

SB Canal Water Quality Committee  
September 20, 2021  
2:00 pm  
Town Hall

Committee Members: Dave Wilson, Jack Whitney, Glenn Dallas, Brian Moroz, Gary Lessing, Bob Fisher  
Town Council: Derek Abbott  
Guests: Chris Vanuga, Edie Dondero

Jack called the meeting to order at 2:00 pm

1. Minutes from August 16, 2021 meeting were approved.
2. Derek Abbott, Town Council was introduced to the Committee
  - a. Town Council does not have any specific tasks for the Committee at this time.
  - b. The Town Council normally prefers to refer issues to the Committee and is concerned with mission creep.
  - c. They look for us to make recommendations and priorities concerning canal water quality issues.
3. Canal Water Testing - Dave Wilson
  - a. Dave shared his discussion about additional samples and testing with water quality expert, Ed Whereat, at the University of Delaware.
  - b. Based on these discussion Dave recommends that we expand nutrient analysis to four more sites. These will be total nitrogen and phosphorus measured in the Petherton and Brandywine Canal dead ends and the Anchorage and Petherton mid canal locations.
  - c. Expected annual cost is expected to be around \$720.00. This cost can be covered within our current \$4800.00 budget for sampling. Dave will verify this with Ed Whereat and will not proceed until the existing budget is secured.
  - d. Dave will update the budget and submit it to the Committee for information.
  - e. A motion was made and seconded to accept Dave's recommendations. The motion was passed to proceed with this additional sample testing.
4. Statistical Analysis on Data - Brian Moroz
  - a. Brian shared the work he's begun to statistically analyze of the canal water quality sampling we've done over the years.
  - b. The initial objective was to see if there is evidence that any past work has impacted the water quality in our canals by reviewing DO.
  - c. Data clearly showed difference between canals with lower and higher circulation.
  - d. Brian reviewed numerous alternates that could be considered in these reviews and stated all of this was still under consideration.

- e. It is possible analyzing the low and high “spikes” in DO level could be key instead of the averages. However, that is not determined.
- f. At this point in time the analyses are not complete and, there are no clear correlations between the data and the past Town programs to improve water quality. This will take further analysis.
- g. There has been a slight upward trend in DO levels since 2014 in the mid canals but not at the ends of canals. It may be possible to include other variables in the analyses such as rain, wind, turbidity, salinity, nutrients, etc. to more clearly see the trends.
- h. Brian stated he was not certain that regression analyses were better than looking at the averages for seasonal and annual variations.
- i. Dave Wilson agreed to research and identify Town projects and the dates they were initiated .
- j. There were discussions about identification of control sites (such as in the larger bays, etc.) to use for comparison with our canals.
- k. Jack and Brian will try to meet with Ed Whereat from the University of Delaware (Lewes) to gain some additional insights.
- l. Related comments:
  - i. Group highly complementary of Brian’s work.
  - ii. The University of Delaware has large amounts of data that we can access to study external trends.
  - iii. We should focus on the May to September period and separately for the October to April period for insights.
  - iv. We should consider talking to other communities about their sampling and learning. UD would be the most valuable source of information of this.

## 5. Priority Poll

- a. Jack led us through a discussion on the initial results of the priority survey he asked the Committee to complete.
- b. Several of the high priority projects are already underway.
- c. The highest ranked item was to determine alternate ways to reduce nutrients entering canals.
- d. We thought an opportunity would be to review the current Town codes and recommend changes that could result in improved water quality. Derek requested that when we recommend a program that we propose how to implement them and consider the financial impact on the Town and the homeowners.
- e. There was considerable discussion about the effectiveness of the floating wetlands. It was not highly ranked in the poll but some feel it should be reviewed further. Somebody had recommended the plants be changed annually but this could be costly and counter-productive. Dave feels that the floating wetlands at mid-canal locations should be relocated to canal-ends. Gary and Bob agreed to investigate the effectiveness of the floating wetlands in our canals if there are ways we could improve the impact on our water quality.

- f. We also discussed investigating the regulations that other towns / cities with canals are using to improve water quality.
- g. Jack agreed to revise the poll and show projects underway separately to enable the Committee to identify a reviewed priority listing.
- h. This subject will be continued at the next meeting.

CWQC Activity Priority Ranking												
Ranking By:												
Date:												
Item	JLW	GD	DW	JW	GL	KG	PA	RF	CV	Total	Ave	Rank Order
a. Statistical analysis of existing data to evaluate DO results from past programs	3	1	5	3	7	2		6	13	40	5.0	4
b. Continue Citizen Canal Testing (now funded)	1	2	13	1	8	8		1	3	37	4.6	3
c. Expanded Citizen water sampling and Lab testing (funding exists)	2	5	3	2	11	4		2	4	33	4.1	2
d. Study To determine economic and sustainable ways to improve canal circulation	4	6	8	4	6	10		3	5	46	5.75	5
e. Dredging canal ends and other areas to improve water quality and circulation	9	9	6	8	10	6			6	54	6.75	6
f. Maintain existing floating wetlands (now funded)	8	10	1	7	12	3		7	7	55	6.9	7
g. Increase floating wetlands	13	11	2	9	4	5		8	8	60	7.5	9
h. Oyster Gardening – restart program	10	12	12	10	3	9		10	9	75	9.4	11
i. Town, State and Federal Code Review	6	7	10	11	5	13		5	12	69	8.6	10
j. Determine and recommend additional ways to reduce nutrients entering canals (such as stormwater treatment, etc)	5	3	9	5	1	1		4	1	29	3.6	1
k. Canal bubble aeration – restart and/or expand	13	13	11	12	2	0		12	11	74	10.6	12
l. Citizen education - restart	7	8	7	6	9	7		9	2	55	6.9	8
m. Other suggestions			4						10			

*Note: Number 1 is the highest priority*

The meeting was adjourned at 4:00pm.