed to add other items to the list, as they are identified.
 - **Meeting Adjourned at about 12:10 pm**