Understanding the Role Coastal Marshes Play in Protecting Communities from Storm Surge and Flooding

Project description: http://www.nerrssciencecollaborative.org/project/Sheng16

Piermont Marsh project flood mapping web tool provides access to the following products:

- **1% annual occurrence flood maps** for 7 scenarios (flood resulting from a storm surge that has a 1% chance of annual occurrence)
- **1% annual occurrence wave heights** for 7 scenarios (wave heights resulting from a storm that has a 1% chance of annual occurrence)
- **Estimated annualized economic loss** for 7 scenarios in dollars and as % of total property value (Total loss during a 1% annual occurrence event = annualized loss x 100)

All dollar values in economic maps are expressed in 2019 US dollars (based on 2017 property value data and inflationadjusted to 2019 US dollars).

Annualized loss is the estimated long-term value of losses to the general building stock from a 1% annual occurrence storm flood event, averaged on an annual basis. Like other loss estimates, annualized loss is an estimate based on available data and models. Therefore, the actual loss in any given year can be substantially higher or lower than the estimated annualized loss.

Scenarios

	Scenario	Year	Area 1 (15 acres)	Area 2 (15 acres)	Area 3 (15 acres)	Other Area	SLR
0	Current condition	2019	Current condition	Current condition	Current condition	Current condition	No
1	Management plan Phase 1	2019	No Vegetation	Current condition	Current condition	Current condition	No
2	Management plan Phase 2	2022	Low Biomass Typha	No Vegetation	Current condition	Current condition	No
3	Management plan Phase 3	2025	High Biomass Typha	Low Biomass Typha	No Vegetation	Current condition	6"
4	Completed management	2050	High Biomass Typha	High Biomass Typha	High Biomass Typha	Current condition	18"
5	No management	2050	Current condition	Current condition	Current condition	Current condition	18"
6	Worst case scenario	2100	SLAMM Marsh Loss	SLAMM Marsh Loss	SLAMM Marsh Loss	SLAMM Marsh Loss	114"

Map of areas subject to management



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