

February 26, 2022

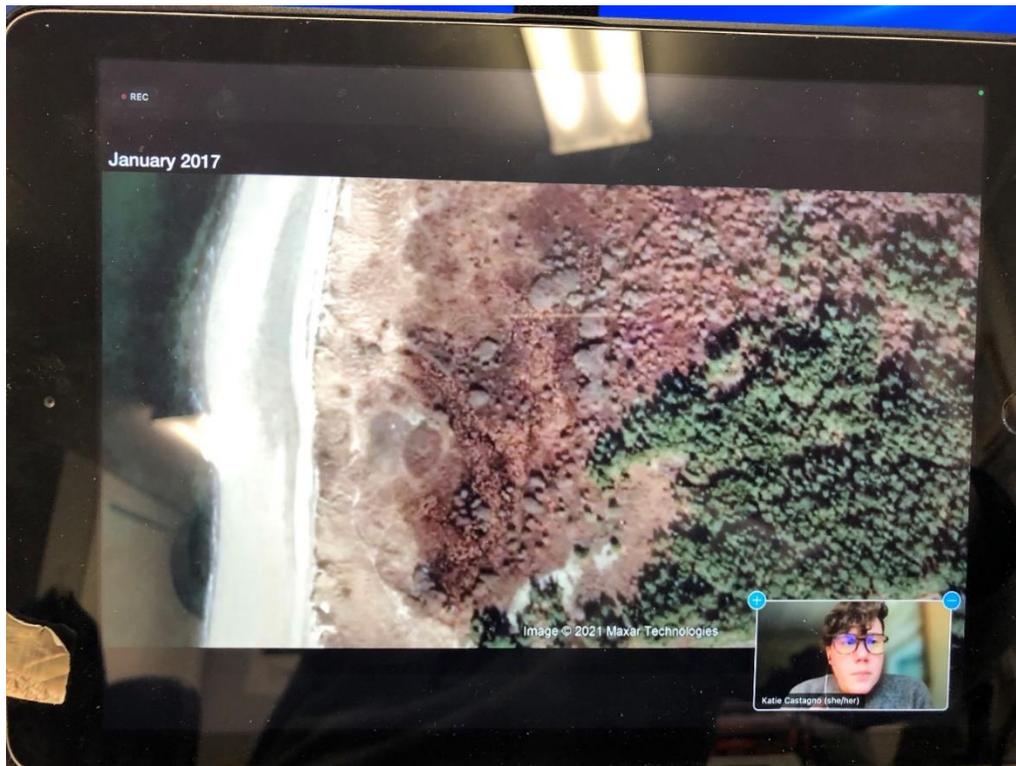
### **Mosquito Plan 2022**

The Club under efforts by Dave Stott and I are continuing to work with CCMC representative Gabi Saklosky on planning and to start the winter cleanout here at the Club. Once the weather becomes friendly the bat houses will be installed around the course. According to CCMC the Duck Harbor area has been cleaned out of dead vegetation which occurred with the dune breach. The National Seashore has no intention of rebuilding the dune, so water will flow in and out. With the removal of the debris, the in and out of the tides will occur, thus limiting standing water. CCMC will continue to monitor the situation and does plan to treat in the areas within their control.

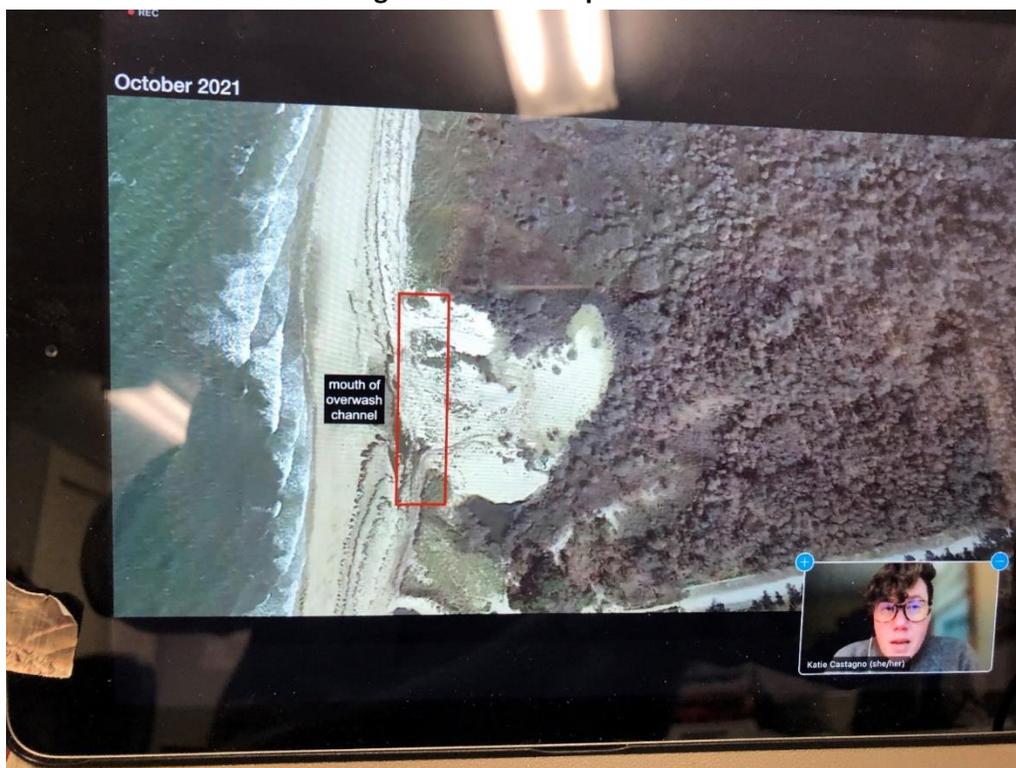


The following images show the impact of the over wash and the dead vegetation due to this situation. Much of the dead vegetation has been removed, this should allow for the normal tidal activity with the sea water receding rather than remaining as it did last year. All this has become the new normal for that area and there is

January 2017, shoreline at Duck Harbor intact.



Photos of Duck Harbor showing timeline and impact of the over wash.



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### Duck Harbor Beach and Overwash



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### Water level loggers with NPS



Summary: The Chequessett Club will work collaboratively with Cape Cod Mosquito Control (CCMC) and other agencies to manage the mosquito activity this coming season. Dave Stott and I will remain in regular contact with CCMC keeping them advised of any water issues that would require additional treatment. CCMC advises that they are cleaning out the areas connected to Duck Harbor and as of this report are confident that the water flow will remain regular because of this work. The astronomical hightides taking place this month and the active weather pattern have created a rush of water into the areas associated with Duck Harbor. CCMC representative Gabi Sakolsky informs me that the amount of the water entering was less than last year and receded because of the cleaning out already completed. CCMC is meeting with representatives of the National Seashore to discuss the current situation and any additional planning required to manage the mosquito matter. I will provide continued updates as they become available. Below are additional mitigation options being initiated by the Club.

- Winter 2022, with the assistance of CMCC, cleanout of all water courses to promote constant flow of water through our club property.
- Installation of (5) new bat houses. The return of bats will take time, but when they engage this new habitat consumption of mosquitos will commence.
- CCMC and Chequessett staff monitor the mosquito situation and in the interim research other alternative approaches should the situation warrant it.

Additional comments from Gabi Sakolsky

The bat issue can be confusing. I think bats are great and I would encourage you to put up a bat house. Bat Conservation International has plans and information that will help to encourage bats to use the house. <https://www.batcon.org/about-bats/bat-houses/>

The question about whether bats eat a large number of mosquitoes in nature is unclear. It takes a lot of energy for bats to fly, and they tend to eat larger prey (beetles, moths). Studies that claim bats are eating high numbers of mosquitoes have been done in controlled settings where bats are only offered mosquitoes. Bats are also feeding at night, so they are not likely to impact the biting pressure of the day biting mosquito population.

Something else to consider might be putting up swallow boxes. Tree swallows do consume many flying insects and they feed during the day. [https://www.allaboutbirds.org/guide/Tree\\_Swallow/lifehistory](https://www.allaboutbirds.org/guide/Tree_Swallow/lifehistory)

Cape Cod Mosquito Control Literature

<https://www.ccmcp.net/>

<https://www.ccmcp.net/public-education/pages/downloadable-pamphlets>