South Bethany Canal Water Quality Committee
Meetings conducted In-person and Zoom
November 18, 2024

Committee Members Present: Chris Vanuga, Chair, John Beauregard, Town Council Liaison Bob Biciocchi, John Roberts, Pete Trelenberg (Zoom), Dave Wilson
Excused Absence: Chris Carlyle
Public: Mike Smith

The meeting was called to order at 10:02 am.

Minutes from the October 21, 2024, meeting were approved.

South Bethany's standard process for requesting grant proposals was reviewed. Mr. Biciocchi will ask the Council to approve a request for a grant application for the Tidal Flow, henceforth referred to as the Canal Circulation and Tidal Flow Project, as noted below.

The Fall Clean-up contract by Envirotech was discussed. It will be done either this week, Nov 18, or next week. The town will consider enforcing vegetation overhanging the canals to reduce the consequences of leaves and debris entering the canal.

Mr. Biciocchi updated the Committee on the work being done by the Town regarding stormwater management. Check valves are being installed to prevent canal water backflow, and one-way stormwater flow out to the canal system. He is contacting the DelDOT representative to ascertain the plan for Route 1 resilience and stormwater planning. There was a suggestion to encourage any road upgrade on Route 1 with permeable asphalt for the shoulders.

Regarding spring algae harvesting, we need to try to determine by historical precedent when spring blooms have occurred to make the best guess on scheduling requests for the harvester. We should inquire about the harvester's availability for unusual blooms outside of the most common times, as in 2024, there was an early February bloom. We recommend planning a spring algae harvest but be aware of the possibility of unpredictable blooms. Mr. Biciocchi will discuss with the town manager modifying the contract language to reference "early" and late" blooms versus specific timeframes. Some Committee members will run additional analysis to see if more probabilistic estimates for timing can be determined based on the data.

The Committee discussed further the need for hydrodynamic modeling of our canal system and adjacent inland bays. Technological improvements in the models and computational power will allow a more rigorous analysis of our canal system to help better assess, plan, and value interventions. Center for Inland Bays (CIB) is initiating a project to update the more than two-decade-old hydrodynamic model for the Inland Bays. However, the scope will only be the Indian River Inlet Bay and Rehoboth Bay, as the Little Assawoman Bay will not be included. Mr. Vanuga is pursuing any chance that their scope can also include the Little Assawoman, which

directly affects the South Bethany Canal system. CIB will be forming a project working committee, and we will attempt to have a South Bethany representative. Mr. Biciocchi encouraged the involvement to push from the local level to affect the regional and state-level processes.

We reviewed again the several key issues as root causes of poor water quality and our intentions to address them, and where having a hydrodynamic model of the canal system and adjacent inland bays would better support decision-making, grant applications and overall funding requirements over time:

1) Route 1 stormwater runoff - DelDOT update and discussions
2) Town stormwater and properties runoff - check valve and drain maintenance and additional regulations and enforcement
3) Lack of Tidal Flow – Pilot for circulation enhancements between problematic canals
4) Sediment and nutrient build-up – vacuum dredging plan
5) Contamination in general – building a database of pipes into the canal system and taking corrective actions

An update on the Canal Circulation pilot project was reviewed. We're getting an estimate from Johns Hopkins to create a simulation model of our canal system to determine if it would be feasible to engineer modifications to alter and improve the water circulation in the canals. A presentation will be prepared to present to the Council requesting authorization to pursue pilot study grants. The project will be named Canal Circulation and Tidal Flow Pilot to reflect the intent and potential positive impact.

Contact was made to DelDOT regarding the degraded rain gardens. Clarification was provided that all maintenance efforts were the Town's responsibility while additional rain gardens were DelDOT's. Additional guidance was provided on what materials can surround them, too. Bob will work with the town manager to implement the repairs.

We reviewed the latest Water Quality report. The probe is broken and with UD for diagnosis and hopefully a repair. If not, we will attempt to find funding to replace it, including asking UD College of Marine Studies if any support via Sea Grant is available, as the volunteers in town have been providing the data to them for years.

The bacteria levels in the canal are the lowest they've been in a long time, likely due to the lack of rain. This lack of rain supports the hypothesis that canal bacteria mostly enter via storm water run-off, so stopping or redirecting would have a significant positive impact. We reviewed again the interest in posting more water quality information on the website. We will continue to assess what information and the best timing for the postings. Once completed, the next step would be to present it to the Town Council for consideration and guidance.

There was no public comment.
The meeting was adjourned at 11:52