



January 30, 2019

Judy Davies-Dunhour, Mayor  
Borough of Stone Harbor  
9508 Second Avenue  
Stone Harbor, NJ 08247

Re: SHPOA Priorities 2018-19 for Borough Flood Management Program

Dear Judy,

This correspondence is the last in a series of letters from SHPOA that present key actions we believe the Borough should focus on during this fiscal year. Letter one dealt with how the beaches of the Borough should be monitored, maintained, replenished and financed. Letter two discussed similar actions (monitoring, dredging, financing) for the Borough's bays and channels. This letter prioritizes actions that we believe SH should complete this year on the program to reduce flooding in the Borough and on the Island. SHPOA believes that a review of the brief history of our input on the Flood Management Program would provide context for this letter. In August of 2017, SHPOA testified at a Council meeting on the draft Flood Management Plan. We had not seen the plan but had observed a workshop on the Plan by a Borough consultant. Our initial thoughts were:

1. The Borough needed to form a Blue-Ribbon Panel of experts to peer review the Draft Flood Management Plan given the costs involved (\$25-\$50 million) and the importance to the Island's sustainability.
2. Maintenance of flap gates, bulkheads and correction of the Borough's marina launch ramp elevation needed immediate action as they caused so many localized flooding events.
3. The Flooding Program costs need to be incorporated into the SH 10 Year Financial Plan the Borough was preparing. SHPOA has been consistent in requesting that the Borough complete the 10 Year Financial Plan for 4 years.

SHPOA followed our testimony with a detailed letter (attached) submitted in September 2017. The Chair of our Beach and Bay Committee, Wally Bishop and I met with you and Borough Administrator Jill Gougher several months later to discuss the letter's recommendations and how important SHPOA felt they were to protect the Island and eliminate flooding. After much discussion, it was agreed that the Borough would prepare a written response.



SHPOA appreciates the accomplishments of the Borough over the last year to reduce flooding – most importantly the new bulkhead regulation and standard. Additionally, we offer the following recommendations for actions in the coming year:

1. Formalize the Blue-Ribbon Panel of experts and peer review the Flood Management Plan before it's finalized.
2. Complete design of the Stormwater Pump Station after receiving peer review comments.
3. Complete the fix for the marina boat ramp elevation problem by installing a tide and flood barrier.
4. Complete permitting and design review for lowest bulkheads in Borough and initiate construction.
5. Insure flap gates and duck bills are installed on all storm drain outlets and are operating correctly.
6. Incorporate Flood Management Plan costs in SH 10 Year Financial Plan.
7. SHPOA 2017 Project of the Year partially funded, with the Borough, a project to install flood monitoring gauges throughout the Borough. The report on the monitoring results and the effectiveness of the program needs to be issued and included in the flood planning.

SHPOA has consistently offered our support and partnership with this vital initiative. Our members recognize that prevention of flooding is a cornerstone of Island sustainability and protection of their properties. Your actions and accomplishments toward this goal are appreciated and “moving the ball forward” is an utmost priority for SHPOA. We stand ready to assist in any way possible.

Best Regards,

Bob Charamella  
President, Stone Harbor Property Owners Association



September 6, 2017

Jill Gougher, Borough Administrator  
Borough of Stone Harbor  
9508 Second Avenue  
Stone Harbor, New Jersey 08247

Subject: SHPOA Comments on Draft Flood Management Plan

Dear Jill:

This letter is a follow-up to preliminary verbal comments provided by the SHPOA at the August 15, 2017 Council meeting. The comments were in response to the Draft Flood Management Plan (FMP) presented to the Council by Stone Harbor's consultant at the earlier Workshop Session. The SHPOA recognizes that the Draft FMP is a work in progress as the Borough looks at a long term strategy to the flooding issues facing our residents and businesses. Nonetheless, we are engaged as a partner to assist in making the plan professionally sound, innovative, cost effective and adaptable. Our comments are grouped under the categories of Immediate, Near Term, and Long Term actions.

**Immediate:**

The Draft FMP points out that the storm drain outlets in the Bay are often submerged by tides and a source of flooding. The report indicates that less than half of the outlets owned by the Borough and the County have flap gates installed to prevent tides from entering the outlets and flooding the streets. Further, the report indicates that several of the installed flap gates were observed to be stuck in the open position. The Borough should identify outlets without flap gates or duck bill-type check valves (around 10) that are priorities for causing flooding and immediately install duck bill rubber check valves. Additionally, an intensive maintenance and pre-storm inspection program should be instituted to assure existing flap gates work and will close.

The final Flood Management Plan should be a long term strategy which is updated every two years based on changing conditions, new data and evolving technology and equipment. Real time data of flood causes will be vital. The SHPOA has selected to partially fund an August 10, 2017 proposal sent to the Borough by the Coastal Research Center as its 2017 Project of the Year. We hope the Borough will take action to budget the required matching funds. We note that Avalon and Longport have already proceeded with this program.

To ensure the FMP is the best possible plan, a Blue Ribbon Panel of storm drain experts should be convened immediately to review and provide input. This "Peer Review Team" of at least three experts can ensure the Plan is practical, uses proven solutions, and is cost effective in its proposed actions. The Panel should be used now as the Plan is being developed, again when the Plan has its final draft, and in all subsequent updates. We have provided you with the name of an individual and firm who can assist the Borough with organizing this work. We would suggest they look closely at the Plan's suggestion that radio operated mechanical sluice gates be utilized on critical storm drains. These type of gates have a checkered past for performance experiences and are high maintenance. The Panel should also review the recommendation to build eight Pump Stations.

Avalon is currently starting a Flooding study which should be coordinated with Stone Harbor's Planning. This is an island, comprised of two boroughs. What Stone Harbor does & Avalon does needs to be



coordinated and consistent to ensure success. Avalon is using 25, 50 & 100 storms as a yard stick for what needs to be done. Your draft plan refers to a 10 & 25 year storm events as its initial measuring stick.

We believe you should know the impacts of a 25 & 50 year storm event on the current system and the proposed long term system. The 100 year storm will be cost prohibitive to plan for; however, since this is a plan that will be long term in its vision and most likely be the largest investment of taxpayers' dollars in the Borough's history, a 25 year storm event should be a minimum design standard. The final Plan can look at 50 & 100 year events to see how it would perform.

Finally, the SH boat launch ramp has been identified as a serious source of flooding as its elevation is lower than the surrounding bulkheads and the cause of flooding in the marina area. An immediate short term fix using stop logs and sand bags when tide events are indicated at elevations above the ramp elevation should be designed and ready for installation. This temporary solution can work until a more permanent (inflatable dam or other) solution can be identified and built. Flooding this area of the island by a recreational facility should not be tolerated and allowed to continue.

### **Near Term:**

The current draft FMP proposes the construction of eight pump stations to connect the existing gravity drainage system into a pumped force main system. This is a dramatic change from what is currently in place and needs careful review and alternatives analyzed. The capital costs associated with this is a large sum in the range of \$15 to \$30 million and the annual operating and maintenance of the new pump stations can be over \$2million/year depending on backup generators, standby pumps, below ground construction and shielding and noise abatement. A review of ways to minimize the number of pump stations by alternative approaches which may increase capital costs but eliminate operating expenses and community impacts needs to be analyzed. This is something for the Blue Ribbon Panel to address with your consultant. Alternatives may be compatible with the need to increase size of exiting storm drains where identified as too small. Another area of study would be cost effective ways to raise and cap bulkheads to the new elevations. Older bulkheads will need to be replaced at the height the Borough specifies. However, newer bulkheads can be capped and raised two to four feet.

The Borough's new 10 year Financial Plan is under development. As a near term issue, the Financial Plan should incorporate placeholders for investments required by the Flood Plan including the annual Operating and Maintenance increase for new facilities. These placeholders are broad costs which can be refined in subsequent updates.

### **Long Term:**

The Stone Harbor Flood Management Plan should have a 10-25 year horizon. Costs including bulkhead raising can be over \$50 million and will need to be staged, phased in and spread out. When the annual cost of the new flood facilities are added to the cost of beach renourishment, basin and bay dredging, and water conservation and supply issues, a \$100 million present worth price tag over this time frame appears realistic. How those costs are included in the 10 year Borough Financial Plan and balanced against existing needs is a critical long term question but vital for island sustainability. Placeholders for each of these four critical programs when exact costs are not known need to begin in the 10 year Financial Plan and annually updated as actual cost are verified.

In summary, Stone Harbor is to be commended for beginning the planning for flood management, one of the four critical underpinnings for island sustainability. The other's beach renourishment and maintenance, basin and bay dredging and water usage and conservation will need their own long term plans. Ultimately, the costs and timing will need to be incorporated into the 10 year Financial Plan.



Changing weather and tides, ocean rising, land subsidence are requiring these types of analysis and planning for the long term health and sustainability of our island. The SHPOA has identified these issues as vital to our members. We are committed to working as partners with the Borough to prepare the best plan possible. Thanks for starting this vital work and requesting our input.

Sincerely,

Wally Bishop, Chair  
Beach and Bay Committee  
SHPOA

cc: Judy Davies-Dunhour  
Josee Rich