



# A SCORCHED EARTH



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Projected shifts in average temperatures of cities by 2050



Data obtained from Vox Weather 2050 project

**FOR EXAMPLE:**

Philadelphia's average temperature will be that of Southern Virginia by 2050

The Amazon fires. Typhoon Hagibis. Hurricane Harvey. California fires. Hurricane Sandy. Millions of people have been displaced. Millions more to come. Recent natural disasters and extreme temperature changes are impacting every single person on Earth.

## WARMING UP

While students are aware of the disasters heavily reported by the media, they are less informed about the everyday impacts climate change has on them.

An example of this can be seen in New Mexico, where there have been noticeable changes to the desert landscape.

“We are facing rising temperatures, more frequent droughts, increasingly severe wildfires and much more,” New Mexico Senator Tom Udall said in an interview with *The Highlander*. “These consequences of climate change have ripple effects for all of us—threatening food security, economic security and our way of life.”

Virginian author Rick Van Noy spent a year traveling the southeast coast of America, exploring the effects of climate change on local habitats. In his book *Sudden Spring*, one example stands out.

“The most extreme is a community in Louisiana called Isle de Jean Charles,” Van Noy said. “It’s made up of a mixed tribe of Native Americans, and they’ve lost 98% of their land mass. They will be asked to relocate, but it’s hard to leave your home that you’ve gotten used to.”

Also known as “managed retreat,” many coastal communities in America may require relocation, since rising sea levels will likely flood their homes. The number of “climate change refugees” will only increase as the effects of global warming further take hold.

According to the World Bank, an average of 24 million people each year have been displaced due to climate change, and this number could grow to nearly 150 million by 2050. This serves as a possible preview for the cloudy future of life on Earth.

These overall upward shifts in temperatures have been one of the most apparent effects of climate change. This problem isn’t just isolated in the U.S.—other parts of the world are seeing similar patterns.

“In places like Southeast Asia, for example, climate change is leading to extreme monsoon seasons, which severely hurt farming efforts, and increasingly hot summers, which will eventually lead to summers where going outside could be fatal,” junior Ryan Shue said.

In a poll of 253 McLean students, over 60% said they feel the federal government is responsible for handling the problem, and nearly 90% think the government isn’t doing enough to combat these oncoming issues.

“Climate change poses an existential threat to our environment, public health, way of life and security,” Udall said. “This requires an immediate and aggressive federal response: setting a national standard for renewable electricity generation to achieve significant cuts in carbon emissions as well as other pollutants that hurt our most vulnerable communities.”

Officials have recognized the existing impacts of climate change; however, it has proven difficult to balance the economic benefits of environmentally unfriendly practices like coal mining. In West Virginia, Senator Joe Manchin, ranking member of the Senate Energy and Natural Resources Committee, recognizes the challenge of balancing climate initiatives with the economic advantages.

“Many leading the climate change debate will suggest we need to eliminate certain fuel sources, but the truth is that fossil fuels will continue to play a role in the global economy, particularly in countries like India and China,” Manchin said in an interview with *The Highlander*. “I believe that the U.S. must lead the world in pursuing climate solutions that will allow us to use fossil fuels in a cleaner manner.”

Manchin has shown initiative in this issue by introducing environmentally friendly legislation.

“This year, our committee has passed 49 bills, many of which would advance energy solutions like carbon capture

technologies, battery storage, advanced nuclear and energy efficiency,” Manchin said.

Although some government officials advocate for green solutions, the process of alleviating environmental damages still has a long way to go.

“No single policy or approach will solve this monumental challenge,” Udall said. “We need to make sure our responses meet the needs of a diverse range of communities across the country and around the globe.”

## STRIKE FOR THE FUTURE

Refusing to bear the impacts of global warming, 16-year-old Swedish environmental activist Greta Thunberg launched the Fridays for Future Youth Climate Strike. This movement started with her single-person protest outside the Swedish Parliament and eventually spread to a global movement in almost all major cities throughout the world.

As part of the worldwide effort, the U.S. Youth Climate Strike fights for governmental interference in response to the increase in environmental damages.

“We follow the Youth Climate Strike dates on [certain] Fridays,” said Katya Little, a Yorktown High School junior who is the state communication officer for the Virginia Youth Climate Strike. “We will leave school. We will work with our regional teams that are organized across the state to protest at key parts of our local governments to urge them to enact climate legislation.”

Little joined the organization to directly impact climate change reform.

“I wanted to make sure that I was part of a system that uplifted everybody who needs a place at this table and fight one of the greatest, most devastating issues of our time,” Little said.

Capitol Hill was crowded by thousands of students on Sept. 20, during the 2019 D.C. Climate Strike, as part of the largest worldwide environmental protest in history.

“Climate Strike represents those who did the least to cause climate change who are the first to experience the effects,” said sophomore Leah Siegel, who participated in the D.C. Climate Strike. “I believe that by striking, I can help represent the voiceless and be active in politics, even if I can’t vote.”

Most of the featured speakers were teens aspiring for a better tomorrow for the planet, including senior Wendy Gao from Oakton High School.

“[The strike] was showing world leaders that there are a lot of people who care about [climate change], and they need to act on it,” Gao said.

Student activists advocate for excused absences on Fridays, but Siegel argues otherwise.

“I think that having [climate strikes] unexcused truly shows it is an act of disobedience, and it shows those who are genuinely passionate about the movement are those who leave,” Siegel said.

Despite the overwhelming support for Friday Climate Strikes by students, teachers suggest that advocates should take an approach that does not disrupt traditional learning.

“I encourage students to be activists, but I feel that it is important for them to be learning, and I would not advocate for skipping school or excused absences,” AP Environmental Science teacher Kate Hoefler said.

Hoefler recommends other methods of voicing concerns for global warming.

“Educate the public on the weekends. Talk to your neighbors. Participate in organized Earth Day events,” Hoefler said. “There is so much you can do that does not compromise your education.” ►

**FLOODING NEIGHBORHOOD** — A neighborhood in Hampton, Virginia, experiences flooding even though there's no rain or storm. Known as “sunny day flooding,” this effect of climate change has raised concerns about rising sea levels in the Chesapeake Bay Region. *(Photo courtesy of Rick Van Noy)*





## VA IS FOR ENVIRONMENT-LOVERS

For the past few years, one of the most pressing environmental issues in Virginia has been the construction of fracked gas pipelines. The pipelines transfer highly pressured liquid natural gas, which many think poses risks to local communities. The Atlantic Coast Pipeline, running from West Virginia and across Virginia to North Carolina, was proposed in 2014.

The Mountain Valley Pipeline, from West Virginia to Virginia, was proposed in 2015. The proposals provoked controversy due to the potential for water contamination and other environmental damages.

“Fracked gas pipelines are really dangerous and damaging to the environment and people’s health and obviously will magnify Virginia’s contribution to climate [change],” said Alice Redhead, a clean energy organizer in the Sierra Club Virginia Chapter.

Virginia’s largest electricity supplier, Dominion Energy, was the lead partner in the Atlantic Coast Pipeline. Dominion greatly influenced the Virginia legislature in past years and donated large sums of money to political campaigns. However, many Virginia representatives have recognized the fossil fuel industry’s negative impacts on the environment. This year, some officials and candidates pledged to not accept donations from fossil fuel companies such as Dominion.

“Officials were potentially turning away Dominion, a large donor, which is really meaningful in showing that they are taking [global warming] seriously,” Redhead said. “They don’t want to be influenced by that money, and instead they want to keep making laws and decisions based on what the people want and what the people need.”

Large fossil fuel companies have been unknowingly contributing to climate change, and the effects are already becoming apparent. Two-thirds of Tangier Island in the Chesapeake Bay has disappeared since 1850 due to climate change.

According to science research news site PHYS.org, Tangier Island might disappear completely in the next 40 years, and this is not the only place in Virginia affected by rising sea levels. Other low-altitude areas experienced similar effects from more extreme weather and natural disasters.

“In Hampton Roads, they’re seeing worse flooding, and even ‘sunny day flooding’ when there is not even a storm happening,” Redhead said.

While the public mainly sees catastrophic reports on climate change in the news, it’s important that they also recognize the positive steps being taken to create a cleaner Earth.

Responding to the climate crisis, Arlington County recently adopted a Community Energy Plan (CEP) that aims to achieve 100% renewable energy in the community by the year 2035.

The CEP will specifically aim to ease the transfer process of fossil fuels to renewable clean energy. It will implement more charging stations for electric vehicles and help homeowners purchase solar panels.

“The plan identifies priorities for continued and enhanced economic strength, reliable and secure energy availability, equitable access to energy efficiency and clean energy across the entire community,” Arlington County Energy Manager John Morrill said.

One day after the September Climate Strike, on Sept. 21, 2019, the Arlington County Board finally approved the 100% renewable energy plan, the first in Virginia, after countless public meetings with various community members.

Morrill recognized the urgency of this global crisis and the crucial role of local government in reducing the community’s carbon footprint.

“[The government is responsible for] trying new technologies and practices to demonstrate what works and leading by example through educating the public [about climate change],” Morrill said.

Starting by installing solar panels in its government buildings and schools like Wakefield High School, Arlington County is taking small steps that contribute to a larger effort in alleviating the climate crisis.

“ YOUNGER GENERATIONS DIDN’T CAUSE [CLIMATE CHANGE], BUT THEY WILL BEAR THE CONSEQUENCES.”

- TOM UDALL  
SENATOR FROM NEW MEXICO

## COOLING DOWN

Fairfax County is not far behind. Teens in the Fairfax County community have been working on an initiative advocating for the installation of solar panels in Fairfax County schools.

“Our solar panels started in 2016 with three seniors from James Madison High School,” Gao said. “They started to go to school board meetings, and they started a student coalition called Solar on Schools.”

Not only is climate change a prevalent issue on a global scale, but it has major implications locally, as well.

“I’ve always been interested in the environment and solving global warming, because I feel like climate change and global warming have always existed, and it’s always been a problem that’s been conscious in the back of my mind,” Gao said.

Gao and her team are working to spread their message across the county.

“We have been advocating for solar panels for a while.

We go to school board meetings when we can,” Gao said. “We also speak at different community forums that environmental groups hold. We speak at public hearings and Board of Supervisors meetings.”

Placing solar panels on schools would significantly reduce the amount of energy that is used throughout a typical school day. The student coalition’s efforts paid off. As of October 2018, a resolution was passed in support of the students’ advocacy.

“We lobbied the school board panel to pass a resolution on climate change, which basically was a resolution that gave them permission to support federal and state initiatives to decrease the Fairfax County carbon footprint,” Gao said.

The youth group’s advocacy did not stop there. In January 2019, they spoke at the Capital Improvement Plan (CIP) public hearing. The CIP is a document that lists all of the buildings and renovations for Fairfax County Public Schools.

“We spoke at the public hearing and we got three schools, Thomas Jefferson High School, Chantilly High School and Mason Crest Elementary School, listed in this CIP to receive solar panels,” Gao said. “We got over 150 schools added to be evaluated for solar capacity.”

Although the school board approved solar panel installation in three schools, some McLean students are skeptical about the necessity of this kind of change.

“I support solar panels in FCPS and I think McLean should implement them,” Shue said. “However, solar panels are expensive, and McLean’s carbon footprint is so small that using solar power wouldn’t affect climate change at all.”

Clubs and organizations at McLean have also taken actions against global warming. Through FCPS Get2Green, schools have the opportunity to participate in the Trex plastic film recycling challenge. In McLean’s Science National Honor Society, students can bring in plastic items for service hours, benefiting the environment.

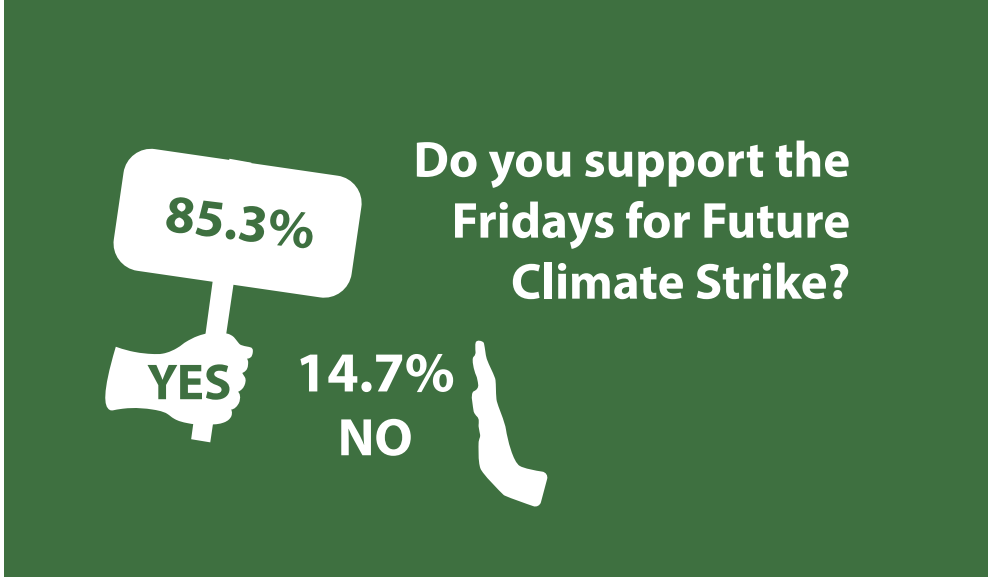
“I felt that a challenge such as this would be beneficial to students in that it’s so easy, and it really is eye-opening to see how much plastic we use every day,” Hoefler said. “Everything we purchase, just about, is wrapped in plastic film. However, our standard recycling services at home and at school don’t pick up plastic films.”

Hoefler believes that individual actions can lead to a brighter future.

“It would be cool for students to bring it here and make a difference,” Hoefler said. “Less plastic going into the [waste bin] means less plastics entering our waterways and oceans.”

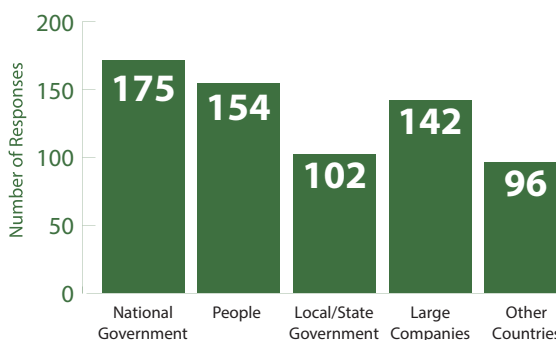
From individuals to governmental agencies, tackling climate change requires all hands on deck.

“Younger generations didn’t cause this problem,” Udall said. “But they will bear the consequences.” ■



**Is the government doing enough to resolve climate change?**

11.6% YES



**Who is responsible for RESOLVING climate change?**

**Should Fairfax County adopt a 100% renewable energy plan?**

12.3%

NO

87.7%

YES

