

EXPANSION OF MOSQUITO CITIZEN SCIENCE PROGRAM IN THE PECONICS

Background



Salt marshes are under threat due to overdevelopment, hardening of shorelines, dams, and other systems that interfere with natural hydrology. This causes marsh plants to be drowned, creates standing pools of water, and increases mosquito breeding habitat.



Suffolk County Vector Control and Public Health

In addition to being a pest to humans, mosquitos carry and spread diseases, impacting human health. Suffolk County Vector Control (SCVC) works to protect public health across all areas, including treating mosquitos through marsh restoration, chemical usage, and aerial larvicide applications in breeding areas to kill the mosquito larvae in the water.

Accabonac Mosquito Sampling Program

This citizen science program launched in 2017 by The Nature Conservancy. The goals of this sampling program was to recruit volunteers to actively map mosquitos in salt marshes for Suffolk County Vectoral Control to specifically treat these mosquito hotspots. This reduces time, effort, overall pesticide use, and increases clarity with the public on how these decisions are made.



Toolkit: Support Coordinators

This Toolkit was created to set up for individuals to set up this program in their own community. Working with SCVC, these program documents determine:

- What gear one would need, fact sheets to recruit volunteers
- Training manuals
- Survey procedures
- How to record larval presence/abundance/and development
- Grant proposal templates for site coordinators to secure future funding.

This data collected from the Survey123 app goes directly to Suffolk County Vector Control!



Accabonac Harbor Mosquito Monitoring & Treatment Summary

Year	Number of Sampling Days	Acres Treated (Suffolk County Vector Control)
2017	Pilot year	~2,500 acres prior to hotspot targeting
2019	8	Substantially reduced from baseline
2020	6	Reduced through hotspot only treatments
2021	6	Targeted hotspot spraying
2022	4	Targeted hotspot spraying
2023	7	Targeted hotspot spraying
2024	9	Low acreage, hotspot only
2025	11	~100 acres



Key Findings

- Program has been able to identify true active breeding hotspots, lowering acreage of treatments, operational costs, and human/wildlife exposure to chemical exposure
- Decrease in mosquitos being seen overall!
- Five places across the Peconic Estuary watershed where program expansion can be created based on public access and existing spray activity.
- Sites with best success are Accabaonac Harbor and Southampton Flanders.
- There are ready-to-use foundations for future!