CLIMATE POWER 2020

GEORGIA

What Do Trump's Attacks On Science Mean For Georgia?

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TL/DR:

Georgians Believe In Climate Change - And They Want Their Leaders To Act:

- 66% of Georgians believe in climate change, and 58% of the state's residents are worried about climate change.
- 59% of Georgians believe the President should do more to address climate change, 59% believe Congress should do more, and 58% believe both their Governor and local officials should do more.
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Trump's Climate Denial Is Harmful To Georgians' Health:

- Currently, more than 310,000 Georgians are especially vulnerable to extreme heat.
- In 2019, three counties in Georgia received F grades for their number of days of unhealthy ozone levels, and the Atlanta metropolitan area was ranked 23rd in the nation for annual particle pollution.
- A 2017 report showed Georgia's drinking water was among the least safe in the nation, but Trump's anti-science attitude led him to block action to make polluters pay for cleaning up toxic chemicals that have been found in water supplies across the state. These chemicals, called PFAS are linked to kidney and testicular cancer, hypertension and other diseases.
- Trump's close relationship with the coal industry has resulted in looser rules for dumping toxic coal ash. Coal ash contains chemicals linked to cancer, neurological damage, and other health impacts and is stored in sites at risk of spilling into nearby rivers and lakes under flood conditions.

    - Coal ash from a Georgia Power facility leaked into Lake Juliette and the town's groundwater, releasing unsafe levels of chemicals linked to cancer and organ failures.

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Trump's Climate Denial Puts The Safety Of Georgians At Risk:

- Georgia is at risk from climate-related hurricanes:
    - In the past decade, Georgia experienced 5 hurricanes, totaling $115 billion in damages and 258 deaths.
- Georgia is at risk from climate-related wildfire and droughts:
    - Studies show climate change is increasing the severity, frequency, and extent of wildfires.
    - In the last decade Georgia experienced one wildfire that caused a total of $2.6 billion in damages and 21 deaths.
- Climate change is already affecting global patterns of drought, and such trends are expected to continue, with longer and more intense droughts predicted.
    - In the last decade, Georgia experienced three droughts that caused a total of $52 billion in damages and 218 deaths.
- Georgia is at risk from climate-related coastal and in-land flooding:
    - Scientists have linked an increase in heavy downpours to climate change.
    - Currently, 100,000 people are at risk of coastal flooding in Georgia and by 2050, an additional 38,000 people are projected to be at risk of coastal flooding due to sea level rise.
    - Currently, more than 570,000 people are at risk of inland flooding in Georgia.
- In the last decade, in addition to flooding caused by hurricanes and tropical storms, Georgia has experienced four flooding events costing a total of $9.2 billion in damages and resulting in 102 deaths.
- Georgia's military bases are at risk from extreme weather events:
    - Fort Gordon is impacted by current and potential future wildfires
    - Warner Robins Air Force Base is impacted by current and potential future wildfires and current and potential future floods
    - Naval Submarine Base Kings Bay is impacted by current and potential future floods, current and potential future drought, and future potential wildfires.
- Click here to jump to more research below

Trump's Climate Denial Hurts Georgia's Economy:

- Climate change will cost Georgia $34.2 billion a year by the year 2100.
- By 2100, 40,000 homes in Georgia at an estimated worth of $13 billion will face flooding. Those homes at risk currently contribute around $139 million in annual property tax revenue.
- In 2019, agriculture generated over $73 billion in gross state product and employed 392,400 workers in Georgia.
- Outdoor recreation in Georgia supports 238,000 jobs and $27.3 billion in consumer spending. In 2018, tourism generated $66.2 billion in visitor spending and supported more than 471,000 jobs.
- In the past decade, Georgia has experienced 35 climate-related disasters responsible for a total of $405.6 billion in damages.
- Since Trump assumed office, Georgia has experienced 13 climate-related disasters responsible for a total of $114 billion in damages.
- Trump's clean cars rollback will cost Georgians over $1 billion per year.
- Click here to jump to more research below

Trump's Climate Denial Is Especially Harmful To People Of Color In Georgia:

- Three counties in Georgia received "F" grades for ozone levels in 2019.
    - Ozone has been linked to asthma, and Black children are four times more likely to be admitted to the hospital and ten times more likely to die from asthma.
- The Atlanta-Athens-Clarke County-Sandy Springs metropolitan area was ranked 23rd in the nation for annual particle pollution in 2019.
- Communities of color in Georgia continue to fight against nuclear power plant expansion in a already heavily polluted area.
- Click here to jump to more research below

Georgia Has An Opportunity To Build A Strong Green Economy:

- Georgia is a leader in the South for clean energy jobs, with the sector employing 83,806 workers in 2019.
- Georgia was ranked fifteenth for clean energy employment in 2019.
- In 2019, Georgia was home to 4,798 jobs in the solar industry and 501 to 1,000 direct jobs in the wind industry.
- Click here to jump to more research below

HERE'S WHAT'S HAPPENING:

A majority of Georgians both believe in climate change and want their elected officials at all levels to do more to address the issue. President Trump's climate denial is harmful to Georgia's health, safety, and economy – and is particularly harmful to communities of color.

Currently, more than 310,000 Georgians are especially vulnerable to extreme heat. In 2019, three counties in Georgia received F grades for their number of days of unhealthy ozone levels, and the Atlanta metropolitan area was ranked 23rd in the nation for annual particle pollution.

In addition to extreme heat and air pollution concerns, a 2017 report showed Georgia's drinking water was among the least safe in the nation. Toxic PFAS chemicals have been found in water supplies across the state. PFAS chemicals are linked to kidney and testicular cancer, hypertension and other diseases. Georgians also face pollution from coal ash, which contains chemicals linked to cancer, neurological damage, and other health impacts. Coal ash is stored in sites at risk of spilling into nearby rivers and lakes under flood conditions. Coal ash from a Georgia Power facility leaked into Lake Juliette and the town's groundwater, releasing unsafe levels of chemicals linked to cancer and organ failures.

In addition to health factors, Trump's Climate Denial places the safety of Georgians at risk. Over the past decade, Georgia has experienced 5 hurricanes, totaling $115 billion in damages and 258 deaths. Alongside hurricanes, Georgia is at risk from climate-related wildfire and droughts. In the last decade Georgia experienced one wildfire that caused a total of $2.6 billion in damages and 21 deaths, and three droughts that caused a total of $52 billion in damages and 218 deaths.

Currently, 100,000 people are at risk of coastal flooding in Georgia and by 2050, an additional 38,000 people are projected to be at risk of coastal flooding due to sea level rise. In addition, more than 570,000 people are at risk of inland flooding in Georgia. In the last decade, alongside flooding caused by hurricanes and tropical storms, Georgia has experienced four flooding events costing a total of $9.2 billion in damages and resulting in 102 deaths.

Three of Georgia's military bases are also at risk from extreme weather events, Georgia's Fort Gordon is impacted by current and potential future wildfires, Warner Robins Air Force Base is impacted by current and potential future wildfires and current and potential future floods, and the Naval Submarine Base Kings Bay is impacted by current and potential future floods, current and potential future drought, and future potential wildfires.

Trump's climate change denial harms Georgia's economy. Climate change is estimated to cost Georgia $34.2 billion a year by the year 2100. By 2100, 40,000 homes in Georgia at an

estimated worth of $13 billion will face flooding. Climate change will also harm the state's agriculture, outdoor recreation and tourism industries. In the past decade, Georgia has experienced 35 climate-related disasters responsible for a total of $405.6 billion in damages, and since Trump assumed office, Georgia has experienced 14 climate-related disasters responsible for a total of $247.6 billion in damages. Trump's climate policies harm upon the state's economy can be evidenced with his administration's clean cars rollback , which will cost Georgians over $1 billion per year.

Trump's Climate Denial is especially harmful to people of color in Georgia, which has deep roots to the Environmental Justice movement. Communities of color in Georgia continue to fight against pollutants from nuclear facilities.

Despite Trump's climate change denial, Georgia has an opportunity to build a strong green economy. Georgia is a leader in the South when it comes to clean energy jobs. The state was ranked 15th for clean energy employment in 2019, with the sector providing 83,806 jobs. In 2019, Georgia was home to 4,798 jobs in the solar industry and 501 to 1,000 direct jobs in the wind industry.

RESEARCH:

GEORGIANS WANT CLIMATE ACTION

66 Percent Of Georgians Believe In Climate Change. According to public opinion survey estimates modeled by the Yale Program on Climate Change Communication and the George Mason Center for Climate Change Communication, 66% of Georgians agree that global warming is happening. [Yale Program on Climate Change Communication, 9/17/2019]

58 Percent Of Georgians Are Worried About Climate Change. According to public opinion survey estimates modeled by the Yale Program on Climate Change Communication and the George Mason Center for Climate Change Communication, 58% of Georgians are worried about global warming. [Yale Program on Climate Change Communication, 9/17/2019]

60 Percent Of Georgians Believe The President Should Do More To Address Climate Change. According to public opinion survey estimates modeled by the Yale Program on Climate Change Communication and the George Mason Center for Climate Change Communication, 60% of Georgians believe the President should do more to address global warming. [Yale Program on Climate Change Communication, 9/17/2019]

59 Percent Of Georgians Believe That Congress Should Do More To Address Climate Change. According to public opinion survey estimates modeled by the Yale Program on Climate Change Communication and the George Mason Center for Climate Change Communication, 59% of Georgians believe that Congress should do more to address global warming. [Yale Program on Climate Change Communication, 9/17/2019]

58 Percent Of Georgians Believe That Their Governor Should Do More To Address Climate Change. According to public opinion survey estimates modeled by the Yale Program on Climate Change Communication and the George Mason Center for Climate Change Communication, 58% of Georgians believe that their Governor should do more to address global warming. [Yale Program on Climate Change Communication, 9/17/2019]

58 Percent Of Georgians Believe That Their Local Officials Should Do More To Address Climate Change. According to public opinion survey estimates modeled by the Yale Program on Climate Change Communication and the George Mason Center for Climate Change Communication, 58% of Georgians believe that their local officials should do more to address global warming. [Yale Program on Climate Change Communication, 9/17/2019]

TRUMP'S CLIMATE DENIAL IS HARMFUL TO GEORGIANS' HEALTH

EXTREME HEAT DAYS

Currently, Georgia Averages 20 Extreme Heat Days Annually. According to States At Risk, Georgia currently averages around 20 extreme heat days per year. [StatesAtRisk.Org, Accessed 5/12/2020]

By 2050, The Number Of Extreme Heat Days Georgia Experiences Annually Is Projected To Jump To More Than 90. According to States At Risk, Georgia is expected to see nearly 90 days of extreme heat per year by 2050. [StatesAtRisk.Org, Accessed 5/12/2020]

Currently, More Than 310,000 Georgians Are Especially Vulnerable To Extreme Heat. According to States At Risk, there are 310,000 people who are particularly vulnerable to extreme heat – especially those under 6 years old, above 65 years old, or living in extreme poverty – in Georgia. [StatesAtRisk.Org, Accessed 5/12/2020]

ISSUES WITH ACCESS TO CLEAN AIR

Ozone Levels

Three Counties In Georgia Received F Grades For Their Number Of Days Of Unhealthy Ozone Levels In 2019. According to the American Lung Association's 2020 State of the Air report, nine counties in Georgia received "F" grades for the number of days with unhealthy ozone levels in 2019. Those counties are Fulton, Henry, and Rockdale. [State of the Air, Georgia Report Card, 2020]

2019 Marked The First Year That Atlanta Was Not Featured Within The Top 25 Most Polluted Cities In The Nation For Ozone. According to a press release from the American Lung Association on their 2020 State of the Air report: "The American Lung Association's 2020 'State of the Air' report found several cities earned improved rankings for the nation's most widespread air pollutants—ozone and particle pollution—both of which can be deadly. In last year's report, Atlanta was ranked the 25th most polluted city in the nation for ozone. However, improvements and fewer days of unhealthy ozone resulted in Atlanta's removal for the 'Most-Polluted Cities' list as it ranked 33rd this year." [Press Release, American Lung Association, 4/21/2020]

In 2019, Macon And Warner-Robbins Counties' Ozone Levels Remained Stagnant From 2018. According to a press release from the American Lung Association on their 2020 State of the Air report: "Macon and Warner-Robbins had the same number of unhealthy ozone days from last year's report and tied 122nd for most polluted city for ozone. 'Ozone pollution can harm even healthy people, but is particularly dangerous for children, older

adults and people with lung diseases like COPD or asthma,' said Deen. 'Breathing ozone-polluted air can trigger asthma attacks in both adults and children with asthma, which can land them in the doctor's office or the emergency room. Ozone can even shorten people's lives.'" [Press Release, American Lung Association, 4/21/2020]

Particle Pollution

In 2019, August Recorded Worse Levels Of Particle Pollution Than 2018. According to a press release from the American Lung Association on their 2020 State of the Air report: "Macon and Warner-Robbins tied 41st in year-round particle pollution and recorded their best levels in this year's report. Augusta was slightly worse this year and tied 36th for most polluted city for year-round particle pollution." [Press Release, American Lung Association, 4/21/2020]

The Atlanta-Athens-Clarke County-Sandy Springs Metropolitan Area Was Ranked 23rd For Annual Particle Pollution. According to the American Lung Association's 2020 State of the Air report, the Atlanta-Athens-Clarke County-Sandy Springs metropolitan area ranked 23rd for annual particle pollution in 2019. [State of the Air, City Rankings, 2020]

Augusta, Macon And Warner-Robbins Witnessed An Uptick In Days When Short-Term Particle Pollution Reached Unhealthy Levels. According to a press release from the American Lung Association on their 2020 State of the Air report: "'State of the Air' 2020 also tracked short-term spikes in particle pollution, which can be extremely dangerous and even lethal. The report found that Augusta (T-44th), Macon (T-56th), and Warner-Robbins (T-56th) had more days when short-term particle pollution reached unhealthy levels." [Press Release, American Lung Association, 4/21/2020]

- **Upticks Were Directly Linked To Weather Patterns, Such As Drought, And High Emissions From Wood-Burning Devices.** According to a press release from the American Lung Association on their 2020 State of the Air report: "Many of these spikes were directly linked to weather patterns like drought which are increasing in frequency and intensity in many areas due to climate change and high emissions from wood-burning devices." [Press Release, American Lung Association, 4/21/2020

In 2019, The Number Of Unhealthy Air Days In Atlanta Remained Stagnant From 2018. According to a press release from the American Lung Association on their 2020 State of the Air report: Atlanta tied 61st for short-term particle pollution and experienced the same number of unhealthy air days in last year's report." [Press Release, American Lung Association, 4/21/2020]

ISSUES WITH ACCESS TO CLEAN WATER

PFAS Contamination

A 2017 National Resources Defense Council Report Showed Georgia's Drinking Water Was Among The Nation's Least Safe. According to Patch: "Georgia's drinking water is among the least-safe in the United States, according to a new report by the National Resources Defense Council. According to the report, Georgia had the nation's fifth-most violations of the 1974 Safe Drinking Water Act in 2015, the year that was analyzed in the study. The rankings are adjusted for population. [...] In Georgia, the group found 1,870 violations of the drinking water act in 906 different water systems. More than 3.8 million people are served by those water systems, according to the NRDC, amounting to roughly 37 percent of the state's entire population." [Patch, 5/3/2017]

High Levels Of PFAS Chemicals Were Detected In The City Of Summerville's Water Supply. According to 11 Alive: "People in Summerville, Georgia are lining up by the hundreds to get bottled water from the city. This is in reaction to an EPA study that shows high levels of possibly dangerous chemicals, known as Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS), in drinking water. The chemicals are found in Teflon, carpets, clothes and other sources. The EPA has ruled PFOA and PFOS levels should not exceed 70 parts per trillion. Water tested in January from Summerville's Raccoon Creek treatment facility had 98 parts per trillion." [11 Alive, 12/12/2020]

High PFAS Levels Were Detected In Northeast Georgia, Home To Carpet Industrial Facilities. According to Atlanta Journal-Constitution: "PFAS have been used since the 1950s in a variety of industrial and household products, including non-stick pans, stain-resistant carpets and fabrics, cleaning solutions and some firefighting foams. The chemicals have turned up at elevated levels in the drinking water of millions, including in northeast Georgia where the carpet industry has been blamed by some for polluting local water sources." [Atlanta Journal-Constitution, 2/14/2019]

PFAS Also Contaminated Groundwater At Georgia' Three Air Force Bases. According to Atlanta Journal-Constitution: "PFAS have also contaminated groundwater at Georgia's three air bases, raising concerns about potential impacts to surrounding communities and the environment. " [Atlanta Journal-Constitution, 2/14/2019]

Health Risks

Environmental Working Group: PFAS Contamination of Drinking Water Far More Prevalent Than Previously Reported, Detectable In All Major Water Supplies In The U.S. In January of 2020, the Environmental Working Group published a report stating: "New laboratory tests commissioned by EWG have for the first time found the toxic fluorinated chemicals known as PFAS in the drinking water of dozens of U.S. cities, including major metropolitan areas. The results confirm that the number of Americans exposed to PFAS from contaminated tap water has been dramatically underestimated by previous studies, both from the Environmental Protection Agency and EWG's own research. Based on our tests

and new academic research that found PFAS widespread in rainwater, EWG scientists now believe PFAS is likely detectable in all major water supplies in the U.S., almost certainly in all that use surface water. EWG's tests also found chemicals from the PFAS family that are not commonly tested for in drinking water." [Environmental Working Group, 1/22/2020]

PFAS Chemicals Were Linked To Kidney And Testicular Cancer, Hypertension, And Other Diseases. According to Politico: "The chemicals, known as PFOA and PFOS, have been linked to kidney and testicular cancer, hypertension and other ailments. Major chemical companies like 3M as well as the Defense Department would face billions of dollars in liability from aggressive efforts to regulate and clean up the chemical, which has contaminated groundwater near hundreds of military bases and chemical plants." [Politico, 1/28/19]

Per- And Polyfluoroalkyl Substances, Known As PFAS, Are Prevalent Man-Made Chemicals That Do Not Break Down And Accumulate Over Time In The Environment And Human Body. According to the EPA, "Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that includes PFOA, PFOS, GenX, and many other chemicals. PFAS have been manufactured and used in a variety of industries around the globe, including in the United States since the 1940s. PFOA and PFOS have been the most extensively produced and studied of these chemicals. Both chemicals are very persistent in the environment and in the human body – meaning they don't break down and they can accumulate over time. There is evidence that exposure to PFAS can lead to adverse human health effects." [EPA.gov, accessed 3/8/19]

PFAS Are Known As "Forever Chemicals" Because They Do Not Break Down. According to The Washington Post, "Because PFAS do not break down in the environment, they have become known as 'forever chemicals.'" [Washington Post, 2/14/19]

PFAS Chemicals Are Currently Not Designated "Hazardous Substances" Under The Superfund Law. According to the Environmental Working Group: "Superfund distinguishes between chemicals that have been designated as 'hazardous substances' and things that are merely considered 'pollutants or contaminants.' Under current law, PFAS chemicals are considered 'pollutants or contaminants' but not 'hazardous substances.' This significantly limits the power of the Environmental Protection Agency and the states to clean up PFAS pollution. A 'hazardous substance' designation under Superfund triggers reporting requirements for releases over a certain threshold. Anytime the hazardous substance is released into the air, land or water in amounts exceeding the threshold, it triggers an investigation and potential cleanup. By contrast, when a substance is simply a 'pollutant or contaminant,' it must be shown to pose an 'imminent and substantial danger' to public health before the site can be investigated and cleaned up – and, even then, the EPA has considerable discretion over whether to pursue cleanup." [Environmental Working Group, 7/3/2019]

Under Superfund, Parties Responsible For Contamination Are Forced To Either Perform The Cleanup Work Or Reimburse The Government For Cleanup Costs. According to the Environmental Protection Agency, "CERCLA is informally called Superfund. It allows EPA to clean up contaminated sites. It also forces the parties responsible for the contamination to either perform cleanups or reimburse the government for EPA-led cleanup work." [Environmental Protection Agency "What is Superfund" accessed 2/5/2020]

COAL ASH

Pollution Risks

Coal Ash Contains Chemicals Known To Cause Cancer, Neurological Damage, Or Heart Ailments And Is Stored In Sites At Risk Of Spilling Into Nearby Rivers And Lakes Under Flood Conditions. In August of 2019, Politico reported: "The ash, left behind when coal is burned for power generation, contains arsenic, selenium, lead, mercury, boron and other contaminants known to cause cancer, neurological damage or heart ailments. Electric utilities usually store it in massive landfills or unlined ponds that are at a risk of spilling when nearby lakes and rivers flood — as happened in a $1.2 billion disaster that damaged dozens of homes in Tennessee in 2008, as well as two breaches that fouled a river and lake in North Carolina last year after Hurricane Florence." [Politico, 8/26/2019]

Unsafe Levels Of Toxic Metals Found In Groundwater Near More Than 90% Of Power Plants Subject To Monitoring Requirements. In March of 2019, Reuters reported "More than 90 percent of U.S. coal-fired power plants that are required to monitor groundwater near their coal ash dumps show unsafe levels of toxic metals, according to a study released on Monday by environmental groups. The groups, led by the Environmental Integrity Project and Earthjustice, said their findings show the potential harm to drinking water from coal ash and indicate that stronger regulations are needed. Data made public by power companies showed 241 of the 265 plants, or 91 percent, that were subject to the monitoring requirement showed unsafe levels of one or more coal ash components in nearby groundwater compared to EPA standards, according to the analysis by the groups. The report also found that 52 percent of those plants had unsafe levels of cancer-causing arsenic in nearby groundwater, while 60 percent showed unsafe levels of lithium, which can cause neurological damage." [Reuters, 3/4/2019]

More Than 100 Storage Sites For Coal Ash Are At High Risk For Flooding. In August of 2019, Politico reported: "More than 100 storage sites for coal-burning power plants' toxic leftovers lie in areas that federal emergency managers have labeled a high risk for flooding, according to POLITICO's examination of government and industry data. That finding comes as scientists and pollution experts warn that coal ash — a multibillion-dollar liability problem for communities across the country — may become an even greater danger because of heavier rains triggered by climate change. Already, federal agencies warn that the government's flood maps most likely understate the risks of deluges in much

of the country, including the Southeast, where at least 42 storage sites in POLITICO's analysis are located." [Politico, 8/26/2019]

Local Incidents

Coal Ash From Georgia Power Leaked Into Lake Juliette And The Town's Groundwater, Releasing Unsafe Levels Of Chemicals Linked To Cancer And Organ Failures. According to Grist: "On a sweltering late-August day, a pair of red vehicles pulled down Bowdoin's driveway, carrying Jen Hilburn and Fletcher Sams of the Altamaha Riverkeeper. [...] Over the course of the past year, Hilburn and Sams have gathered water samples that they say show coal ash has leaked into both Lake Juliette as well as groundwater consumed by residents. They've tested 29 wells, and nearly every sample has contained potentially unsafe levels of hexavalent chromium, which is linked to ulcers, liver and kidney failure, and cancer. Sams says those initial findings suggest groundwater near Scherer could be more widely contaminated than the utility has previously reported." [Grist, 1/13/2020]

Georgia Power's Own Tests Showed Detected Levels Of Cobalt, Which Has Been Linked To Thyroid Damage. According to Grist: "The company's own tests have detected elevated levels of cobalt — which can cause thyroid damage — according to a 2018 analysis of the utility's data by Earthjustice and the Environmental Integrity Project, or EIP, a watchdog group made up of ex-EPA staffers. The two environmental organizations also found that 11 of Georgia's 12 coal-fired plants, including Scherer, have contaminated nearby groundwater." [Grist, 1/13/2020]

TRUMP'S CLIMATE DENIAL PUTS THE SAFETY OF GEORGIANS AT RISK

HURRICANES

Link To Climate Change

New York Times Headline: "Climate Change Is Making Hurricanes Stronger, Researchers Find." On May 18, 2020, the New York Times reported: "Hurricanes have become stronger worldwide during the past four decades, an analysis of observational data shows, supporting what theory and computer models have long suggested: climate change is making these storms more intense and destructive. The analysis, of satellite images dating to 1979, shows that warming has increased the likelihood of a hurricane developing into a major one of Category 3 or higher, with sustained winds greater than 110 miles an hour, by about 8 percent a decade." [New York Times, 5/18/2020]

NOAA: Human Activities May Have Already Made Changes To Atlantic Hurricanes. According to the Geophysical Fluid Dynamics Laboratory, "It is premature to conclude that human activities–and particularly greenhouse gas emissions that cause global warming–have already had a detectable impact on Atlantic hurricane or global tropical cyclone activity. That said, human activities may have already caused changes that are not yet detectable due to the small magnitude of the changes or observational limitations, or are not yet confidently modeled (e.g., aerosol effects on regional climate)." [NOAA, Geophysical Fluid Dynamics Laboratory, accessed 8/29/17]

Anthropogenic Warming Is Likely To Increase Intensity Of Hurricanes By As Much As 11%. According to the Geophysical Fluid Dynamics Laboratory, "Anthropogenic warming by the end of the 21st century will likely cause tropical cyclones globally to be more intense on average (by 2 to 11% according to model projections for an IPCC A1B scenario). This change would imply an even larger percentage increase in the destructive potential per storm, assuming no reduction in storm size." [NOAA, Geophysical Fluid Dynamics Laboratory, accessed 8/29/17]

Increased Hurricane Activity Is Linked To Higher Surface Temperatures Caused By Man Made Carbon Emissions. According to the National Climate Assessment, "The recent increases in activity are linked, in part, to higher sea surface temperatures in the region that Atlantic hurricanes form in and move through. Numerous factors have been shown to influence these local sea surface temperatures, including natural variability, human-induced emissions of heat-trapping gases, and particulate pollution. Quantifying the relative contributions of natural and human-caused factors is an active focus of research." [National Climate Assessment, Extreme Weather, 2014]

Warming Water Would Provide Fuel For More Intense Hurricanes. According to NASA, "The one way in which global warming could impact hurricanes is by making them more intense. More heat and water in the atmosphere and warmer sea surface temperatures could provide more fuel to increase the wind speeds of tropical storms." [NASA, Earth Observatory, accessed 8/28/17]

Recent Hurricanes

2019 Hurricane Dorian

August – September 2019: Hurricane Dorian Caused $1.6 Billion In Damages And Resulted In 10 Deaths. According to NOAA's National Centers for Environmental Information, Hurricane Dorian, which caused an ocean surge to hit Georgia in August and September of 2019, caused $1.6 billion in damages and resulted in 10 deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

- **Dorian Was A Category 1 Hurricane That Caused Significant Flood, Severe Storm, And Tornado Damage On Georgia's Outer Banks.** According to NOAA's National Centers for Environmental Information, "Category 1 hurricane makes landfall on the Outer Banks of Georgia, after devastating the northern Bahama Islands as a historically-powerful and slow-moving hurricane. Dorian tracked offshore parallel to the Florida, Georgia and South Carolina coastline before making a Georgia landfall, bringing a destructive sound-side surge that inundated many coastal properties and isolated residents who did not evacuate. Significant flood, severe storm, and tornado damage to many homes and businesses occurred on the Outer Banks of Georgia." [ncdc.noaa.gov, Accessed 5/12/2020]

- **Dorian Reached A Maximum Sustained Wind Speed At Landfall At 185 Miles Per Hour, The Highest Since The 1935 Labor Day Hurricane.** According to NOAA's National Center for Environmental Information, "Dorian's intensification to a category 5 storm marks the fourth consecutive year, in which a maximum category 5 storm developed in the Atlantic basin - a new record. Dorian also tied the record for maximum sustained wind speed for a landfalling hurricane (185 mph) in the Atlantic, a record shared with the historic 1935 Labor Day Hurricane." [ncdc.noaa.gov, Accessed 4/30/2020]

2018 Hurricane Michael

October 2018: Hurricane Michael Caused $25.5 Billion In Damages And Resulted In 49 Deaths. According to NOAA's National Centers for Environmental Information, Hurricane Michael, which hit Georgia in October 2018, caused $25.5 billion in damages and 49 deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

- **Hurricane Michael Was A Category 5 Hurricane That Reached Wind Speeds Of 160 Miles Per Hour.** According to NOAA's National Centers for Environmental Information, "Powerful category 5 hurricane made landfall at Mexico Beach, Florida with devastating winds of 160 mph and storm surge in excess of 15 feet. [...] Michael's intense winds also reached well inland causing billions in damage costs to agriculture and forestry, as high winds hit during harvest season for numerous crops across several states. [...] Michael was initially rated as a category 4 with 155 winds but

upgraded to a category 5 with 160 mph winds upon further analysis." [ncdc.noaa.gov, Accessed 5/12/2020]

- **Hurricane Michael Was The Third Category 4 Or Higher Storm To Make Landfall In The U.S. Since 2017.** According to NOAA's National Centers for Environmental Information, "Michael is the third category 4 or higher storm to make landfall in the U.S. since 2017. Michael is the first category 5 to strike the U.S. mainland since Hurricane Andrew in 1992 and is only the fourth on record. The others are the Labor Day Hurricane (1935) and Hurricane Camille (1969)." [ncdc.noaa.gov, Accessed 5/12/2020]

2018 Hurricane Florence

September 2018: Hurricane Florence Caused $24.5 Billion In Damages And Resulted In 53 Deaths. According to NOAA's National Centers for Environmental Information, Hurricane Florence, which hit Georgia in September 2018, caused $24.5 billion in damages and 53 deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

2017 Hurricane Irma

September 2017: Hurricane Irma Caused $52.5 Billion In Damages And 97 Deaths. According to NOAA's National Centers for Environmental Information, Hurricane Irma, which hit Georgia in September 2017, caused $52.5 billion in damages and 97 deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

- **Hurricane Irma Was A Category 4 Hurricane And A Category 5 Storm.** According to NOAA's National Centers for Environmental Information, "Category 4 hurricane made landfall at Cudjoe Key, Florida after devastating the U.S. Virgin Islands - St John and St Thomas - as a category 5 storm." [ncdc.noaa.gov, Accessed 5/12/2020]

- **Hurricane Irma Sustained Winds Of 185 Miles Per Hour For Longer Than 37 Hours, The Longest Recorded In The Satellite Era.** According to NOAA's National Centers for Environmental Information, "Category 4 hurricane made landfall at Cudjoe Key, Florida after devastating the U.S. Virgin Islands - St John and St Thomas - as a category 5 storm. [...] Irma maintained a maximum sustained wind of 185 mph for 37 hours, the longest in the satellite era. Irma also was a category 5 storm for longer than all other Atlantic hurricanes except Ivan in 2004." [ncdc.noaa.gov, Accessed 5/12/2020]

2016 Hurricane Matthew

October 2016: Hurricane Matthew Caused $10.9 Billion In Damages And 49 Deaths. According to NOAA's National Centers for Environmental Information, Hurricane Matthew, which hit Georgia in October 2016, caused $10.9 billion in damages and 49 deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

- **Hurricane Matthew Made Landfall In North Carolina As A Category 1 Hurricane.** According to NOAA's National Centers for Environmental Information, "Category 1 hurricane made landfall in North Carolina, after it paralleled the Southeast coast along Florida, Georgia and the Carolinas causing widespread damage from wind, storm surge and inland flooding." [ncdc.noaa.gov, Accessed 5/12/2020]

- **Hurricane Matthew Caused Damage From Wind, Storm Surge And Inland Flooding.** According to NOAA's National Centers for Environmental Information, "Category 1 hurricane made landfall in North Carolina, after it paralleled the Southeast coast along Florida, Georgia and the Carolinas causing widespread damage from wind, storm surge and inland flooding." [ncdc.noaa.gov, Accessed 5/12/2020]

2011 Tropical Storm Lee

September 2011: Tropical Storm Lee Caused $2.9 Billion in Damages and 21 Deaths. According to NOAA's National Centers for Environmental Information, Tropical Storm Lee caused wind and flood damage across the East coast, totaling $2.9 Billion and twenty-one deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

WILDFIRE

Link To Climate Change

Climate Change Is Increasing The Severity, Frequency, And Extent Of Wildfires. According to a report from the EPA: "Higher temperatures and drought are likely to increase the severity, frequency, and extent of wildfires in Colorado, which could harm property, livelihoods, and human health. In 2013, the Black Forest Fire burned 14,000 acres and destroyed over 500 homes. Wildfire smoke can reduce air quality and increase medical visits for chest pains, respiratory problems, and heart problems. The size and number of western forest fires have increased substantially since 1985." [Environmental Protection Agency, "What Climate Change Means for Colorado" August 2016]

The National Climate Assessment Has Found That The Number Of Wildfires Is Likely To Increase As The Climate Warms And Could Induce "Profound Changes To Certain Ecosystems." In August of 2018, The Atlantic reported: "As if there wasn't enough evidence of that. Last year, the National Climate Assessment—written by a panel of scientists in the military, federal civilian agencies, and private universities—reviewed the complete scientific literature on climate change and wildfires. They concluded that the number of large blazes had increased since the early 1980s. They also said the number of wildfires 'is projected to further increase in those regions as the climate warms.' They warned this could induce 'profound changes to certain ecosystems.'" [The Atlantic, 8/10/18]

Acres Burned By Wildfire Doubled In Recent Decades Due To Climate Change. According to the 2018 National Climate Assessment Report: "Wildfire is a natural part of many ecosystems in the Southwest, facilitating germination of new seedlings and killing pests. Although many ecosystems require fire, excessive wildfire can permanently alter ecosystem integrity. Climate change has led to an increase in the area burned by wildfire in the western United States. Analyses estimate that the area burned by wildfire from 1984 to 2015 was twice what would have burned had climate change not occurred. Furthermore, the area burned from 1916 to 2003 was more closely related to climate factors than to fire suppression, local fire management, or other non-climate factors." [National Climate Assessment, Chapter 25, 2018]

Recent Wildfire Seasons

2019 Fire Season

In 2019, 12,407 Acres Of Land Were Burned Due To Wildfire In Georgia. According to the National Interagency Fire Center's 2019 report, 12,407 acres of land were burned in 3,158 fires across Georgia in 2019. [National Interagency Fire Center, National Report of Wildland Fires and Acres Burned by State, 2019 Report]

2018 Fire Season

In 2018, 14,236 Acres Of Land Were Burned Due To Wildfire In Georgia. According to the National Interagency Fire Center's 2018 report, 14,236 acres of land were burned in 2,572 fires across Georgia in 2018. [National Interagency Fire Center, National Report of Wildland Fires and Acres Burned by State, 2018 Report]

2017 Fire Season

In 2017, 200,785 Acres Of Land Were Burned Due To Wildfire In Georgia. According to the National Interagency Fire Center's 2017 report, 200,785 acres of land were burned in 3,929 fires across Georgia in 2017. [National Interagency Fire Center, National Report of Wildland Fires and Acres Burned by State, 2017 Report]

2016 Fire Season

Summer – Fall 2016: Western/Southeastern Wildfires Caused $2.6 Billion In Damages And 21 Deaths. According to NOAA's National Centers for Environmental Information, Western/Southeastern Wildfires that sparked in Georgia through the Summer and Fall of 2016 caused $2.6 billion in damages and 21 deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

DROUGHT

Link To Climate Change

NASA Research Showed Human Activity Has Been Influencing Global Patterns Of Drought, With Increased Drought Occurring In Response To Greenhouse Gas Emissions. According to NASA, "Warming temperatures and changing precipitation patterns can lead to droughts, and NASA research shows that humans have been influencing global patterns of drought for nearly a century. Kate Marvel and Ben Cook, researchers at NASA's Goddard Institute for Space Studies and Columbia University in New York City, investigated humans' influence on 20th-century drought patterns using historical weather data and drought maps calculated from tree rings. They found that a data 'fingerprint' – a drying and wetting pattern predicted to occur in response to greenhouse gas emissions – was visible as far back as the early 1900s." [climate.nasa.gov, 6/13/2019]

Climate Change Is Already Affecting Global Patterns Of Drought, And Such Trends Are Expected To Continue. According to NASA, "Demonstrating that humans influenced global drought patterns in the past is an important part of understanding how we may influence

them in the future, said Cook. 'Climate change is not just a future problem,' he said. 'This shows it's already affecting global patterns of drought, hydroclimate, trends, variability — it's happening now. And we expect these trends to continue, as long as we keep warming the world.'" [climate.nasa.gov, 6/13/2019]

Longer And More Intense Droughts Are Expected In The Future Due To Climate Change. According to NASA, "Demonstrating climate models' ability to accurately depict past droughts, helps to confirm their ability to model future droughts as well. Other research of Cook's shows that if greenhouse gas emissions continue to increase along current trajectories, the U.S. Southwest could see 'megadroughts' lasting more than three decades. Cook and his team ran 17 different climate models, and all of them agree that there are likely to be longer and more intense droughts in the future." [climate.nasa.gov, 6/13/2019]

Recent Droughts

2016 Drought Impacts

2016: West/Northeast/Southeast Drought Caused $3.8 Billion In Damages And Zero Deaths. According to NOAA's National Centers for Environmental Information, droughts across the Western, Northeastern and Southeastern States including Georgia in 2016 caused $3.8 billion in damages and zero deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

2012 Drought Impacts

Throughout 2012, Drought Caused $34.2 Billion In Damages And 123 Deaths. According to NOAA's National Centers for Environmental Information, drought and heat waves across the Southern Plains and Southwest, which impacted Georgia in throughout 2012, caused $34.2 Billion in damages and one hundred and twenty-three deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

- **This Drought Was The "Worst Since The 1930's."** According to NOAA's National Centers for Environmental Information, "The 2012 drought is the most extensive drought to affect the U.S. since the 1930s." [ncdc.noaa.gov, Accessed 5/12/2020]

2011 Drought Impacts

Spring - Summer 2011: Drought And Heat Waves Across The Southern Plains And Southwest Caused $14 Billion In Damages And 95 Deaths. According to NOAA's National Centers for Environmental Information, drought and heat waves across the Southern Plains and Southwest, which impacted Georgia in the Spring and Summer of 2011, caused $14 billion in damages and 95 deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

FLOODS

Link To Climate Change

Heavy Rainstorms Have Become Heavier And More Frequent In The U.S. In The Past Three To Five Decades. According to the National Climate Assessment, "Heavy downpours are

increasing nationally, especially over the last three to five decades. The heaviest rainfall events have become heavier and more frequent, and the amount of rain falling on the heaviest rain days has also increased. " [National Climate Assessment, Extreme Weather, 2014]

Scientists Have Linked An Increase in Heavy Downpours To Climate Change. According to the National Climate Assessment, "Global analyses show that the amount of water vapor in the atmosphere has in fact increased due to human-caused warming. This extra moisture is available to storm systems, resulting in heavier rainfalls." [National Climate Assessment, Extreme Weather, 2014]

National Climate Assessment: "Heavy Downpours Are Increasing Nationally…The Mechanism Driving These Changes Is Well Understood." According to the 2014 National Climate Assessment: "Heavy downpours are increasing nationally, especially over the last three to five decades. The heaviest rainfall events have become heavier and more frequent, and the amount of rain falling on the heaviest rain days has also increased. Since 1991, the amount of rain falling in very heavy precipitation events has been significantly above average. This increase has been greatest in the Northeast, Midwest, and upper Great Plains – more than 30% above the 1901-1960 average. There has also been an increase in flooding events in the Midwest and Northeast, where the largest increases in heavy rain amounts have occurred. The mechanism driving these changes is well understood. Warmer air can contain more water vapor than cooler air. Global analyses show that the amount of water vapor in the atmosphere has in fact increased due to human-caused warming.,,, This extra moisture is available to storm systems, resulting in heavier rainfalls. Climate change also alters characteristics of the atmosphere that affect weather patterns and storms." [2014 National Climate Assessment: Extreme Weather]

Sea Level Rise

Currently, 100,000 People Are At Risk Of Coastal Flooding In Georgia. According to States At Risk, there are currently 100,000 people at risk of coastal flooding in Georgia. [StatesAtRisk.Org, Accessed 4/29/2020]

By 2050, An Additional 38,000 People Are Projected To Be At Risk Of Coastal Flooding Due To Sea Level Rise. According to States At Risk, by 2050 a further 38,000 people, for total of 138,000, are projected to be at risk of coastal flooding in Georgia due to sea level rise. [StatesAtRisk.Org, Accessed 4/29/2020]

Inland Flooding

Currently, More Than 570,000 People Are At Risk Of Inland Flooding In Georgia. According to States At Risk, there are currently more than 570,000 people living in areas at elevated risk of inland flooding in Georgia. [StatesAtRisk.Org, Accessed 4/29/2020]

Recent Flooding Events

2015 Flooding Events

May 2015: Texas and Oklahoma Flooding and Severe Weather Caused $2.8 Billion in Damages and 31 Deaths. According to NOAA's National Centers for Environmental Information, storms associated with those affecting Texas and Oklahoma hit Georgia in May 2015, causing $2.8 Billion in damages and 31 deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

2014 Flooding Events

April 2014: Tornadoes And Flooding Caused $1.9 Billion In Damages And 33 Deaths. According to NOAA's National Centers for Environmental Information, tornadoes and flooding across the Midwest, Southeast and Northeast which hit Georgia in April 2014 caused $1.9 billion in damages and 33 deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

- **83 Confirmed Tornadoes Impacted Across Fifteen States Including Georgia.** According to NOAA's National Centers for Environmental Information, "Tornado outbreak across the Midwest, Southeast and Northeast states (AL, AR, DE, FL, GA, KS, MD, MO, MS, NC, NJ, NY, PA, TN, VA) with 83 confirmed tornadoes." [ncdc.noaa.gov, Accessed 5/12/2020]

2010 Flooding Events

April 2010: Severe Weather Across the East Coast Caused $2.7 Billion in Damages And 32 Deaths. According to NOAA's National Centers for Environmental Information, severe weather and flooding across the East Coast and South hit Georgia in April 2010, causing $2.7 Billion in Damages and 32 deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

2009 Flooding Events

April 2009: Severe Weather and Tornadoes Caused $1.8 Billion in Damages and Six Deaths. According to NOAA's National Centers for Environmental Information, severe weather and flooding across the Southeast hit Georgia in April 2009, causing $2.7 Billion in damages and six deaths. [ncdc.noaa.gov, Accessed 5/12/2020]

MILITARY BASES AFFECTED BY CLIMATE CHANGE

Georgia's Fort Gordon Is Impacted By Current And Potential Future Wildfires. According to the Department of Defense, Fort Gordon in Georgia is impacted by current and potential future wildfire events. [Report on Effects of a Changing Climate to the Department of Defense, January 2019]

Georgia's Warner Robins Air Force Base (AFB) Is Impacted By Current And Potential Future Wildfires And Current And Potential Future Floods. According to the Department of Defense, Warner Robins Air Force Base (AFB) in Georgia is impacted by current and

potential future wildfire events and current and future potential floods. [Report on Effects of a Changing Climate to the Department of Defense, January 2019]

Georgia's Naval Submarine Base (NSB) Kings Bay Is Impacted By Current And Potential Future Floods, Current And Potential Future Drought, And Future Potential Wildfires. According to the Department of Defense, Naval Submarine Base (NSB) Kings Bay in Georgia is impacted by current and potential future drought, current and future potential floods, and potential future wildfire events. [Report on Effects of a Changing Climate to the Department of Defense, January 2019]

TRUMP'S CLIMATE DENIAL HURTS GEORGIA'S ECONOMY

GDP IMPACT

Climate Change Will Cost Georgia $34.2 Billion A Year By The Year 2100. According to data on the impacts of climate change as part of a study published in Science Magazine, Georgia can expect to lose $34.2 billion from annual GDP by the year 2100 if action isn't taken to immediately curtail carbon emissions. The study used a model that aimed to calculate the future impact on each state's gross domestic product (GDP) from events including hurricanes, storm surges, changes in agricultural yields, changing electricity demands, changes in mortality rates, changes to the labor supply, rising sea levels and rising crime rates. [Hsiang, S., Kopp, R.E., et al, "Estimating economic damage from climate change in the United States" Science Magazine, 6/30/2017, MarketWatch, 4/30/2018]

Economic Impact Of Flooding

By 2100, More Than 40,000 Homes In Georgia At An Estimated Worth Of $13 Billion Will Face Flooding. According to a press release from the Union of Concerned Scientists: "By 2045, more than 6,000 of today's residential properties, currently home to about 11,000 people, are at risk of chronic inundation. The total number of at-risk residential properties jumps to more than 40,000—home to about 79,000 people—by 2100. By 2045, more than $2.2 billion-worth of residential property (based on today's values) are at risk of chronic flooding. The homes that would face this flooding at the end of the century are currently worth roughly $13 billion." [Press Release, Union of Concerned Scientists, 6/18/2018]

The 40,000 Homes At Risk Of Flooding By 2100 Currently Contribute Around $139 Million In Annual Property Tax Revenue. According to a press release from the Union of Concerned Scientists: "The Georgia homes at risk in 2045 currently contribute about $24 million in annual property tax revenue. The homes at risk by 2100 currently contribute roughly $139 million collectively in annual property tax revenue." [Press Release, Union of Concerned Scientists, 6/18/2018]

AGRICULTURAL IMPACTS

Georgia Agriculture Generated $73 Billion In 2019 And Supported 392,400 Jobs. According to an article in the New Georgia Encyclopedia by Professor William Flatt of the University of Georgia, "The economic impact of the food, fiber, and related industries was estimated in 2019 at more than $73 billion. That includes $13 billion in farm gate value, or the value of the product when it leaves the farm, and about $60 billion in processing value. Agriculture supports more than 392,400 jobs in the state, and Georgia

consistently ranks as the top forestry state in the nation." [University of Georgia System/New Georgia Encyclopedia, 9/9/2019]

TOURISM & OUTDOOR RECREATION IMPACTS

Outdoor Recreation In Georgia Supports 238,000 Jobs And $27.3 Billion In Consumer Spending. According to data collected by the Outdoor Industry Association, outdoor recreation in Georgia supports 238,000 direct jobs and generates $8.1 billion in wages and salaries. Outdoor recreation generates $27.3 billion in consumer spending for the state, which brings in $1.8 billion in state and local tax revenue. [Outdoor Industry Association accessed 6/9/2020]

Georgia's Tourism Industry Generated $66.2 Billion In Sales In 2018 And Supported 471,00 Jobs In 2018. In May of 2019, the Georgia Department of Economic Development issued a press release announcing: "Georgia Tourism, a division of The Georgia Department of Economic Development, today announced that the state's tourism industry generated a record-breaking $66.2 billion in business sales impact in 2018, up 4.7 percent, according to the U.S. Travel Association and Tourism Economics. 'The tourism industry is a leading contributor to Georgia's economic growth and prosperity,' said Governor Brian P. Kemp. 'Not only does our state welcome a record number of visitors each year, but travel and tourism creates jobs for 471,000 Georgians. The industry's continued growth reaffirms that travel matters to every community in Georgia and makes our state a great place to live, work and do business.'" [Georgia Department of Economic Development, 5/6/2019]

SPENDING ON DISASTERS

In The Past Decade, Georgia Has Experienced 37 Climate-Related Disasters Responsible For A Total Of $246.1 Billion In Damages. According to NOAA's National Centers for Environmental Information, in the past decade Georgia has witnessed 37 climate-related disasters that were responsible for total damages of $246.1 billion. These 37 disasters, which were responsible for over a billion dollars' worth of damages each, include 21 severe storms, six tropical cyclones, three winter storms, one freeze, one wildfire, three droughts and two floods from 2009 to 2019. [ncdc.noaa.gov, Accessed 4/30/2020]

Since Trump Assumed The Office Of The Presidency In 2017, Georgia Has Experienced 13 Climate-Related Disasters Responsible For A Total Of $114.1 Billion In Damages. According to NOAA's National Centers for Environmental Information, since President Trump assumed office in 2017, North Carolina has experienced 13 climate-related disasters responsible for total damages of $114.1 billion. These 13 disasters, each responsible for over one billion dollars' worth of damages, include seven severe storms, four tropical cyclones, one winter storm, and one freeze event. [ndcd.noaa.gov, Accessed 4/30/2020]

THE COST OF TRUMP CLIMATE POLICIES

Trump's Clean Cars Rollback Will Cost Georgians Over $1 Billion Per Year. In March of 2019, the Center for American Progress analyzed the costs of some of Donald Trump's regulatory changes. For Trump's rollback of clean cars standards, they combined data from M.J. Bradley and Associates' analysis of the net cost for American families of freezing fuel economy targets at model-year 2020 along with data from the Energy Information Agency's oil price forecasts as well as the American Community Survey. The analysis found that Trump's rollback of clean cars standards will cost Georgians $1,069,100,000 per year. [Center for American Progress, 3/27/2019]

TRUMP'S CLIMATE DENIAL IS ESPECIALLY HARMFUL TO PEOPLE OF COLOR IN GEORGIA

AIR POLLUTION

Three Counties In Georgia Received F Grades For Their Number Of Days Of Unhealthy Ozone Levels In 2019. According to the American Lung Association's 2020 State of the Air report, nine counties in Georgia received "F" grades for the number of days with unhealthy ozone levels in 2019. Those counties are Fulton, Henry, and Rockdale. [State of the Air, Georgia Report Card, 2020]

2019 Marked The First Year That Atlanta Was Not Featured Within The Top 25 Most Polluted Cities In The Nation For Ozone. According to a press release from the American Lung Association on their 2020 State of the Air report: **"**The American Lung Association's 2020 'State of the Air' report found several cities earned improved rankings for the nation's most widespread air pollutants—ozone and particle pollution—both of which can be deadly. In last year's report, Atlanta was ranked the 25th most polluted city in the nation for ozone. However, improvements and fewer days of unhealthy ozone resulted in Atlanta's removal for the 'Most-Polluted Cities' list as it ranked 33rd this year." [Press Release, American Lung Association, 4/21/2020]

In 2019, Macon And Warner-Robbins Counties' Ozone Levels Remained Stagnant From 2018. According to a press release from the American Lung Association on their 2020 State of the Air report: "Macon and Warner-Robbins had the same number of unhealthy ozone days from last year's report and tied 122nd for most polluted city for ozone. 'Ozone pollution can harm even healthy people, but is particularly dangerous for children, older adults and people with lung diseases like COPD or asthma,' said Deen. 'Breathing ozone-polluted air can trigger asthma attacks in both adults and children with asthma, which can land them in the doctor's office or the emergency room. Ozone can even shorten people's lives.'" [Press Release, American Lung Association, 4/21/2020]

- **Asthma And Allergy Foundation: "Ozone Triggers Asthma."** According to the Asthma and Allergy Foundation of America, "Ozone, a gas, is one of the most common air pollutants. Ozone contributes to what we typically experience as "smog" or haze. It is most common in cities where there are more cars. It is also more common in the summer when there is more sunlight and low winds. Ozone triggers asthma because it is very irritating to the lungs and airways. It is well known that ozone concentration is directly related to asthma attacks. It has also caused the need for more doses of asthma drugs and emergency treatment for asthma. Ozone can reduce lung function. Ozone can make it more difficult for you to breathe deeply." [Asthma and Allergy Foundation of America, October 2015]

- **African American Children Were Four Times More Likely To Be Admitted To The Hospital And Ten Times More Likely To Die From Asthma.** According to the Department of Health and Human Services, "In 2015, African American children had a death rate ten times that of non-Hispanic white children. Black children are 4 times more likely to be admitted to the hospital for asthma, as compared to non-Hispanic white children. [Department of Health and Human Services, Accessed 9/7/18]

In 2019, Augusta Recorded Worse Levels Of Particle Pollution Than 2018. According to a press release from the American Lung Association on their 2020 State of the Air report: "Macon and Warner-Robbins tied 41st in year-round particle pollution and recorded their best levels in this year's report. Augusta was slightly worse this year and tied 36th for most polluted city for year-round particle pollution." [Press Release, American Lung Association, 4/21/2020]

The Atlanta-Athens-Clarke County-Sandy Springs Metropolitan Area Was Ranked 23rd For Annual Particle Pollution In 2019. According to the American Lung Association's 2020 State of the Air report, the Atlanta-Athens-Clarke County-Sandy Springs metropolitan area ranked 23rd for annual particle pollution in 2019. [State of the Air, City Rankings, 2020]

Augusta, Macon And Warner-Robbins Witnessed An Uptick In Days When Short-Term Particle Pollution Reached Unhealthy Levels. According to a press release from the American Lung Association on their 2020 State of the Air report: "'State of the Air' 2020 also tracked short-term spikes in particle pollution, which can be extremely dangerous and even lethal. The report found that Augusta (T-44th), Macon (T-56th), and Warner-Robbins (T-56th) had more days when short-term particle pollution reached unhealthy levels." [Press Release, American Lung Association, 4/21/2020]

- **Upticks Were Directly Linked To Weather Patterns, Such As Drought, And High Emissions From Wood-Burning Devices.** According to a press release from the American Lung Association on their 2020 State of the Air report: "Many of these spikes were directly linked to weather patterns like drought which are increasing in frequency and intensity in many areas due to climate change and high emissions from wood-burning devices." [Press Release, American Lung Association, 4/21/2020

In 2019, The Number Of Unhealthy Air Days In Atlanta Remained Stagnant From 2018. According to a press release from the American Lung Association on their 2020 State of the Air report: Atlanta tied 61st for short-term particle pollution and experienced the same number of unhealthy air days in last year's report." [Press Release, American Lung Association, 4/21/2020]

- **Headline: "Hispanics And Blacks Create Less Air Pollution Than Whites, But Breathe More Of It, Study Finds."** [CNN, 3/13/2019]

- **Study: Blacks And Hispanic Are Exposed To 56% And 63% More Particulate Air Pollution (PM2.5) Than Is Caused By Their Consumption, While Non-Hispanic Whites Are Exposed To Less Pollution Than They Cause.** According to a study published in the Proceedings of the National Academy of Sciences, "Fine particulate matter (PM2.5) air

pollution exposure is the largest environmental health risk factor in the United States. Here, we link PM2.5 exposure to the human activities responsible for PM2.5 pollution. We use these results to explore "pollution inequity": the difference between the environmental health damage caused by a racial–ethnic group and the damage that group experiences. We show that, in the United States, PM2.5 exposure is disproportionately caused by consumption of goods and services mainly by the non-Hispanic white majority, but disproportionately inhaled by black and Hispanic minorities. On average, non-Hispanic whites experience a "pollution advantage": They experience ~17% less air pollution exposure than is caused by their consumption. Blacks and Hispanics on average bear a "pollution burden" of 56% and 63% excess exposure, respectively, relative to the exposure caused by their consumption. The total disparity is caused as much by how much people consume as by how much pollution they breathe. Differences in the types of goods and services consumed by each group are less important. PM2.5 exposures declined ~50% during 2002–2015 for all three racial–ethnic groups, but pollution inequity has remained high." [Tessum, Chrstopher W. et al, "Inequity in consumption of goods and services adds to racial–ethnic disparities in air pollution exposure." Proceedings of the National Academy of Sciences Mar 2019, 116 (13) 6001-6006]

ENVIRONMENTAL JUSTICE HAS DEEP ROOTS IN GEORGIA

In The 1990s, Residents In The Predominantly Black Neighborhood Of Chosewood Park Fought Against Plans To Turn The Former General Motors Plant In To Junkyards And Recycling Facilities. According to Atlanta Journal-Constitution: "The Sawtell, says the real estate listing, is 40 acres of opportunity — a mixed-use developer's dream come true not far from the Atlanta Beltline. But decades ago, the massive plot of land along McDonough Avenue in Chosewood Park wasn't so full of promise. Residents held prayer vigils and demonstrations to stop the former site of the General Motors plant from becoming a wasteland of junkyards and recycling facilities. It was the late 1990s and they hoped their efforts would eliminate these environmental hazards from their communities." [Atlanta Journal-Constitution, 2/9/2020]

Atlanta Was "Ground Zero" For People Of Color Fighting Against Environmental Hazards Damaging Their Communities In The 1990s. According to Atlanta Journal-Constitution: "In the 1990s, Atlanta was ground zero for people of color who identified and fought against the environmental hazards damaging their communities. A new black Southern identity was forming and the 'black mecca' was bursting with black creativity and progress in areas including entertainment and business. The era would lay the groundwork for today's black environmentalists who are being recognized for their stewardship." [Atlanta Journal-Constitution, 2/9/2020]

- **Black People, In Particular Black Women, In Predominantly Black Neighborhoods Who Fought Environmental Racism. Were Locked Out Of Decision-Making.** According to Atlanta-Journal Constitution: "Black people, and black women in particular, in predominantly black neighborhoods fighting environmental racism were locked out of

environmental decision-making, according to a 2011 analysis of three communities in Atlanta featured in the scholarly journal Race, Gender & Class." [Atlanta Journal-Constitution, 2/9/2020]

CURRENT ENVIRONMENTAL JUSTICE ISSUES

Burke County - Plant Vogtle Expansion

Shell Bluff In Burke County, GA Lies Surrounded By A Nuclear Weapons Facility, An Aging Nuclear Power Plant And One Of The Most Toxic Waterways In The Country. According to ThinkProgress: "You could be forgiven for taking a Geiger counter on a visit to Shell Bluff, Georgia. The town lies just across the Savannah River from a nuclear weapons facility and just down the road from an aging nuclear power plant. The river is one of the most toxic waterways in the country. The weapons facility is one of the most contaminated places on the planet, and the power plant is about to double in size. Locals are outraged." [ThinkProgress, 8/29/2018]

Plans By Southern Company To Expand The Nuclear Plant In Shell Bluff Has Raised Concerns Of Increased Contamination In An Already Heavily Polluted Area. According to ThinkProgress: "In 2009, Southern Company began building two reactors, which are expected to go online in 2021 and 2022, respectively. The expansion has stoked fears of contamination in what is already a heavily polluted area, leading advocates to call for more testing." [ThinkProgress, 8/29/2018]

Since The 1980s, Burke County Residents Have Experienced A Cancer Epidemic. According to The Giro: "Since the early 1980s, Burke County residents have experienced a veritable cancer epidemic. Located along what is already the fourth most toxic waterway in the nation, Shell Bluff is across the Savannah River from a former nuclear weapons manufacturing plant. Nearby Waynesboro residents rely on wells for bathing and drinking water, which makes them highly vulnerable to the radioactive contamination of local ground water." [The Giro, 1/25/2012]

The Nuclear Facilities Produce Radioactive Chemicals Linked To Down Syndrome That Have Contaminated Groundwater Near The Plant. According to ThinkProgress: "Both the power plant and the weapons facility across the river produce a radioactive form of hydrogen called tritium that has been tentatively linked to Down syndrome in infants. Monitoring has found 'elevated levels' of tritium in the groundwater near Plant Vogtle — too little to threaten public health, officials say, but enough to raise eyebrows." [ThinkProgress, 8/29/2018]

GEORGIA HAS AN OPPORTUNITY TO BUILD A STRONG GREEN ECONOMY

GEORGIA'S GREEN ECONOMY

Georgia, Alongside Florida And North Carolina, Is A Leader In Clean Energy Jobs In The South. According to the 2020 Clean Jobs America Report by E2: "While California remained the nation's undisputed leader in clean energy jobs through 2019, states as diverse in size and structure as Texas and Massachusetts also are in the top ten for clean energy jobs. Florida, North Carolina and Georgia continued to lead the South, while Michigan, Illinois and Ohio led the Midwest." [Clean Jobs America Report, E2, 2020]

Georgia Was Ranked 15th Among The States For Clean Energy Employment In 2019. According to the 2020 Clean Jobs America Report by E2, Georgia was 15th in clean energy employment in 2019, with the clean energy sector providing 83,806 jobs. [Clean Jobs America Report, E2, 2020]

SOLAR

2019: Georgia Was Home To 4,798 Jobs In The Solar Industry. According to The Solar Foundation, in 2019 there were 4,798 solar jobs in Georgia and the state was ranked fifteenth in the nation for solar jobs. [The Solar Foundation, Solar Jobs Census 2019: Georgia, Accessed 5/12/2020]

2019: There Were 270 Solar Companies In Georgia. According to The Solar Foundation, in 2019 there were 270 total solar companies in Georgia. [The Solar Foundation, Solar Jobs Census 2019: Georgia, Accessed 5/12/2020]

2019: 280,576 Equivalent Homes Were Powered By Solar In Georgia. According to The Solar Foundation, in 2019 the number of equivalent homes powered by solar in Georgia stood at 280,576. [The Solar Foundation, Solar Jobs Census 2019: Georgia, Accessed 5/12/2020]

WIND

2019: Georgia Was Home To 501 To 1,000 Direct Jobs In The Wind Industry. According to American Wind Energy Association, in 2019 the wind industry supplied 501 to 1,000 direct jobs in Georgia. [American Wind Energy Association, State Fact Sheet: Wind Energy In Georgia, April 2020]

2019: There Were 12 Wind Energy-Related Manufacturing Facilities In Georgia. According to American Wind Energy Association, in 2019 there were 28 active manufacturing

facilities in Georgia. [American Wind Energy Association, State Fact Sheet: Wind Energy In Georgia, April 2020]