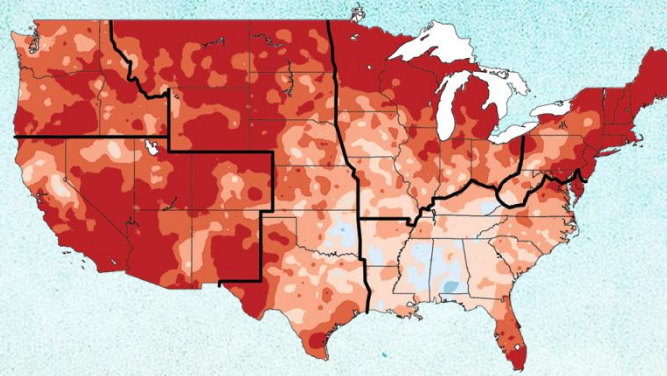


Third National Climate Assessment

Climate Change Impacts in the United States



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Columbia University
July 25, 2014





Northeast

<http://nca2014.globalchange.gov/report/regions/northeast>

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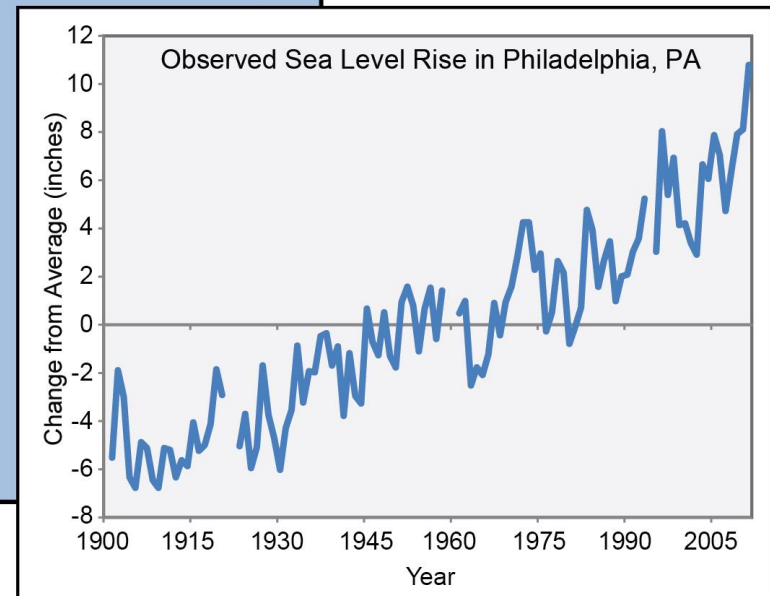
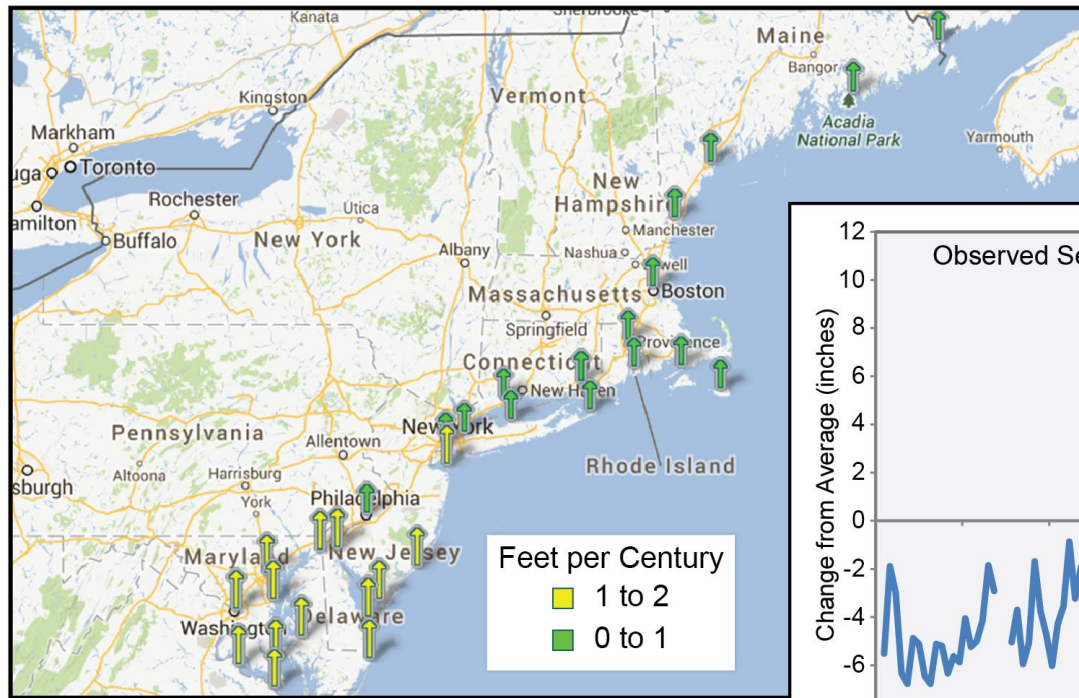


Observed Climate Change

- Sea level has risen approximately 1 foot and coastal flooding has increased since 1900
- Precipitation from extreme events has increased more than 70 percent since 1958, more than any other US region
- Temperatures across the region have increased by an average of 2°F since 1895

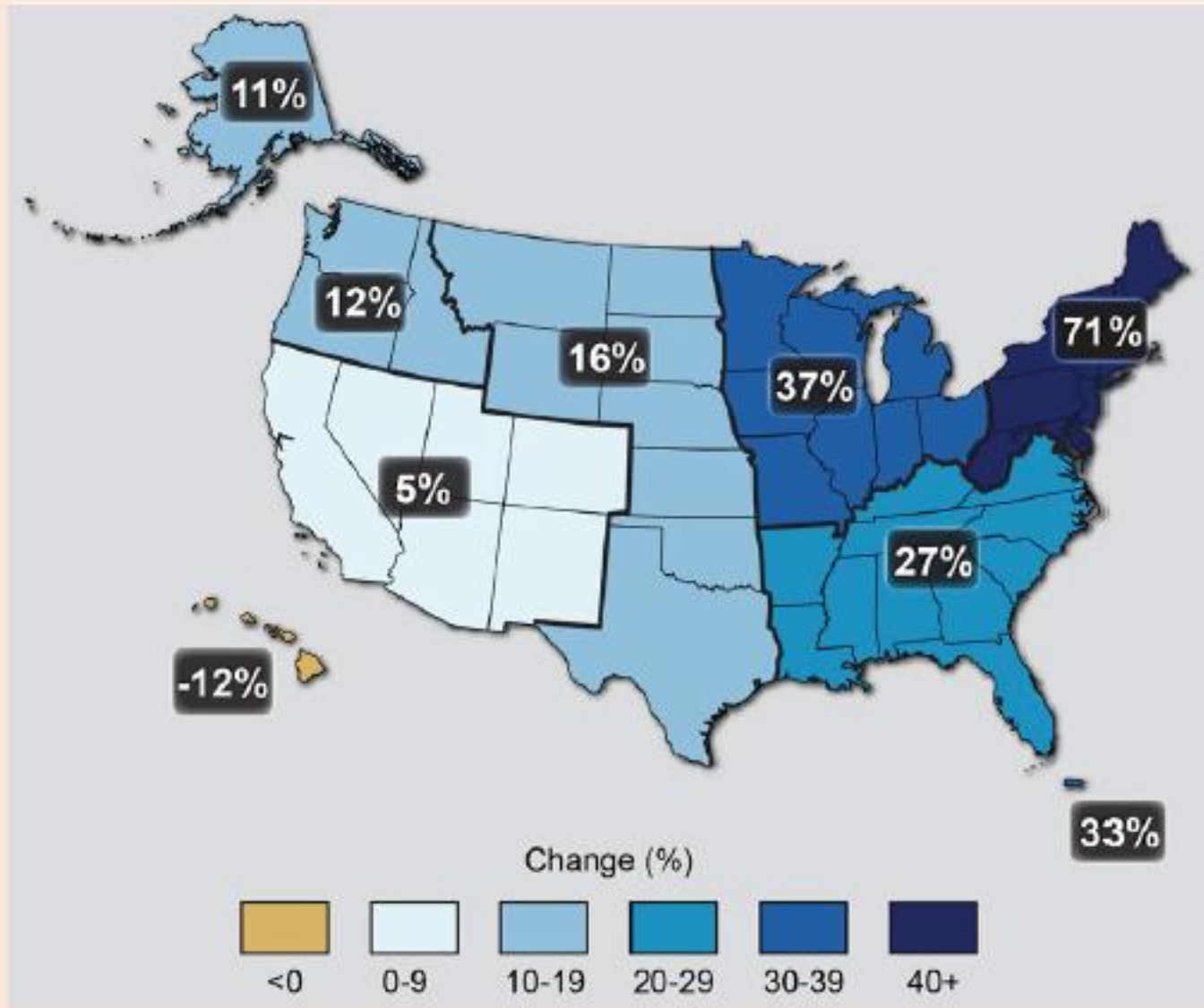


Sea Level is Rising



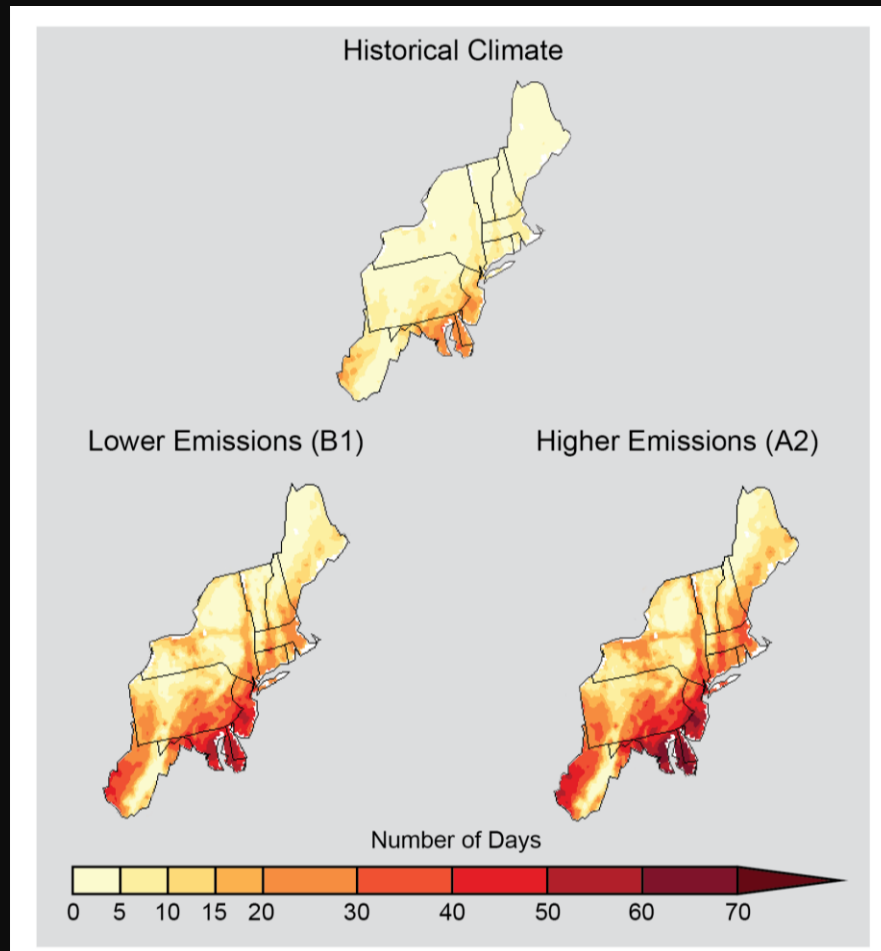


Observed Change in Very Heavy Precipitation



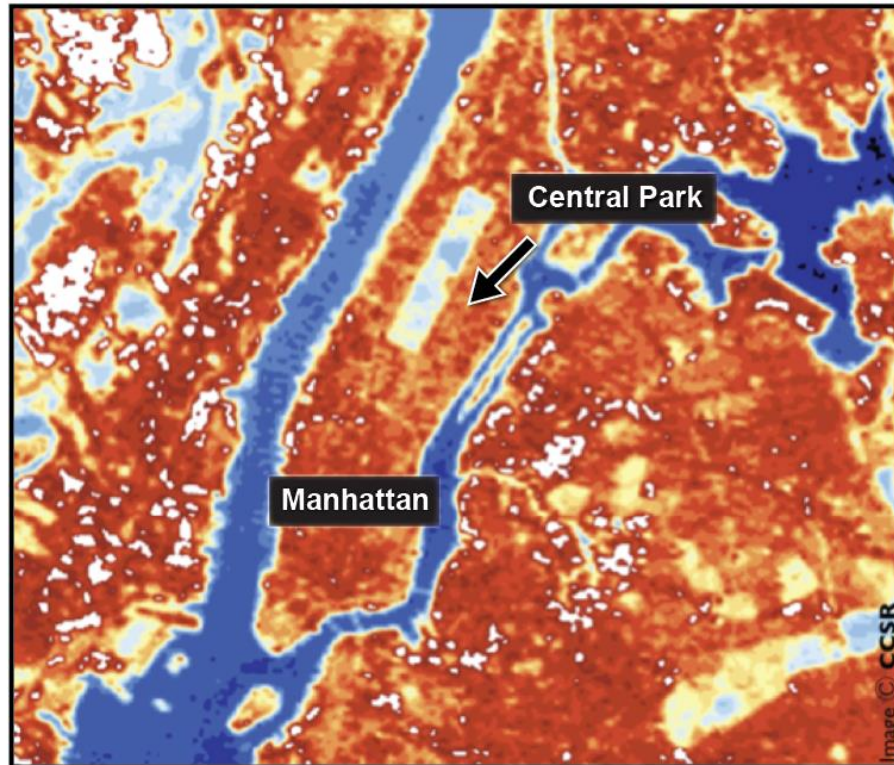


The Number of Days Over 90° F is Projected to Increase

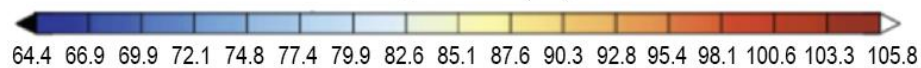




Urban Heat Island



Temperature (°F)





Agricultural and Ecosystem Impacts

Agriculture, fisheries, and ecosystems will be increasingly compromised over the next century by climate change impacts. Farmers can explore new crop options, but these adaptations are not cost- or risk-free. Moreover, adaptive capacity, which varies throughout the region, could be overwhelmed by a changing climate.



Storm Surge Barrier



Hurricane Sandy New York City

- 44 deaths, 80% from drowning
- Major flooding 7 subway lines under East River, 3 tunnels closed
- 90,000 buildings in the inundation zone
- ~2 million without power
- ~\$19 billion in damage



South Ferry Subway Station, Manhattan
December 12, 2012

Source: D. Bader



Sea Level Rise Baseline (2000 – 2004)	Low-estimate (10 th percentile)	Middle range (25 th to 75 th percentile)	High-estimate (90 th percentile)
2020s	+ 2 in	+ 4 in to 8 in	+ 10 in
2050s	+ 8 in	+ 11 in to 21 in	+ 30 in
2080s	+ 13 in	+ 18 in to 39 in	+ 58 in
2100	+ 15 in	+ 22 in to 50 in	+ 75 in

Based on 24 GCMs and two Representative Concentration Pathways. Shown are the low-estimate (10th percentile), middle range (25th percentile to 75th percentile), and high-estimate (90th percentile).

Higher sea levels are extremely likely for New York City

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