

November 21, 2023

Snug Harbor Civic Association  
c/o Mr. Kevin Gallagher  
PO Box 62  
Shady Side, Maryland 20764

Re: Snug Harbor Citizens Association  
Marine & Shoreline Technical Summary

Dear Mr. Gallagher:

BayLand Consultants & Designers has assisted Snug Harbor Civic Association numerous times over the years both privately and under the direction of Anne Arundel County. BayLand is highly familiar with Snug Harbor and the surrounding Shady Side Peninsula, having worked in the area for over 25 years. With the protection of over 5 miles of shoreline along the Chesapeake Bay and having permitted and designed over 200 dredging projects, BayLand is uniquely qualified providing technical input on dredging, shoreline protection, coastal resiliency and other projects in the land water interface.

Like many coastal communities along the Bay in Anne Arundel County, Snug Harbor has numerous challenges related to maintained boating access and protection from sea level rise and increased storm events. Snug Harbor is uniquely positioned to approach their various issues through a holistic approach that will meet the goals of the boating community and the greater association. Below BayLand has outlined some of the major issues mentioned by the various stakeholders and a broad summary of how these issues can be resolved and potential next steps.

### **Sedimentation in the entrance of the Snug Harbor Basin**

Continued littoral movement of the sand in the entrance of the basin will require that the entrance channel area be regularly dredged to maintain access from the marina into the Chesapeake Bay. Due to regulatory challenges, the placement of material adjacent to the basin is no longer a viable solution and spoils must be taken off site. If there is a desire to dredge now, mechanical methods should be implemented, and spoils taken to an approved upland disposal site.

Additional considerations:

- Regular renewal of dredge permits should remain a priority for the community as dredging will likely be required in perpetuity.
- Repair of the existing jetties should be considered, including installation of fabric, in the current orientation. (Note: Realignment of the jetties is not likely impact sedimentation)

- Local placement of dredged material should be explored including beneficial use on a living shoreline, thin layer placement in adjacent marsh, etc.
- Material previously tested was not highly desirable beach grade sand but could be used beneficially with proper containment measures or amendments.

### **Sedimentation in the body of the Snug Harbor Basin**

Continued siltation into the basin can be expected as the tidal stream that drains the adjacent marsh runs into the basin and discharges into the Chesapeake Bay. Sediment build up is significant enough to have created upland area in the usable boating area prior to the 2018 dredging event. The current path of the stream into the basin is likely the largest contributor of sediment and does not foster healthy habitat for anadromous fish. There are numerous hurdles with the regulatory agencies and approval will likely take great effort and coordination with State and Federal stakeholders. The majority of the large marsh is not owned by the community and would require coordination and approval of the land owner.

#### **Additional Considerations:**

- Potentially diverting the channel gut would help with basin sedimentation and provide environmental uplift for anadromous fish.
- Permitting the tidal channel shift would be complicated, but potentially appealing to grant agencies.
- Worth pursuing as part of a larger environmental uplift project to enhance and raise the marsh through thin layer placement.

### **Shoreline protection / Sea Level Rise & Coastal Resiliency**

A holistic approach to addressing sea level rise and coastal resiliency would likely benefit the community while making regular maintenance dredging more financially feasible. Sea Level rise predictions, particularly in southern Anne Arundel County, show that numerous areas, including Snug Harbor will see the impacts of sea level rise by 2050. Using the NOAA Sea Level Rise Viewer a 2 foot and 4 foot inundation map can be seen below. Protection from sea level rise can be achieved in numerous ways and more careful consideration will need to be made to determine how those protection goals can be achieved. The Snug Harbor has historic shoreline that receded over 100 feet prior to protection and that area may very well be available for shoreline protection measure such as living shoreline or sandy beaches (See 1972 Wetland Map).

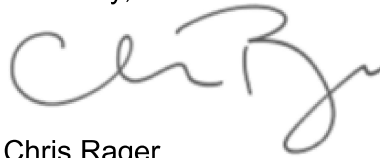
#### **Additional considerations:**

- Numerous grants are available to convert hardened shoreline into nature-based shoreline protection for the purposes of water quality and habitat uplift.
- Sea Level Rise and Coastal Resiliency grants are currently popular and often available annually.

- Could utilize dredge material from the marina to supply and replenish raise marsh areas and supply sandy material to living shorelines.
- Planning, Permitting & Design of these projects can take up to 24 months.
- Grant funded project can take up to 36 months from the time of application to be completed

Snug Harbor is one of 8 communities in Shady Side that were part of a more detailed analysis for Region 9 as laid out in the Anne Arundel County Sea Level Rise Strategic Plan Update. Shady Side and Deale were identified as a priority area and the County has initiated a more detailed feasibility study to determine an implementation strategy. Snug Harbor should work to be ready for potential implementation funds, leverage their existing sediment resources and closely engage with stakeholders to help meet the goals of SHWID and the greater community.

Sincerely,

A handwritten signature in black ink, appearing to read 'Chris Rager', with a stylized flourish at the end.

Chris Rager  
Project Manager

2 feet of SLR (typical daily high tide in 2050)



4 feet of SLR (potential 1 year storm event 2050)

