SEASIDE PARK BAYFRONT FLOODING ADVISORY COMMITTEE

August 20, 2024

To: Mayor Peterson

From: Bayfront Flooding Advisory Committee, Charles Appleby Chairman

Re: Recommendations, Post RVE Presentation

Sir,

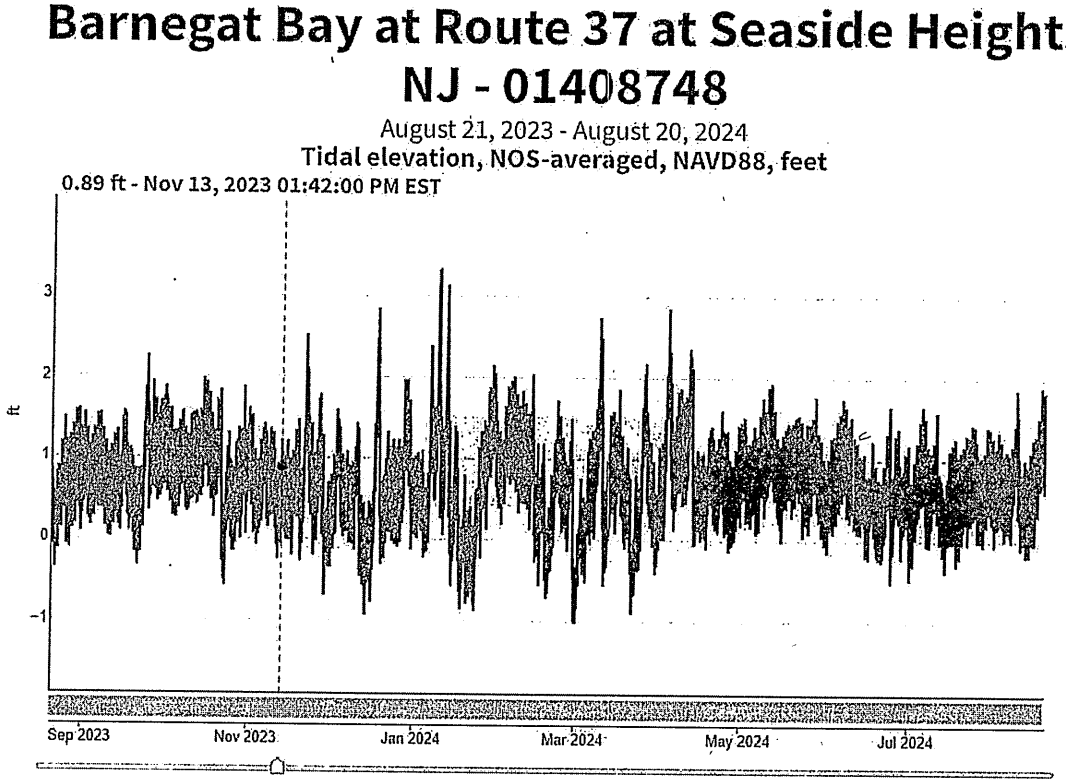
The committee met with the Mayor and Council in an open public forum/workshop on 18 July 2024 to review and discuss a newly, RVE, proposed fast track bulkhead construction project that would span all of Bayview Avenue. The committee has discussed the proposal and provides the following recommendations:

1) Situation: The RVE proposed concept options have gaps in data.
   a. Recommendation: The following gaps in data that should be obtained and evaluated to provide a detailed understanding of existing conditions:
      i) NJDOT pump stations:
         (1) The as builds for the construction, pump capacities and pump rate charts, design specification, etc... and all the he system component details (holding tanks, Manufactured Treatment Devices, Capture zone calculations, etc...), storm water capture zone and stormwater calculations of the contributing storm water areas outside the pump station designed capture zones.
      ii) As built detailed construction design for the western waterside of the bulkhead including dune profiles, Wetland delineations, and SAV assessments.
      iii) Detail construction designs of the proposed replacement of the storm water catch basin and valve operation to maximize the stabilization of sand and minimize lateral movement of sand along the beach.
      iv) Tide data for the last 14 years and the assessment to identify the various percentiles 60, 70, 80, 90, 100 of highest observed tide to evaluate the preferred height of the bulkhead. Other pertinent information, exiting bulkhead and bay structure elevations, pump station generator elevations, etc...
      v) Engineering proposal from NJDOT to fund and install permanent substation generators above flood elevation as was originally designed.

2) Situation: Requirements and timelines associated with required permitting based on anticipated tasks.
   a. Recommendation: identify all NJDEP, USACE, other, permit types and create a list with estimated or mandatory timelines, costs, effort to complete etc...

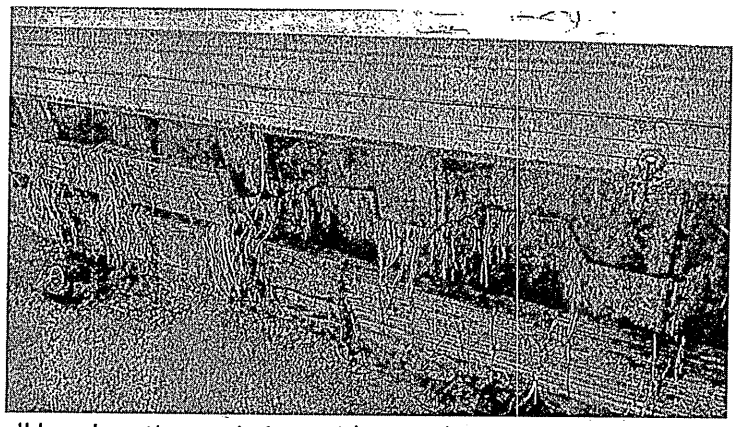
3) Situation: The RVE Proposal removed all existing stormwater gravity outfalls and relies on the two NJDOT pump stations to move all stormwater to the bay.
   a. Recommendation: The proposed design removed the outfalls that provide structure in the form of a groin system to hold sand and stabilize the beachfront. The current system also provides a gravity flow stormwater management system that will function when and if the pump systems fail to work as designed. By rebuilding the current outfalls as originally designed with the addition of remotely operated mechanical gate valves (not flapper valves), the stormwater can be managed optimally. A "Operations Plan" maintained and operated by the Borough would open and close the valves allowing for stormwater to drain from the streets as well as prevent tidewater from flooding the streets based on various conditions. As stormwater accumulates west of the barrier during times of high tide and closed valves, the stormwater will flow to the inlets of the two NJDOT pump stations and be pumped to the bay. It is anticipated that Bayview Avenue flooding would be reduced based on the capacity of the NJDOT pump stations to remove the stormwater. This can be calculated and modeled to assess the systems functional capacity based on the stormwater loading etc....
4) Situation: The elevation of the proposed barrier (bulkhead) is proposed at 5Ft NAVD 88.
   a. Recommendation: The proposed elevation 5ft. would place the proposed bulkhead 3 ft. above the current bulkhead at 10th Avenue. This elevation is significant and would greatly impede access to the bayfront. Further discussions on the proposed elevation for the complete barrier is recommended. A review of recent flooding data (https://waterdata.usgs.gov/monitoring-location/01408748/#parameterCode=72279&period=P7D&showMedian=true) found the highest tide for the last 12 months was January 10, 2024 was 3.26ft NAVD 88. We believe that flood tide was the highest since 2013. That height is just inches above the existing bulkhead height in some areas. This height also corresponds to the elevation of the Marina bulkheads. The majority of the flood waters come through the storm drain systems and the low areas of reduced or no curb height at times of flood tides. A review of existing information and the gap data (issue#1) is needed by the stakeholders (to include DPW, Borough Marina, Yacht Club, etc..) to conclude an appropriate finished height to be primarily protective of floodwater inundation as well

as preserve access to the bayfront recreational areas.



5) Situation: The SAV (Subaquatic Vegetation) of the proposed bayfront work area is expansive (Bayview Avenue west to the Borough riparian line), has been identified as a probable critical habitat/primary concern by federal regulators. There has been only fragmented SAV assessments completed over the years (latest almost four years ago), associated with individual projects, but no complete/factual baseline assessment of the whole proposed impacted area.
   a. Recommendation: The Borough should compile all existing survey data and map it (over time) as appropriate. That data is anticipated to be very limited and not represent the potentially impacted areas of the proposed project. Based on the data, additional assessments should be performed ASAP, to establish a baseline of SAV and other bay floor geographic (depth) and physical (soil) properties. This data will provide an assessment of existing SAV and determine if the area is capable of supporting SAV natural development.
6) Situation: Proposed improvements should be sustainable, maintainable, and upgradable in the future.
   a. Recommendation: The selected design of the seawall barriers should permit future expansion capability to permit additional height as sea level rises. A section of the current bulkhead in the vicinity of D Street appears to have raised with an extension of bulkhead sheeting and cap (see photo). This design may not be optimal and improvements using modern materials should be evaluated. In a similar way, storm

water catch basins should be planned to allow for the raising of Bayview Avenue during future paving work. If the road were to be raised 4-8 inches, the basins should be designed to allow for inlet basin risers to be added as needed using value engineering. The overall design of the project should take into consideration, work done in other parts of the world and that are appropriate for our specific site conditions in Seaside Park. Discussions amongst the stakeholders would be productive to that end.



Bulkhead section, existing, with completed extension in height

7) Situation: The residents of the Borough need information and action. Numerous comments have been made at Council meetings and directly to committee members requesting "What and when" mitigation work will be done. Additionally, Borough residents from bayfront areas north of "I" street have asked what is being done to mitigate flooding in those areas.
   a. Recommendation: The Committee requests guidance from the Mayor on addressing the areas north of "I" street. We recommend that a public meeting focused on allowing the public to comment directly to the Committee and a presentation of the "What and When" responses be provided as soon as is logistically possible. The residents living and vacationing within the regularly flooded bayfront areas cannot endure a 13th year of flood anxiety, inability to leave their homes for hours and even days, and property loss without material efforts being made by the Borough and County.
8) Situation: Communication between the Mayor's Citizens Advisory committee and other stakeholders and the Borough Engineer, RVE, has been limited and hinders the forward momentum of the committee's role (and their knowledge base) in developing mitigation projects.
   a. Recommendation: The committee strongly recommends a meeting, which includes us, be established with designated stakeholders and RVE to formulate a sound and probable design of the flood water barrier and storm water management system for the Bayview Avenue roadway and a continuing dialogue on (future) wave mitigation

options. The establishment of these meetings and the anticipated design of a manageable and practical flood mitigation system is needed as soon as possible. For some street flooding provides a unique novelty and entertaining bike or kayak ride through the floodwaters. For others, residents in particular, we see our homes and assets on the verge of annihilation.

Respectfully Submitted,

The Bayfront Flooding Advisory Committee