

October 2022

Climate Change in New Jersey

A decade after Sandy, the Garden State continues to grow warmer, wetter, and more prone to flooding.



Temperatures are climbing

The Mid-Atlantic region is one of the most rapidly warming locations in the continental U.S.

3rd

2021 was the 3rd warmest year on record in NJ¹ ~4°F

Increase in avg annual temps in NJ since 1900, roughly twice the global average¹

3-9°F

Projected increase in avg annual temps by 2100 (relative to 1901-1960) with moderate emissions¹ 30

Days with max temp over 95°F by 2100 in Camden and surrounding area (with moderate emissions), up from current average of 5 days²



Sea-level rise is accelerating

And the trend is expected to continue well beyond the 21st century.

 \sim 1.5 ft

Amount of sea level rise at Atlantic City since 1911¹

2x

How much faster sea level is rising in NJ compared to global average¹

240

Projected days per year of tidal flooding in Atlantic City by 2100 (with moderate emissions), up from 5 days in 2000 and 13 days in 2021¹



Extreme precipitation is more frequent and intense

Greater warmth and humidity increase heavy rainfall and, with sea-level rise, drive severe flooding.

74%

Increase in 48-hour extreme precipitation events in northeast U.S. 1901–2016¹

5-15%

Projected increase in extreme 24-hour rainfall in NJ relative to 1950–1999¹ >9 in

Rain in 6 hours in parts of central Jersey during Tropical Storm Ida, 2x normal September amount¹

njclimateresourcecenter.rutgers.edu

The New Jersey Climate Change Resource Center was established by statute in 2020 to address climate change issues in the Garden State by providing actionable science, planning tools, and technical guidance to policymakers, practitioners, and communities.

What's at Stake for New Jersey?



Recent events offer a glimpse of what we can expect — and where our vulnerabilities are most acute — as temperature and sea level continue to rise and extreme precipitation becomes more frequent and intense.



- Increased heat-related illness
- Degraded air quality
- Spread of vector-borne disease
- Storm-related injury and death

30

Deaths caused by Tropical Storm Ida in NJ, 2nd greatest loss of life in NJ due to a natural disaster since 1900¹

8.7%

Proportion of NJ health and medical lifelines (hospitals, clinics, EMT, health facilities) in 100-year floodplain³

156%

Increase in heat-related hospital admissions in NJ during warm season (May–Sep) from 2004 to 2013⁴

28

Additional growing season days in Flemington since 1970, lengthening the allergy season⁵

559,715

"overburdened communities" living in a 100-year floodplain⁶

\$ Economy

- Damage to infrastructure
- Damage to homes and businesses
- Economic disruption
- Potential decrease in agricultural yields

\$8-10 bil

Estimated damage in NJ caused by Tropical Storm Ida⁷

\$5.8 bil

Total NJ flood insurance claims from 1978 to 2019. NJ ranks third in nation in claims paid by FEMA⁸

16%

Proportion of residential NJ parcels with at least half of area in 100-year floodplain⁶ 24%

Proportion of NJ commercial and industrial properties with at least half of area in 100-year floodplain⁶

6,100

Approximate number of NJ buildings engulfed in seawater at high tide by 2050, a taxable property value of more than \$6 billion⁹

Senvironment

- Greater wildfire risk
- Habitat loss
- More short-term droughts
- Potential freshwater salinization

2 bil

Gallons of untreated sewage discharged into local waters from NJ wastewater facilities due to Hurricane Sandy¹⁰

35

Confirmed harmful algal blooms in NJ in 2021, up from 20 in 2017, down from 47 in 2020¹¹

29%

NJ bird species vulnerable to climate change, including American Goldfinch,
NJ's state bird¹²

20%

Area of existing NJ salt marshes vulnerable to 1 foot of sea level rise by 2050¹³

16,600

Acres of coastal farmland inundated by 1 foot of sea-level rise, which is within the likely projected range by 2050¹

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