VIRGINIA

CLIMATE CHANGE IMPACTS

Excess heat, major storms, and coastal and inland flooding have already impacted Virginia, and pose growing challenges to many aspects of life. Human health and infrastructure will be increasingly compromised.

	ALREADY OBSERVED CHANGES	ANTICIPATED FUTURE CHANGES	RISKS TO SOCIETY
 **HEAT**	Annual temperatures in Virginia have increased by 2°F since the 1970s, and over 3°F in the wintertime. Bristol, VA now experiences more than **two weeks** of additional **extreme heat days** compared to the 1970s.	The number of "**dangerous**" or "extremely dangerous" **heat days** in Virginia is expected to **more than quadruple** by 2050, currently averaging less than 10 per year. By 2050, the number of **heat wave days** in Virginia is expected to **increase by 6 times**, from 10 to nearly 60 days per year.	**Mosquito season** in Richmond is currently a month longer than in the 1980s. Norfolk has experienced a 3°F increase in dew point temperature since the 1980s and the additional moisture in the air increases risk of **heatstroke** and **heat exhaustion.**
 **COASTAL FLOODING**	**Hurricanes** in the Atlantic have been **stronger** in the past couple of decades than during the 1970s/80s. Sea level rise in Norfolk has increased the chance of **exceeding flood advisory/ warning thresholds** by 4 times compared to the 1960s.	By 2050, Virginia's **coastal flood threat** may **increase by 75%,** putting an additional 140,000 people in the 100-year floodplain. Sea level rise by 2050 may increase coastal **flooding** events by **five times** at the Chesapeake Bay Bridge and make a **100-year flood 25 times more likely.**	During Hurricane Sandy, 18.3 million gallons of **sewage** was spilled in Suffolk due to equipment failure. As Atlantic hurricane season becomes more intense, the threat of similar spills increases.
 **INLAND FLOODING**	On average, Virginia has experienced a **20-30% increase in heavy downpours** since 1950.	By 2050, Virginia's **inland flooding threat** is projected to **increase by more than 20%.** Without climate action, we expect **double the number of heavy rainfall events** and a 20% increase in the amount of rain falling during heavy downpours in the Southeast by 2100.	**265,000 people** in Virginia are currently living in **flood prone areas.** Intensifying extreme rainfall events is stressing already deteriorating **infrastructure** in the Southeast. Many **transportation** and **storm water systems** were not designed to withstand these events.

For sources of information, please visit: www.edf.org/climateimpactsources

*Anticipated future changes are for scenarios without climate action

EDF ENVIRONMENTAL DEFENSE FUND
Finding the ways that work

EXPECTED DAMAGES

IN VIRGINIA BY 2100
WITHOUT CLIMATE ACTION

- At least 700 additional deaths per year between 2080 and 2099
- 17 counties currently home to over 400,000 people expected to see 40 to 60% decrease in major crop yields relative to 2012 levels
- 100 counties currently home to over 6 million people are each expected to spend 10% more on energy relative to 2012 levels