

**TOWN OF SOUTH BETHANY
TOWN COUNCIL WORKSHOP MEETING MINUTES
NOVEMBER 19, 2015**

MEETING CALLED TO ORDER

Mayor Voveris called the November 19, 2015, Town Council Workshop Meeting to order at 2:00 p.m.

ATTENDANCE

PRESENT: Council Members Sue Callaway, George Junkin, Tim Saxton, Wayne Schrader, Carol Stevenson, Frank Weisgerber, and Mayor Pat Voveris; Town Manager Melvin Cusick; and Administrative Assistant Pam Smith

PARTICIPATING BY REMOTE ACCESS: Leslie Fields, Coastal Geologist, Woods Hole Group

PUBLIC COMMENT PERIOD

There were no comments from the public.

FEMA APPEAL – WOODS HOLE GROUP'S (WHG) REPORT ON RESULTS OF TASKS 1 AND 2. LESLIE FIELDS OF THE WOODS HOLE GROUP WILL BE AVAILABLE FOR A CONFERENCE CALL DURING THE WORKSHOP MEETING.

(Task 1: Review U.S. Army Corps of Engineers' design study for Bethany Beach and South Bethany dune project. Task 2: Modeling and flood zone mapping using pre-U.S. Army Corps of Engineers' dune topography and realistic assumptions for erosion.)

Leslie Fields, Coastal Geologist, CFM, of the Woods Hole Group reviewed the November 18, 2015, memo from her to Mayor Voveris. The memo can be viewed on pages 2 – 5 of these meeting minutes. During the review of the memo, Ms. Fields answered questions from meeting attendees.

The recommendation from the Woods Hole Group is to proceed to Task 3 to develop a strategy for appealing the Revised Preliminary 2015 FIRMs based on consideration of the USACE beach and dune project.



November 18, 2015

Pat Voveris
 Mayor, South Bethany
 402 Evergreen Road
 South Bethany, DE 19930

Sent via Email: patvoveris@gmail.com

Re: Update on Tasks 1 and 2 to Evaluate Revised Preliminary 2015 FEMA FIRMs for South Bethany

Dear Ms. Voveris,

I'm providing a brief summary of the Woods Hole Group findings during Tasks 1 and 2 of the study to evaluate FEMA's Revised Preliminary 2015 FIRMs for South Bethany. A more detailed report will be provided as a follow up to this letter.

Task 1: Review of USACE Design Study for the Bethany Beach/South Bethany Coastal Storm Damage Reduction Project

Purpose - The purpose of Task 1 was to review the USACE design study to identify predicted performance of the beach and dune project during the 1% annual chance storm. Results from the USACE model predictions that show the dune project to provide storm damage protection during the 1% chance annual storm would lend support to an argument for including the USACE dune in the FEMA modeling.

Findings

- SBEACH model simulations were performed on the pre-project conditions (before the USACE dune) and on the design beach/dune project. The model simulations included a range of storms (waves and water levels) including the 1% annual chance, or 100-yr event.
- Results from the modeling were presented in a series of tables showing inundation levels and erosion positions, for both the pre-dune conditions as well as the USACE design that was built. For the 1% annual chance event the tables show lower inundation levels and less erosion with the dune project in place, suggesting that the project was predicted to provide storm damage protection.
- We expected the USACE design document to show model results on a cross-section plot, rather than the tables discussed above. The cross-section plots would show the USACE design beach/dune in comparison with modeled erosion during the 1% annual chance storm. The cross-sections would be easily compared with Woods Hole Group erosion simulations on the USACE dune conducted previously for this project, again to lend support to use of the dunes in the FEMA modeling. We have

contacted the USACE for cross-section model results, and are still waiting on a response.

- In the absence of the cross-section model results, the existing design document provides a qualitative measure of project performance during the 1% annual chance storm which supports use of the USACE dunes in the FEMA modeling.

Task 2: Conduct Additional Modeling Using Standard FEMA Methods for Dune Erosion.

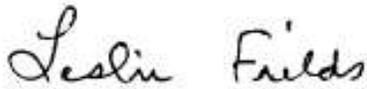
Purpose - The purpose of Task 2 was to model the 2005 pre-USACE dune topography using standard FEMA methods for dune erosion. The resulting flood zone maps from Task 2 can be compared with FEMA's Revised Preliminary 2015 FIRMs which were based on non standard erosion methods applied to the 2005 pre-USACE dune topography.

- Two primary issues were identified with FEMA's 2015 modeling of the pre-USACE dune conditions: (i) the dune erosion does not follow FEMA's standard methods for dunes with cross sections less than 540 sq ft above the 1% annual chance water level, and (2) the bathymetry used by FEMA to represent the nearshore portion of South Bethany has a significantly lower slope than seen in the measured data.
- FEMA used the dune retreat method of erosion on the pre-USACE dune topography. Dune retreat is the standard method of erosion for features that have cross sectional areas greater than 540 sq ft. The pre-USACE dune topography does not meet the 540 sq ft criteria, and therefore dune removal should have been applied. Further, FEMA used non standard slopes to retreat the dune. It appears the slopes were derived from post storm survey data collected on the USACE dune. There is no justification for applying empirical erosion data from the USACE dune to the much lower and flatter 2005 pre-USACE dune topography. Figure 1 shows a comparison between the various methods of dune erosion for a representative transect in South Bethany.
- FEMA used erroneous bathymetry to represent the nearshore portion of South Bethany. The water depths and slopes are not supported by actual survey data collected by the USACE, which show a much steeper nearshore profile. Nearshore slopes modeled by FEMA were 1:800; the USACE data show the slopes to be 1:30. Figure 2 shows a comparison of the nearshore slopes for a representative transect in South Bethany.
- Woods Hole Group conducted revised modeling on the 2005 pre-USACE dune topography. The modeling included a corrected nearshore profile based on actual survey data collected by the USACE, as well as revised dune erosion following standard FEMA methods. Our revised transects are shown in both Figures 1 and 2.
- The revised Woods Hole Group dune erosion was not constrained to stop at Ocean Drive, as FEMA assumed in their non standard method. Erosion beyond Ocean Drive (for the pre-USACE dune conditions) is supported by post storm photos submitted to FEMA when the 2013 Preliminary FIRMs were challenged.
- Flood zone mapping based on the Woods Hole Group revised modeling shows risks similar to FEMA's Revised Preliminary 2015 FIRMs, and in some cases along the west side of Ocean Drive, the risk is actually increased (Figure 3).

- The results of Task 2 alone do not provide justification for an appeal of FEMA's Revised Preliminary 2015 FIRMs.
- The revised mapping based on Task 2 is consistent with photographic evidence of storm damage to the area before construction of the USACE dune in 2008.
- The revised mapping is accurate for the conditions that existed in 2005, but not for the conditions that exist today.

We recommend proceeding to Task 3 to develop a strategy for appealing the Revised Preliminary 2015 FIRMs based on consideration of the USACE beach and dune project.

Regards,



Leslie Fields
Coastal Geologist, CFM

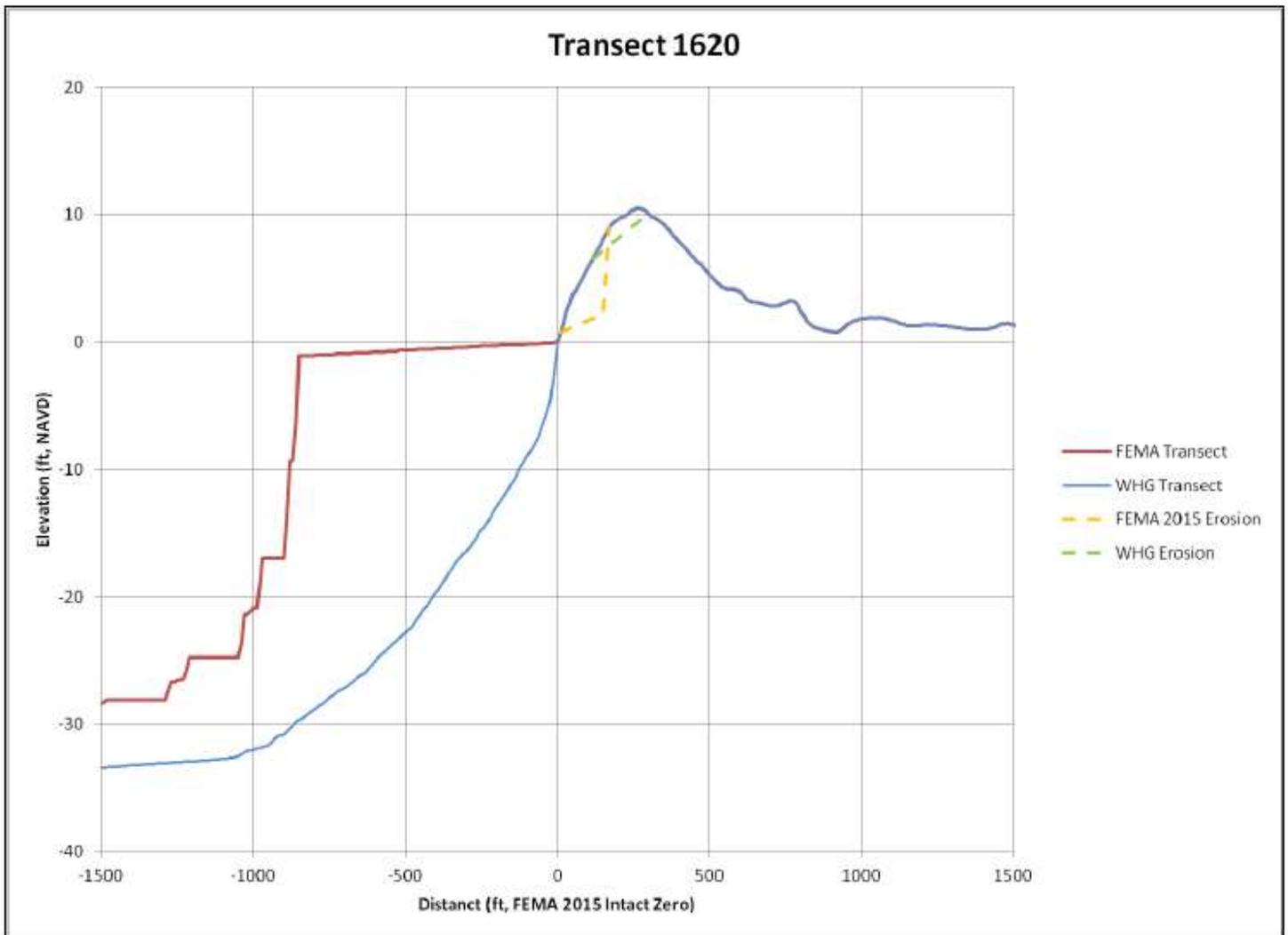
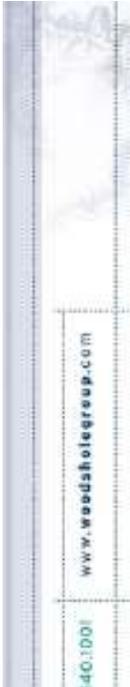


Figure 1.

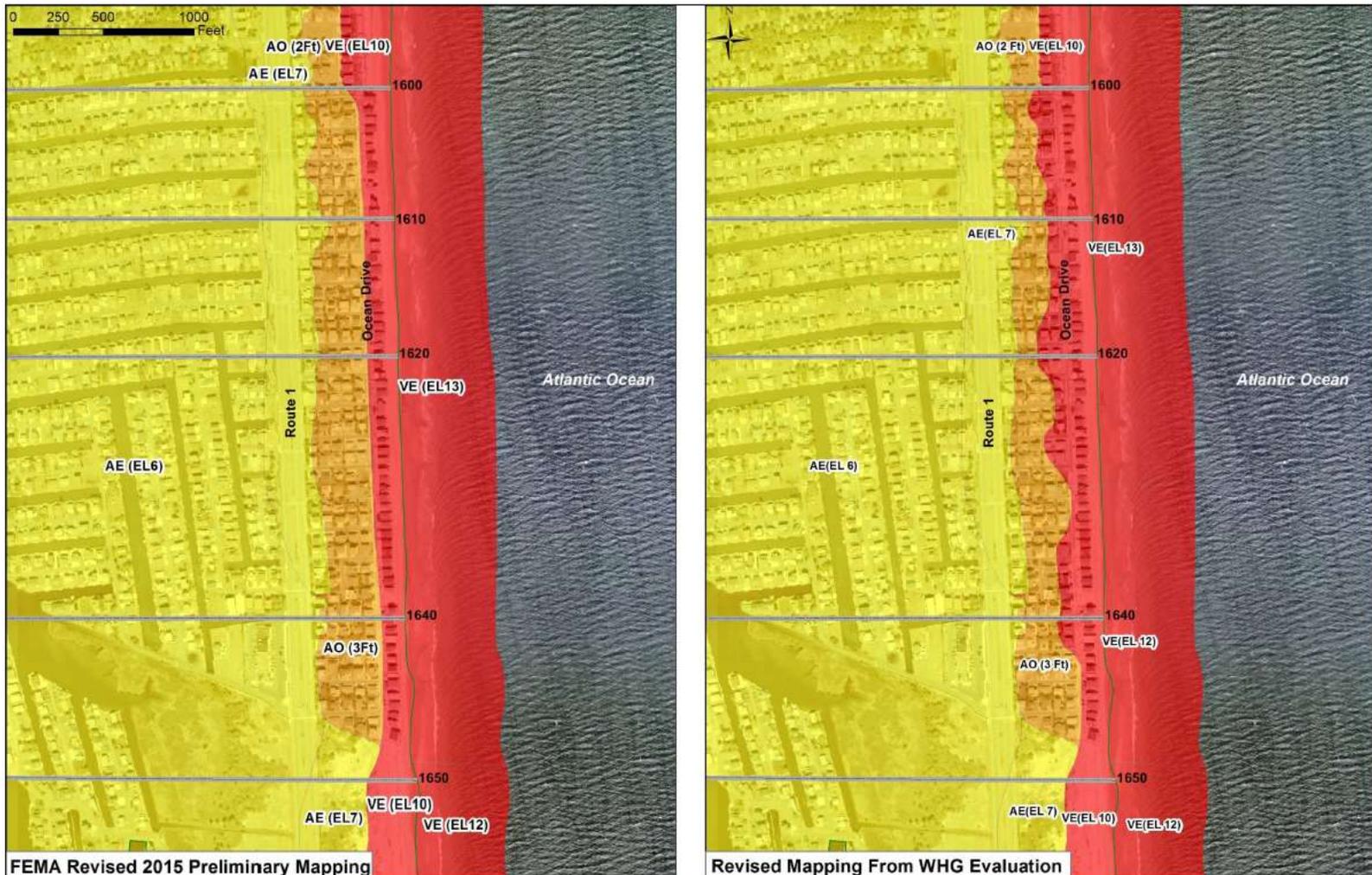
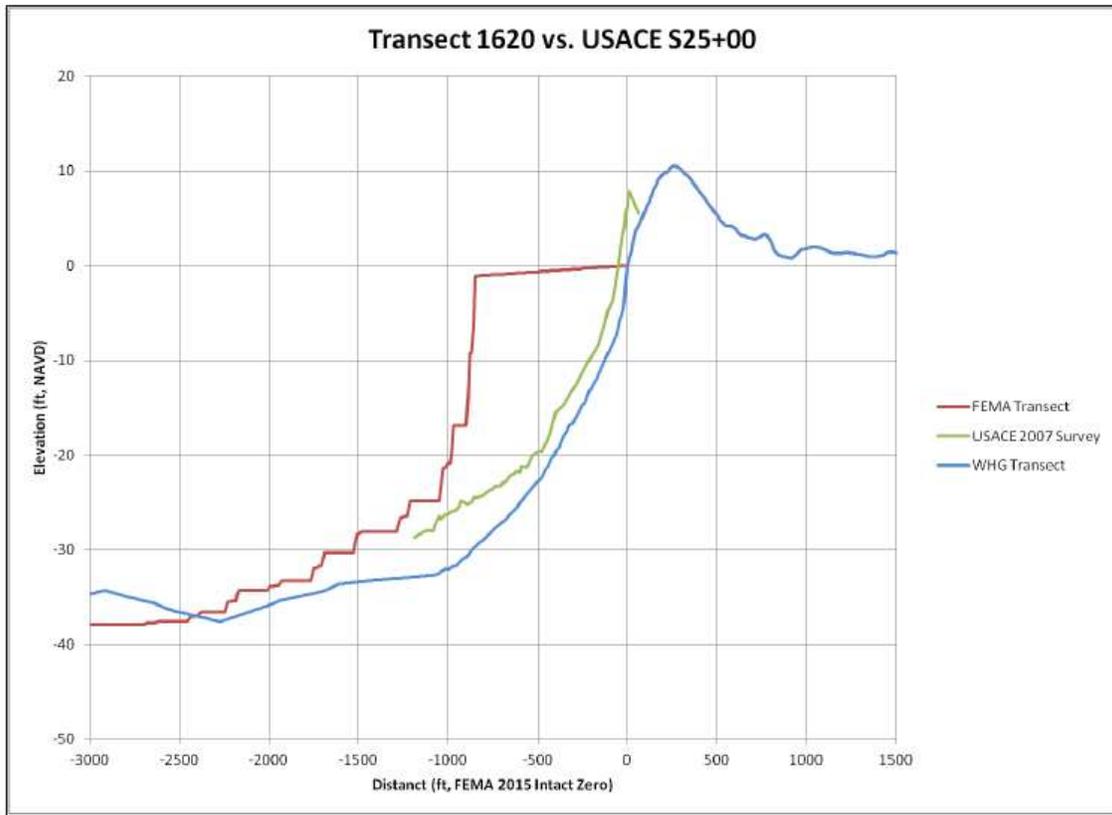


Figure 3.

PUBLIC COMMENT PERIOD REGARDING THE WOODS HOLE GROUP'S REPORT ON RESULTS OF TASKS 1 AND 2.

There were no comments from the public.

DISCUSSION AND POSSIBLE VOTE TO DIRECT THE WOODS HOLE GROUP (WHG) TO PERFORM TASK 3 AND PROVIDE RESULTS OF SUCH AT THE DECEMBER 11, TOWN COUNCIL REGULAR MEETING

(Task 3: Develop strategy for appeal of Preliminary FIRMs)

Motion and Vote: A motion was made by Councilman Junkin, seconded by Councilman Saxton, that Council direct the Woods Hole Group to do Task 3. The motion was unanimously carried.

ADMINISTRATIVE MATTERS

- **Consideration and Possible Vote to Award Bid No. 15-05 Trash, Recycling, and Yard Waste Collection**

Council received a memo from the Town Manager which included the following attachments: 1) Bid Tabulations, 2) Bid Proposals from Republic Services and Waste Industries, 3) The current FY 2016 rates (May 1, 2015 – April 30, 2016), 4) Analysis of the costs which show the yearly savings and cumulative five year total savings based on the current FY 2016 costs, and 5) The estimated cost per household for the five year period which shows a 3% yearly increase over the base FY 2017 cost proposal submitted. This is \$66,077.00 less than the current FY 2016 costs. The Town Manager stated that the contract would take effect May 1, 2016. The Town Manager recommended that the contract for Bid 15-05, Trash, Recycling, and Yard Waste Collection in the amount of \$1,638,431.00 be awarded to BFI/Republic Services for the five year period.

Motion and Vote: A motion was made by Councilman Junkin, seconded by Councilman Saxton, to award Bid No. 15-05, Trash, Recycling, and Yard Waste Collection to BFI/Republic Services for the five year period. The motion was unanimously carried.

- **Approval of the FY 2016 Ambulance Service Budget**

Council received a memo from the Town Manager with the 2016 Ambulance Service Budget and Budget Explanation attached. The Town Manager stated that the Bethany Beach Volunteer Fire Company and the Ambulance Service Sponsors (Towns of Bethany Beach, Fenwick Island, and South Bethany and the community of Sea Colony) have approved the budget. The Town Manager stated that the fees for 2016 will remain the same with no increase. The Town Manager said that the Ambulance Service has paid off their loans for the first two ambulances which has produced quite a bit of savings.

Motion and Vote: A motion was made by Councilman Junkin, seconded by Councilman Saxton, to approve the FY 2016 Ambulance Service Budget. The motion was unanimously carried.

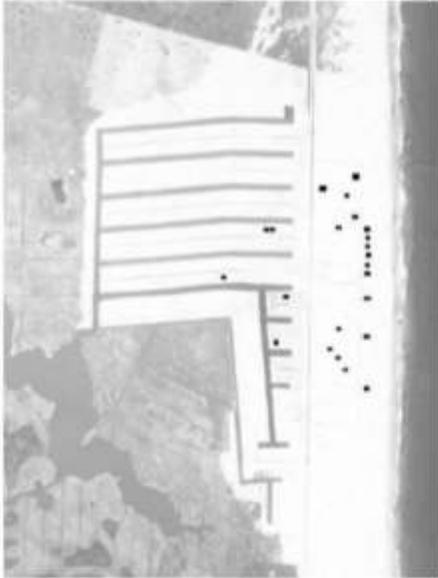
CANAL WATER QUALITY PRESENTATION TO TOWN COUNCIL

Councilman Junkin gave the following PowerPoint Presentation using the overhead projector. Throughout the presentation Councilman Junkin took questions and there was discussion.

WELCOME TO SOUTH BETHANY

**Canal Water Quality
Presentation to Town Council
Emphasis on Need for a Future Circulation Study**

WELCOME TO SOUTH BETHANY History of Monitoring Studies Shows That Increased Population Density/Impervious Surfaces Is Decreasing The Quality Of The Water In Our Canals



In July 1954 South Bethany Canals Were Fishable and Swimmable

Development Has Reduced The Water Quality In South Bethany Canals



Goals of the CWQC

- The South Bethany Water Quality Committee (CWQC) was formed in June 2007 with the goal to make the South Bethany Canals “Fishable & Swimmable.”
- In order to accomplish this they are following the guidance from the Delaware Center for the Inland Bays (CIB) as outlined in their Comprehensive Conservation Management Plan (CCMP).
 - Objective 5 from the CIB CCMP addendum – Reduce nutrient input to residential canals and lagoons
 - CCMP action 5. D – Examine dead-end canals to determine if any could benefit from low-cost solutions to increase flushing.



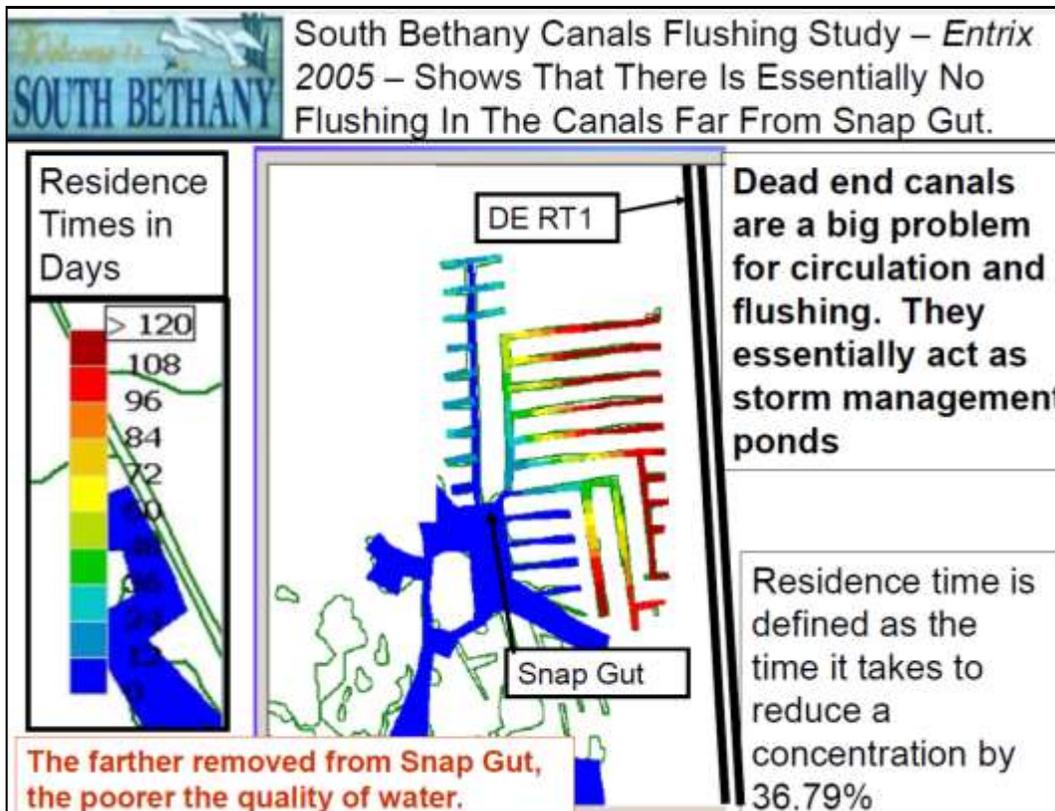
2011 State of the Delaware Inland Bays

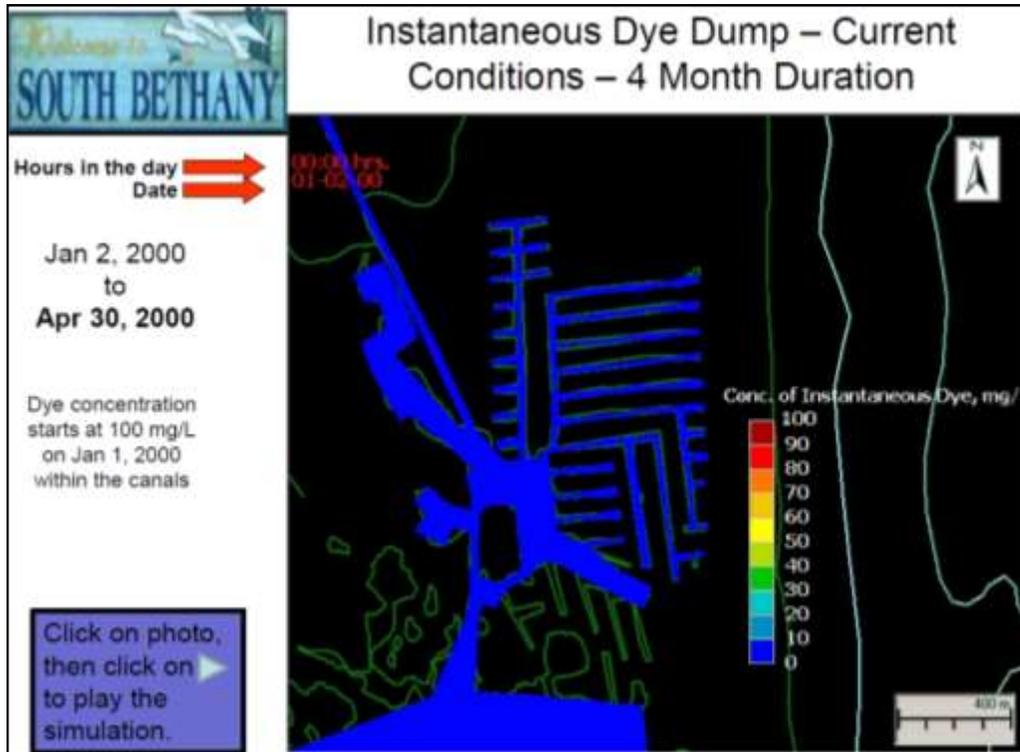
- **The *2011 State of the Delaware Inland Bays* report characterized water quality in the Inland Bays as fair to poor, with the best conditions occurring in waters closest to the flushing effects of Indian River Inlet and the worst conditions in those areas farthest from the beneficial effects of tidal exchange through the Inlet.**
- The report noted that Indian River Bay continues to show evidence of an overall decline in water quality.



Objective 5 from the CIB CCMP

- **Reduce nutrient input to residential canals and lagoons.**
 - Action A. Treat or remove graywater discharges into tributaries, canals, and lagoons. *Performance Metric. Number of graywater discharges treated or removed.*
 - Action B. Filter runoff from roofs, driveways, and other impervious surfaces. *Performance Metric. Number of projects implemented.*
 - Action C. Provide and disseminate educational material for homeowners on reducing fertilizer inputs to tributaries, canals, and lagoons. *Performance Metric. Materials are distributed.*
 - Action D. **Examine dead-end canals to determine if any could benefit from low-cost solutions to increase flushing.** *Performance Metric. Candidate sites for additional tidal flushing are identified.*





Administrative Assistant's Note: Councilman Junkin played the simulation in the above slide during the meeting, but playing the simulation is not an option in these meeting minutes.





Action 5. D – Examine Dead-end Canals To Determine If Any Could Benefit From Low-cost Solutions To Increase Flushing.

- Identified Options
 - Tidal Pump (>\$7M) – **NOT** low cost, but comes closest to providing the benefits provided by an inlet. Probably is the best solution to improve water quality for dead end canals.
 - Pump water from one canal to an adjacent canal at the dead ends of the canals. This has not been assessed or implemented as of now.
 - Connect canals to Little Assawoman Bay. This has not been assessed or implemented as of now.
 - Other??? – We are open to suggestions.



The Tidal Pump Would Provide Flushing & Circulation To The South Bethany Canals

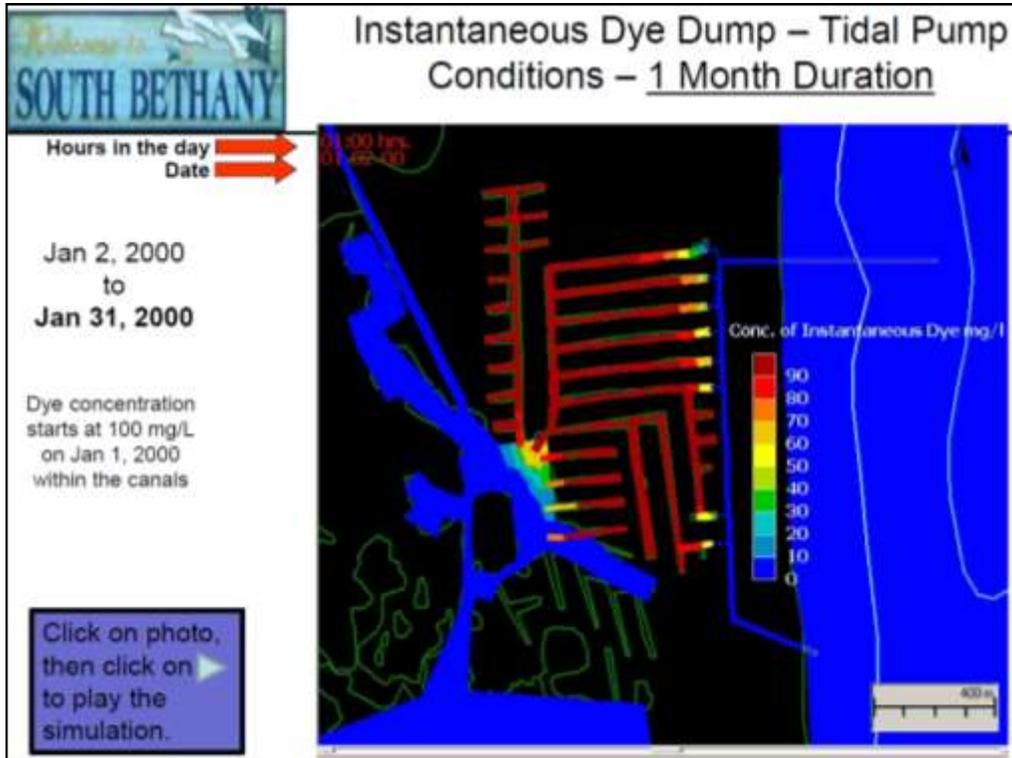


Benefits

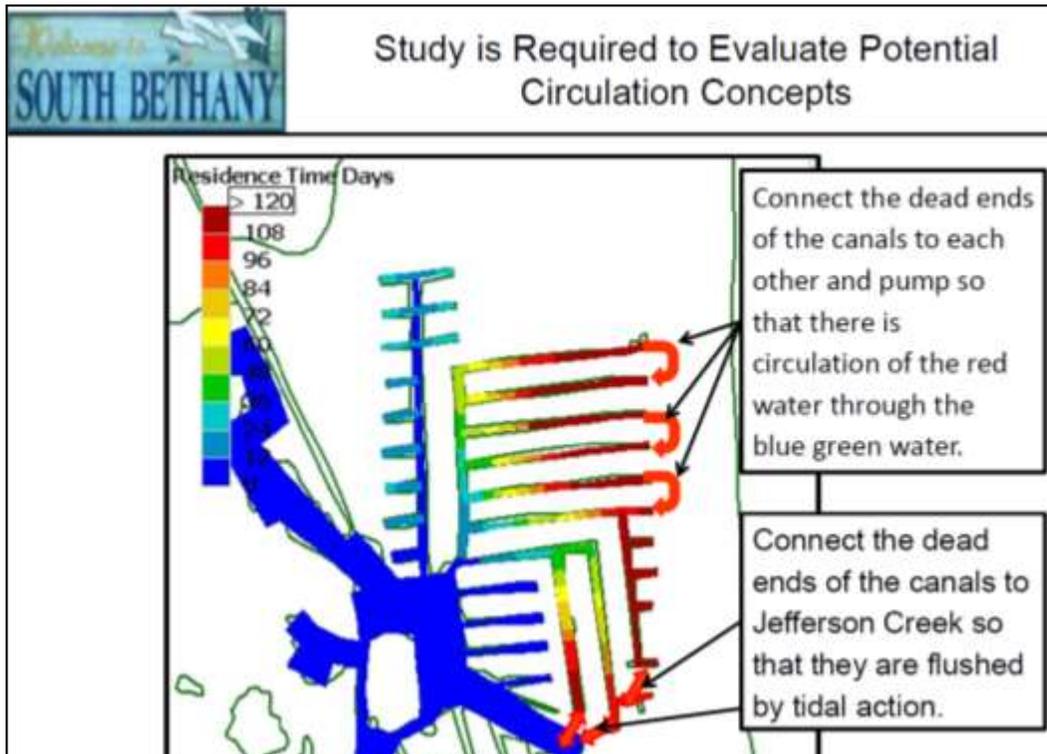
- Provides Flushing & Circulation
- No Impact to the Shore Line
- No Bridge Required

Legend

- 9 Man Holes
- ⌘ 2 Electrically Powered Gate Valves (36\") in Median
- ⌘ 8 Manual Gate Vales (18\") at Canals



Administrative Assistant's Note: Councilman Junkin played the simulation in the above slide during the meeting, but playing the simulation is not an option in these meeting minutes.





Submersible Pumps Are Not Too Expensive. They Have Been Used To Circulate Water For Oyster Gardeners



WellSpring Submersible Pump
 The WellSpring is a submersible pump that is designed for easy in pond, skimmer, or sump installation. The high quality components and durable construction insures efficient operation and long term reliability. The impeter is a semi-open design that helps prevent clogging. The water proof cable and seals protect the pump motor. The pump has overload protection that prevents motor burn out. The pumps are constructed of stainless steel that helps fight corrosion. The spring loaded mechanical seal meets API regulations and has a life expectancy of over 100,000 hours.

Part #	HP	Amp	10	20	30	Weights	Price
WS18	1/8	1.9	20	8	-	12 lbs.	159.00
WS25	1/4	2.9	33	15	-	18 lbs.	290.00
WS33	1/3	4.0	56	30	-	23 lbs.	340.00
WS50	1/2	5.6	84	58	29	25 lbs.	399.00
WS100	1	9.5	100	78	58	27 lbs.	470.00

- 1,600' X 50' X 5' Canal contains 3,000,000 gallons of water.
- A 300 GPM (~7,000 GPH) pump would exchange the water in the canal in 7 days

13



Other Communities Are Addressing Their Dead End Canal Circulation Issues With **Pumps** and Culverts





Summary

- Goal is to make South Bethany canals "Fishable and Swimmable". In order to accomplish this:
 - Continue to reduce the pollutants that are entering South Bethany Canals.
 - Introduce retrofit strategies (i. e. bioretention, rain gardens).
 - Provide information to our community on ways that they can help improve the quality of water in our canals.
 - Work with the CIB and local government agencies to ensure we are using best management practices for controlling pollutants. Examples are median bioretention areas, east and west side rain gardens, Sandpiper Pines Retrofits.
 - Proposed study to asses potential concepts for improving circulation in the SB canals.

**COMMITTEE POLICY REVIEW – DISCUSSION AND POSSIBLE VOTE ON
RECOMMENDATIONS FROM THE AD HOC COMMITTEE APPOINTED TO DEVELOP A
POLICY FOR SOUTH BETHANY COMMITTEES**

Mayor Voveris thanked Council Members Callaway, Saxton, and Schrader for their efforts on developing a draft policy for South Bethany Committees.

Mayor Voveris said she does not think this is a policy that Council will decide on today. Mayor Voveris thinks this is a policy where Council will have a number of discussions. This is Council's first review.

Councilwoman Callaway led the discussion for this agenda item. The following changes were discussed:

Page1:

Standing Committee definition: A Committee that carries on continuing Town work **expected to be greater than one year** ~~on a multi-year basis in excess of five years.~~

Ad Hoc Committee definition: An Ad Hoc Committee is one created by the Mayor and Town Council to address a pressing and separate distinct issue, and will generally have a **short term** period of performance of less than ~~five years~~ **one year**. Mr. Gross (1 S. 3rd St.) suggested adding, **After a year, if necessary, the Committee can be reappointed.** Mr. Gross suggested that it is not necessary for an Ad Hoc Committee to have a member of the Town Council on the Committee.

Move the committees in the Ad Hoc Committee definition (Charter & Code, Communications & Public Relations, and Sea Level Rise and Storm Surge) to the Standing Committee definition.

Page 2, First paragraph, last sentence: Mr. Gross suggested changing Town Council to Mayor and Council. Mr. Gross suggested that this should be consistent throughout the document.

Page 3, Item 5: After discussion, Council agreed to think about whether to include this paragraph or delete it.

Page 4:

Item 1a: Council agreed to delete this item and Items b and c would become Items a and b.

B (Tracking of progress toward the Committee's goals and objectives) – Councilman Junkin suggested that the items listed should be different for Ad Hoc Committees. Councilman Junkin said that when an Ad Hoc Committee is established Council should establish what the reporting guidelines are for that Committee.

Page 5:

Item E: Councilman Junkin pointed out that the Charter and Code Committee may have a problem if the Charter and Code Committee is a Standing Committee. This led to a discussion as to whether or not membership includes non-voting members. Councilman Schrader said he thinks Membership should not include non-voting members because non-voting members would not be counted for a quorum. There was a consensus to insert the word "voting" before the word "members".

Item F: Mr. Gross suggested that this should not pertain to Ad Hoc Committees. Council agreed.

Item K: Councilwoman Callaway said she will send the Committee Participation Request Form to Council.

Committee Pages:

Budget and Finance Committee Mission/Purpose: Councilman Saxton said he will continue working on revising the Budget and Finance Committee's Mission/Purpose.

Charter and Code Committee: Councilwoman Callaway will integrate the items under "Process" from a previous version into Scope of Work with approval by Chair, John Fields.

South Bethany Canal Water Quality Committee Mission/Purpose: To improve water quality within the South Bethany canal network, ***with the goal of making the South Bethany Canals "Fishable and Swimmable"***.

Mr. Gross suggested including the Board of Adjustment (BOA) and the Planning Commission in the guidelines. Because the BOA and the Planning Commission are statutorily mandated by state law, Council agreed that they should not be included in the South Bethany Committee Guidelines.

Councilwoman Callaway will send Council a revised version of the guidelines sometime in January. Mayor Voveris said that possibly Council would wrap up the guidelines in March.

PUBLIC COMMENT PERIOD

There were no comments from the public.

ADJOURNMENT

A motion was made by Councilman Saxton, seconded by Councilman Weisgerber, to adjourn the November 19, 2015, Town Council Workshop Meeting at 4:20 p.m. The motion was unanimously carried.

phs: PHS:2015 11 19 Workshop Minutes Approved 12 11 15