



NEWS

Coalition Brings Together Leading Scientists to Study Gooseberry Causeway Impacts

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In 1943, amid the Nazi submarine scare along the US northeast coast, the federal government acted quickly to solidify a boulder and concrete causeway from the Westport (MA) mainland to access a military installation on Gooseberry Island. The action converted what had been an island into a one-mile-long groin extending into Buzzards Bay.

Could one wartime decision have caused a cascade of negative impacts that are still affecting the health of more than a quarter of the Buzzards Bay watershed today? The Buzzards Bay Coalition, local government officials, and leading oceanographic scientists believe it is beyond time to answer these pressing questions.

In the decades that have passed since the construction of the Gooseberry causeway, town officials and landowners have questioned whether the causeway is acting like a groin at a macro scale along a more than 10-mile stretch of shoreline – leading to a host of unintended and serious consequences. Not just for the shore, but for the ecological health of two major river systems (Westport and Slocums) and their 117 sq. mile watersheds, the wildlife habitats of an internationally-recognized Important Bird Area (IBA) at Allens Pond, and the economic value and safety of hundreds of coastal properties threatened with accelerated erosion and sea level rise.

The key problems in need of exploration include:

1. The area immediately downdrift of the Gooseberry known as East Beach has lost nearly 200 feet of land since causeway construction. The area once hosted seaside mansions and hotels and is now close to full breach into the Westport River, threatening a public road and dozens of

residential lots. Where did all of this sand go and is the Causeway responsible?

2. The mouth of the Slocum River has seen dramatic shoaling with new sand filling in around the river outlet and restricting flushing to this Nitrogen-impaired estuary. Is this the East Beach sand transported more than 5 miles downshore? How much has this new sand contributed to water quality and fisheries declines in the estuary and could removing it improve river health?



Waves crashing on Gooseberry Causeway.
Photo credit: Brian Santerre.

3. Does the Gooseberry Causeway create ocean backcurrents that limit the ability of the Westport River estuary to exchange clean offshore waters from Buzzards Bay each tidal cycle? The Westport is also severely degraded with excess nitrogen pollution. Could removal or alteration of the Gooseberry Causeway restore natural flushing to the river and thereby aid water quality recovery?

4. The inlet to sensitive Allens Pond – set halfway between the Causeway and the Slocum River mouth – has seen increasing instability in recent years. What used to be a once per 5-7 year inlet closing is now closer to once per 3-4 years making maintenance of high quality salt pond habitats more challenging. Is this instability linked to Gooseberry-altered sediment flows in the area? And lastly, a major new question.

5. How is climate change and accelerating sea level rise going to further exacerbate, alleviate or otherwise alter the already human-generated impacts of the Gooseberry Causeway construction?

The Buzzards Bay Coalition will raise \$325,000 over the next three years to match a \$1 Million challenge gift from the Rathmann Family Foundation to finance this effort and bring together a world-renowned group of scientists to study these questions. Leading scientists from Boston University, the Woods Hole Group, and the Virginia Institute of Marine Science (VIMS) will partner to search for the answers over the next 3 years.

Facing up to the challenge of investigating these questions is timely. The science of modeling the complex fluid dynamics and sediment transport processes have developed to a point where the above questions can be answered. Without a major investment in the science, however, local communities and the Commonwealth of Massachusetts will never have the evidence to make the case for change.

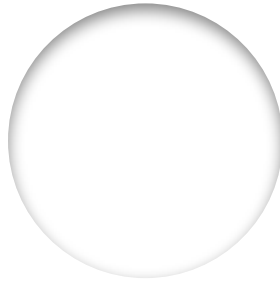
New state and federal funding directed at Climate Change Adaptation makes this the moment for action. The 2021 Infrastructure Bill includes \$47 Billion for communities to prepare for climate change impacts from sea level rise, storms and flooding. The projects with the science and the plans ready will be the ones that move.

The Coalition is thrilled to have brought together this prestigious group of scientists and help to make this scientific inquiry a reality. The results of this study will answer key questions that will provide answers to the citizens and leaders of the entire lower Buzzards Bay Coastline.

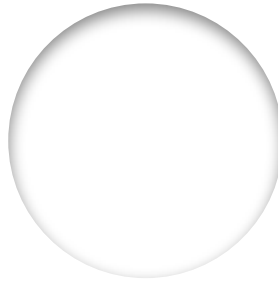
Working to Save Buzzards Bay

The Buzzards Bay Coalition is a membership-supported organization dedicated to improving the health of the Buzzards Bay ecosystem for all through education, conservation, research, and advocacy.

We work to protect clean water on the Bay and on the land:



ON THE BAY



ON THE LAND

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