

Climate Change in Coastal Virginia

The Impacts are Here Now, But So are the Solutions



Climate change—caused primarily by the burning of fossil fuels like coal, oil, and gas—is the major driver of sea level rise globally and in Hampton Roads. Virginia’s coastal communities are already experiencing costly impacts from flooding. Coastal Hampton Roads is especially vulnerable to worse climate change impacts to come—not only from rising seas but also from stronger storms and heavier rainfall.

- Coastal Virginia is second only to New Orleans and Louisiana’s Gulf Coast as the largest U.S. population center at greatest risk of flooding due to sea level rise.¹
- Sea levels along Virginia’s coast are rising at one of the fastest rates in the nation, partly because Hampton Roads is also sinking. Sea level in coastal Hampton Roads has risen over a foot in the past 80 years, compared to the global average of six inches in the last century.²
- The Virginia Institute of Marine Science (VIMS) projects that Virginia’s coast will see 3-7 more feet of sea level rise by 2100.³

Have you noticed?

- More frequent flooding
- Impassable roadways
- Property damage
- Homes being raised

Sea level rise also makes storm surges from hurricanes more damaging. When Hurricane Isabel hit Hampton Roads in 2003 it caused more damage than a bigger hurricane that hit the region in 1933. VIMS researchers believe Isabel was more destructive because the storm rode atop seas that were 14 inches higher.⁴



The Stakes for Our Communities and Economy are High

» Hampton Roads is home to about 1.7 million people, yet the region has no strong plan for evacuation and shelter in the event of climate-related disasters like hurricanes. Even Governor McAuliffe has publicly noted that the region is woefully unprepared for mass evacuation.

» The Tidewater Region is critical to our national security, possessing the world’s largest naval base, the Langley Air Force Base, and extensive military and federal infrastructure. Sea level rise and extreme weather events pose a threat to these installations and thus our military readiness.

» Prominent historical sites like Fort Monroe, Tangier Island, Jamestown Island, Yorktown Battlefield, and Colonial Williamsburg are at risk of being inundated, or disappearing entirely, due to sea level rise and stronger storms.

» The region is known for its thriving beach tourism industry, which generated \$1.28 billion in 2012 alone.⁵

» Hampton Roads is comprised of beautiful, ecologically sensitive wetlands and fisheries that stand to be adversely impacted by climate impacts.

» Hampton Roads possesses extensive import and export infrastructure, which supports the local economy and provides jobs. Port activity impacts the Hampton Roads economy substantially, generating \$12.3 billion in local output.⁶

It's Time to Make Hampton Roads a Ground Zero for Solutions

Adapt to the sea level rise we're locked

into: The region needs a massive, coordinated investment in new and resilient infrastructure, living shorelines, emergency planning, and strategic retreat from vulnerable areas to keep people safe and dry. And we need money to pay for it—likely upwards of \$1 billion in Norfolk alone.⁷

THE SOLUTION:

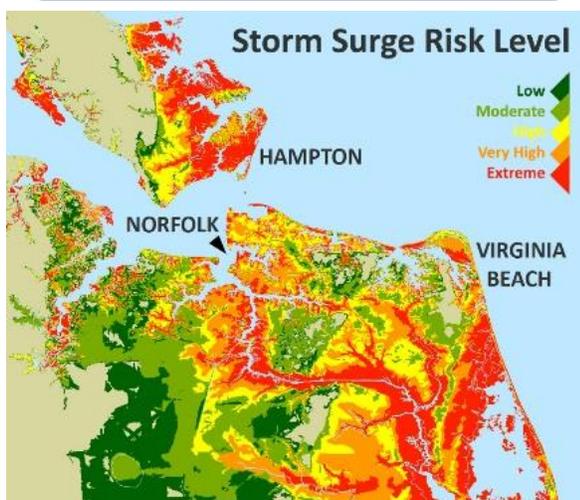
Virginia can generate significant funds by participating in the Regional Greenhouse Gas Initiative (RGGI), a market-based collaboration of nine states from Maine to Maryland that caps carbon pollution from power plants. Through auctions of pollution permits, RGGI could raise as much as \$209 million per year to help pay for adaptation solutions, while reducing the fossil fuel pollution at the root of the problem.⁸

Reduce fossil fuel emissions to protect the coast from the worst impacts:

If we want to avoid catastrophic levels of global warming, we need to keep at least two-thirds of the world's known fossil fuel reserves in the ground. In Virginia, that means we need to phase out dirty energy and transition to clean energy sources like offshore wind and solar power. Yet our largest utility company, Dominion Virginia Power, plans to increase carbon emissions by 37% over the next 15 years.⁹

THE SOLUTION:

Instead of accepting Dominion's regressive plan, we need to pass state legislation that incentivizes Virginia-based clean energy solutions, including a mandatory Renewable Portfolio Standard, while removing existing barriers to solar power and wind power.



Virginia has vast clean energy potential

While Virginia currently has NO utility-scale renewable energy, we could:

- Power 700,000 homes with offshore wind.¹⁰
- Power one million homes with solar energy.¹¹
- Save \$159 per household annually and create 5,600 jobs by 2020 by increasing energy efficiency.¹²



JOIN US! If we're going to protect Hampton Roads from the worst climate impacts, we need to build a climate movement that matches the scale of the problem. To get involved, contact: Monique Sullivan, Field Director, at monique@chesapeakeclimate.org or 240-396-2153. Learn more and view a cited version at chesapeakeclimate.org/virginia/safe-coast

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