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Beverly Triton Nature Park's Recent Capital Projects

Fact Sheet and Updates

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Recent tidal flooding events have generated discussions and social media postings regarding the design and performance of the Beverly Triton Nature Park Shoreline Protection project that was completed in 2021. Those discussions, observations, and video recordings have led to a misunderstanding of the purpose, intent, and function of the project. This fact sheet serves to identify the project's function and design and to provide a potential path forward for future improvements to broaden sustainability and safe access to the shoreline.

Multiple pictures, video imagery and narratives recently posted incorrectly characterized project shortcomings along a segment of shoreline where a rolled and removable boardwalk was recently installed with the park development capital project, including erosion and undermining of the boardwalk. Corrections to recently published comments:

1. The shoreline area adjacent to the rolled and removable boardwalk was not part of the Phase I shoreline protection project. No improvements were provided in this area under the project completed in 2021. The boardwalk will be rolled up and removed to prevent additional future undermining as was observed during the recent protracted flooding events.
2. Erosion along this area has been documented at approximately 2 feet per year over the past 30 years. This area will continue to erode if left unprotected. This area is not and was not previously stable.
3. The nearest erosion protection structure is over 200 feet away and was designed to protect the adjacent tidal pond (Small Pond) from eminent breach. That structure does not cause an increase in erosion along the shoreline area in question because of its distance; its orientation directs wave energy away from, not towards the shoreline; and its seaward extent was limited to ensure it would not interrupt sand movement along the shoreline (littoral drift).
4. NOAA records indicate two distinct flooding events and extended high tides in the region during the recent period of observations. This magnitude of flooding should be expected about 12 times per year. Both natural and properly designed protected beaches will recover and adapt to this magnitude of flooding and tidal dynamics, however, the net trend of erosion will continue.

The shoreline erosion protection design was performed according to a proven design approach, consistent with the U.S. Army Corps of Engineers Coastal Engineering Manual and best industry practices. The design objective to increase coastal protection at the three areas of highest erosion rate have been achieved.

A complete and comprehensive assessment of the entire 6,200 feet shoreline at Beverly Triton Nature Park was conducted by BayLand Consultants & Designers, Inc. in 2018. Proposed shoreline remediation and restoration were prioritized into two phases to protect areas of highest erosion and to sustain areas of special significance (cultural and natural resources). Phase I design features included:

1. Decreasing the gap between the 16 northern breakwaters to reduce the wave energy reaching the shoreline and causing excessive erosion.
2. A 200-foot living shoreline including an attached breakwater, sand fill, and marsh plantings to protect against breaching of the shoreline located immediately adjacent to the Small Pond.
3. A living shoreline along the 250 feet of shoreline north of the southern offshore breakwaters which was eroding at 8 feet per year (highest rate of erosion along shoreline). The living shoreline included extension of the jetty, sand placement and marsh and coastal shrub plantings.

This work, constructed and completed in July 2021, was designed to provide strategic high priority shoreline protection and sustainability to as much eroding shoreline as possible, making best use of limited Capital Improvement Program (CIP) funding.

The County recognizes the need for additional shoreline protection at the Beverly Triton Nature Park. Additional shoreline protection measures being considered as part of a Phase 2 project.

1. Reduction of the breakwater gaps for the southern breakwaters to decrease the wave energy reaching the shoreline and causing erosion.
2. Placement of sand behind the Northern and Southern breakwaters to replenish and protect the beaches impacted by coastal erosion and sea level rise.
3. Repair of 2 outfall pipes located within the coastal zone. The outfall pipes in this area should be replaced with a stone groin built around them to protect against coastal processes. Sand fill can be added to replenish the area of recent erosion.

There is currently no funding for Phase 2. However, if funding for Phase 2 is allocated in a future budget cycle the County and its consultant will reengage community stakeholders to help ensure the project design, function, and expectations are met and understood.

Any further questions or comments should be directed to Kyle Autry at 410-222-7175 or pwautr19@aacounty.org.