

## January 13, 2024 Flooding-Compared to NOAA Sea Level Rise Predictions

- 5 locations in Rye and Rye Beach were compared by a resident using photos taken that day to sea level rise projections in the NOAA (National Oceanic and Atmospheric Administration) viewer [here](#):
  - The area just to the North of Cable Road (noon approx. high tide)
  - Causeway Road, Rye Beach (approximately 1 hour after high tide)
  - South Road and Chapel , Rye Beach (approx. 2 hours after high tide)
  - Washington Road and IA (Rye DPW pictures)
  - Parsons Road (Rye DPW pictures)
- The NOAA viewer was set to a 4' sea level rise, without a storm surge, something which obviously also occurred on Jan. 13
- **The flooding observed at these locations corresponds quite closely to a 3-4' sea level rise prediction which is the intermediate high predicted level for 2100**

# Sea Level Rise Predictions for Rye

Source	Time Period	Intermediate Low	Intermediate High	Highest
U.S. National Climate Assessment (2014)	Year 2050	0.6 ft.	1.3 ft.	2.0 ft.
	Year 2100	1.6 ft.	3.9 ft.	6.6 ft.
NOAA localized Sea Level Rise projections (2022)	Year 2050	0.98 ft	1.28 ft.	1.38 ft
	Year 2100	1.94 ft	4.56 ft	5.94 ft
NH Coastal Flood Risk Summary (2020)	Year 2050	0.5-1.3 ft.*		2.6 ft
	Year 2100	1.0-2.9 ft*		1.5-3.8 ft
<p><i>Note: Scenarios are typically outlined in a range of risk, from low to high. Commonly used are the intermediate-low, intermediate-high, and high scenarios, as displayed here and referenced in the U.S. National Climate Assessment projections and the NOAA 2022 localized SLR projections. The NH Coastal Flood Risk Summary uses "RCP" (or Representative Concentration Pathways) at two levels set by the Intergovernmental Panel on Climate Change based on future greenhouse gas emissions. The RCP 4.5 assumes greenhouse gas emissions stabilize this century (displayed as the intermediate scenarios), the RCP 8.5 scenario assumes greenhouse gases continue increasing (displayed as the high scenarios).</i></p>				

**Table 1: Three sea level rise projection models applicable to Rye, including the U.S. National Climate Assessment (from 2014, referenced in the Rye Master Plan Coastal Hazards and Climate Adaptation chapter, the NOAA 2022 Sea Level Rise Technical Report localized scenarios, and the NH Coastal Flood Risk Summary (2019/2020).**

Source:12-19-23 Draft Rye Existing Conditions Section of the Master Plan made available to a resident

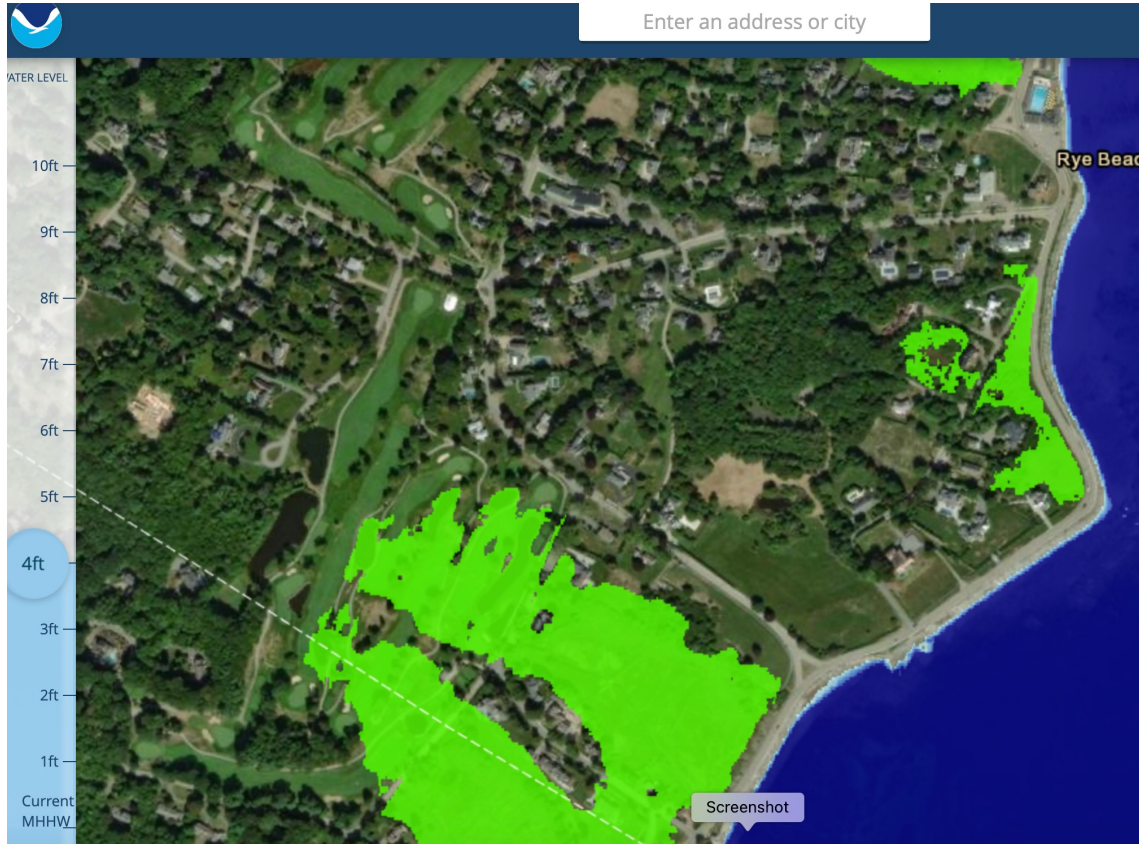
# Cable Road Area (high tide Jan 13)



[NOAA Viewer\\*](#)

\*Clicking on the viewer will also allow you to view other parts of Rye

# Causeway Road (approx. 1 hour after high tide)



[NOAA Viewer](#)

# South/Sea/Chapel Road (approx. 2 hours after high tide)



[NOAA Viewer](#)

# Washington Road and 1A



Photo Rye DPW

# Parsons Road and 1A



Photo Rye DPW

