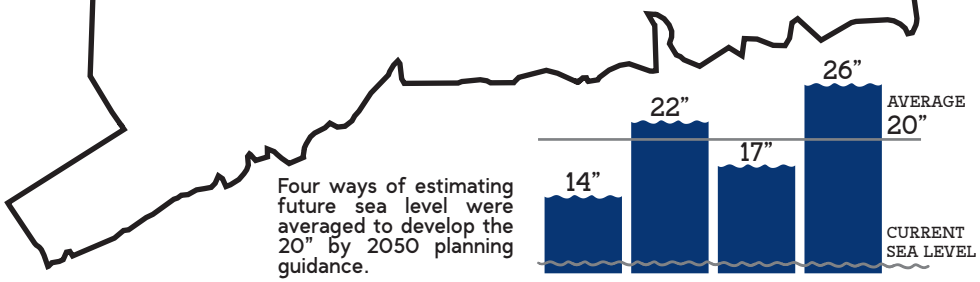
SEA LEVEL RISE & COASTAL FLOODING IN CONNECTICUT

Information from the Governor's Council on Climate Change

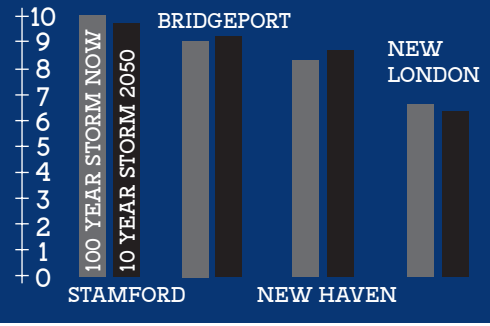
1. Sea level is expected to rise by up to 20 inches by 2050, and to continue increasing after that.
2. Small changes in mean sea level have a big impact on the frequency of flooding.
3. Areas that experience flooding every few years now should expect flooding multiple times a year by 2050.



Four ways of estimating future sea level were averaged to develop the 20" by 2050 planning guidance.

Return intervals describe the frequency and severity of a storm by giving the average time between flood events. For instance, in Stamford a storm with 10' storm surge has a return interval of 100 years.

With up to 20" of sea level rise, storms with a 100 year return interval now will have a 10 year return interval in 2050. Vertical axis scale is in feet.



Sea Level Rise Predictions:

Connecticut is expected to experience up to 20" of sea level rise by 2050, leading to greater frequency of flooding from tides and storms. Small changes in mean sea level have a big impact on the frequency and severity of flooding.

With 20" of sea level rise, what we experience today as a 4.5' storm surge will occur up to ten times more often in 2050. Some areas that flood once every 10 years will likely flood every 2 years. Chronic flooding will be a challenge for neighborhoods, roads, and areas affected in the past.

Planning for communities, infrastructure, and human health should consider the 2050 planning guidance, acceptable levels of risk, and strategies that do not increase exposure of public investment to flooding. Future development plans should consider "resilient corridors," as well as high ground that will be inherently resilient to future sea level rise

Consequences & Flood Risk:

Coastal residents could expect:

- Higher cost of living
- Greater property damage risk
- More highway and road closures
- Inaccessibility to and higher maintenance costs for critical infrastructure

Individual towns are beginning to plan for coastal and inland impacts of climate change, as well as coordinated regional efforts that are underway. Some current actions include the Governor's Council on Climate Change; Multi-jurisdictional Hazard Mitigation Planning by Regional Councils of Governments; and Resilient Connecticut.

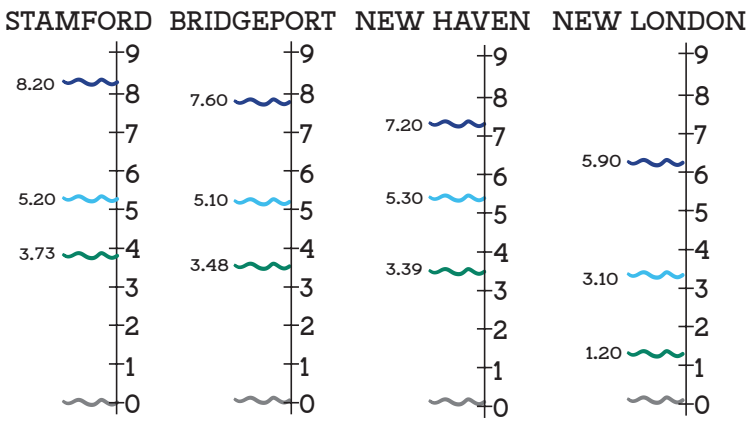
Resilient Connecticut is an initiative charged with creating a regional adaptation plan for Fairfield and New Haven counties by coordinating actions between local and regional stakeholders. The project includes coodination and planning with state agencies, policy recommendations, and strategies that use up-to-date monitoring and science based regional risk assessments to inform pilot projects.

Over the coming years, estimates will be revisited and updated with the most recent data and models.

FLOODING WATER LEVELS IN CT NOW

- MAJOR FLOODING
- MINOR FLOODING
- MEAN HIGHER-HIGH WATER
- CURRENT SEA LEVEL

Current water level benchmarks from Long Island Sound tide gages. Vertical axis scale is in feet and referenced to the North Atlantic Vertical Datum of 1988. More extreme water levels are located further west. **For values in 2050 add 20" (1.66').**



More detailed information is in the ***Sea Level Rise in Connecticut Report***, which is available here: https://circa.uconn.edu/sea-level-rise/references

resilientconnecticut.uconn.edu