State of the Climate

New Jersey 2021

RUTGERS

Temperatures are climbing

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

2021 was the
3rd warmest year
on record in NJ

Average annual temperatures in NJ increased nearly
4°F
since 1900, roughly twice the global average

CO_2 levels in the atmosphere are the highest in at least
800,000 years

Avg annual temperatures are projected to increase
↑ 5–8 °F
above preindustrial levels by 2100 in a low emissions scenario
↑ 8–14 °F
by 2100 in a high emissions scenario

Sea-level rise is accelerating

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

Sea level at Atlantic City rose about
18 inches
since 1911, more than double the global average

Average annual tidal flooding days in Atlantic City

1950s:	<1
2007-16:	8
projected	2030:	17–75
	2060:	85–315

with moderate emissions

Tidal flooding
in Atlantic City is expected to occur at least
240 days a year
with moderate emissions by 2100

Sea level is projected to increase
0.5–1.1 ft by 2030
and
0.9–2.1 ft by 2050
relative to the year 2000

Ida delivered catastrophic flooding (and a glimpse of the future)

Warming temperatures are driving greater variability in precipitation. New Jersey is wetter overall, and heavy rainfall is occurring more often.

30 lives lost
2nd greatest loss of life in NJ due to a natural disaster since 1900

Estimated
$16–24B in damages
in the Northeast U.S.

>9 inches of rain
in about 6 hrs in Somerset and Hunterdon counties, 2x normal rainfall for whole month of September

By 2100, annual rainfall is expected to increase about
5–8%
relative to 2010

Extreme 24-hour rainfall is expected to increase
5–15%
relative to 1950–1999

What's at stake for New Jersey?

Warmer temperatures are producing more severe heat waves. Sea-level rise and heavy rains are causing more intense flooding. These and other climate-related hazards are projected to escalate through the 21st century and will fall heaviest on NJ's most vulnerable residents.

Health

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

Economy

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

Environment

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

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