



# **American Bridge**

## **Trump Policy Brief: Executive Order on Offshore Drilling**

**5.16.17**

## TRUMP'S EXECUTIVE ORDER ON OFFSHORE DRILLING

President Trump signed an executive order aimed at reviewing and “reconsidering” efforts made by the Obama administration to curb offshore drilling.

The order called on Interior Secretary Ryan Zinke to review the Obama-era ban on offshore drilling that covered parts of the Pacific, Arctic, and Atlantic oceans. The order also called for potentially narrowing the boundaries of federally-protected marine sanctuaries so they could be opened up to drilling.

Trump also ordered the Interior Department to “reconsider” safety regulations implemented by the Obama administration in the aftermath of the Deepwater Horizon explosion, which killed 11 people, led to the spillage of almost 5 million barrels of oil over more than 1000 miles of U.S. coastline, led to lost land in Louisiana, killed swaths of marine life, and cost \$28 billion to clean up.

Offshore drilling carries long-term risks as well. Continued reliance on oil and other fossil fuels will have devastating effects on the planet and the people who occupy it, including higher rates of serious health conditions, extreme weather patterns, and loss of habitats and entire communities.

### President Trump Signed An Executive Order Opening The Door To Increased Offshore Drilling

#### TRUMP ORDERED INTERIOR SECRETARY RYAN ZINKE TO REVIEW OBAMA-ERA DRILLING PROHIBITIONS IN THE PACIFIC, ARCTIC, AND ATLANTIC OCEANS

**Trump Instructed Interior Secretary Ryan Zinke To Review The Obama Administration's Plan For Where Offshore Drilling Could And Could Not Take Place Between 2017 And 2022.** According to The New York Times, “Among other directives, the order instructs Interior Secretary Ryan Zinke to review an Obama administration plan that delineated where offshore drilling could and could not take place between 2017 to 2022. The plan put the entire southeast Atlantic coast and large portions of the Arctic Ocean off limits to drilling.” [New York Times, [4/27/17](#)]

- **The Plan Prohibited Offshore Drilling Along The Entire Southeast Atlantic Coast And In Large Portions Of The Arctic Ocean.** According to The New York Times, “Among other directives, the order instructs Interior Secretary Ryan Zinke to review an Obama administration plan that delineated where offshore drilling could and could not take place between 2017 to 2022. The plan put the entire southeast Atlantic coast and large portions of the Arctic Ocean off limits to drilling.” [New York Times, [4/27/17](#)]
- **The Ban Covered Parts Of The Pacific, Arctic, And Atlantic Oceans.** According to NPR, “The order directs Interior Secretary Ryan Zinke to review a five-year plan in which President Obama banned drilling in parts of the Pacific, Arctic, and Atlantic Oceans.” [NPR, [4/27/17](#)]

#### Interior Secretary Ryan Zinke Said He Would Review Areas Previously Closed To Drilling

**Interior Secretary Ryan Zinke Said That Areas Previously Closed To Drilling Would Come Under Review.** According to The New York Times, “On the campaign trail, Mr. Trump repeatedly vowed to open up vast swaths of American lands and waters to oil and gas drilling, which he has touted as a major job creator. Mr. Zinke said that the review process did not guarantee that all those areas would be opened up to drilling, but noted that they would come under review.” [New York Times, [4/27/17](#)]

- **Zinke Said That Areas In Communities And States Supportive Of Oil And Gas Drilling Could Be Included In The Administration’s Next Five-Year Drilling Plan.** According to The New York Times, “On the campaign trail, Mr. Trump repeatedly vowed to open up vast swaths of American lands and waters to oil and gas drilling, which he has touted as a major job creator. Mr. Zinke said that the review process did not guarantee that all those areas would be opened up to drilling, but noted that they would come under review. ‘There’s no set goal. But if there’s areas that are acceptable, that have resources, and local communities are for it and states are for it we could include it in next five-year plan,’ Mr. Zinke said in a conference call with reporters.” [New York Times, [4/27/17](#)]

### **Trump Said During His Presidential Campaign That He Would Open Up American Waters To Oil And Gas Drilling**

**During His Presidential Campaign, Trump Vowed To Open Up American Lands And Waters To Oil And Gas Drilling.** According to The New York Times, “On the campaign trail, Mr. Trump repeatedly vowed to open up vast swaths of American lands and waters to oil and gas drilling, which he has touted as a major job creator.” [New York Times, [4/27/17](#)]

### **THE ORDER WAS EXPECTED TO OPEN UP FEDERALLY-PROTECTED MARINE SANCTUARY LAND FOR DRILLING**

**NYT: The Order Intended To “Erase Or Narrow The Boundaries Of Certain Federally-Protected Marine Sanctuaries, Opening Them Up To Commercial Fishing And Oil Drilling.”** According to The New York Times, “Friday’s executive order was aimed at rolling back the Obama administration’s attempts to ban oil drilling off the southeastern Atlantic and Alaskan coasts. It would erase or narrow the boundaries of some federally-protected marine sanctuaries, opening them up to commercial fishing and oil drilling.” [New York Times, [4/27/17](#)]

**The Order Directed Commerce Secretary Wilbur Ross To Conduct A Review Of Marine Sanctuaries Created During The Previous 10 Years.** According to The New York Times, “Friday’s order will also direct Wilbur Ross, the commerce secretary — who has jurisdiction over marine sanctuaries — to conduct a review of all such sanctuaries created over the past 10 years, and not to create any new sanctuaries during that review period.” [New York Times, [4/27/17](#)]

**The Order Director Ross Not To Create Any New Sanctuaries During The Review Period.** According to The New York Times, “Friday’s order will also direct Wilbur Ross, the commerce secretary — who has jurisdiction over marine sanctuaries — to conduct a review of all such sanctuaries created over the past 10 years, and not to create any new sanctuaries during that review period.” [New York Times, [4/27/17](#)]

### **TRUMP ALSO DIRECTED THE INTERIOR DEPARTMENT TO “RECONSIDER” OFFSHORE DRILLING SAFETY REGULATIONS**

**The Order Directed The Interior Department To “Reconsider” Safety Regulations On Offshore Drilling Implemented By The Obama Administration.** According to The New York Times, “Just past

the seventh anniversary of the Deepwater Horizon oil spill, President Trump on Friday directed the Interior Department to ‘reconsider’ several safety regulations on offshore drilling implemented after one of the worst environmental disasters in the nation’s history. Friday’s executive order was aimed at rolling back the Obama administration’s attempts to ban oil drilling off the southeastern Atlantic and Alaskan coasts.” [New York Times, [4/27/17](#)]

### **The Regulations Dealt With Equipment Found To Have Been Responsible For The Deepwater Horizon Explosion**

**Under The Obama Administration, The Interior Department Implemented Rules Aimed At Improving The Safety Of The Offshore Drilling Equipment Found To Have Been Responsible For The Deepwater Horizon Explosion.** According to The New York Times, “Just past the seventh anniversary of the Deepwater Horizon oil spill, President Trump on Friday directed the Interior Department to ‘reconsider’ several safety regulations on offshore drilling implemented after one of the worst environmental disasters in the nation’s history. [...] But Mr. Trump also took aim at regulations on oil-rig safety. In the final years of the Obama administration, the Interior Department implemented several new rules aimed at improving the safety of specific pieces of offshore drilling equipment that had failed during the 2010 oil spill in the Gulf of Mexico, and were found to have been responsible for the deadly BP oil rig explosion that caused that spill.” [New York Times, [4/27/17](#)]

**The Rules Tightened Controls On Blowout Preventers, Which Served As The Last Line Of Protection Against Explosions In Undersea Oil And Gas Wells.** According to The New York Times, “Also last year, the Obama administration unveiled a set of regulations on offshore oil and gas drilling equipment, intended to tighten the safety requirements on underwater drilling equipment and well-control operations. In particular, the new rules tighten controls on blowout preventers, the industry-standard devices that are the last line of protection to stop explosions in undersea oil and gas wells.” [New York Times, [4/27/17](#)]

- **The Deepwater Horizon Explosion Was Caused In Part By The Malfunction Of A Blowout Preventer On A BP Well.** According to The New York Times, “The 2010 explosion of the Deepwater Horizon rig was caused in part by the buckling of a section of drill pipe, prompting the malfunction of a supposedly fail-safe blowout preventer on a BP well.” [New York Times, [4/27/17](#)]

### **The Deepwater Horizon Explosion Killed 11 People And Led To Irreversible Damage To The Gulf Of Mexico’s Ecosystem**

*The Explosion Killed 11 People And Led To The Spillage Of 4.9 Million Barrels Of Oil, Staining Over 1,000 Miles Of Coastline*

**The Deepwater Horizon Killed 11 People And Spilled 4.9 Million Barrels Of Oil Into The Sea.** According to The New York Times, “In the final years of the Obama administration, the Interior Department implemented several new rules aimed at improving the safety of specific pieces of offshore drilling equipment that had failed during the 2010 oil spill in the Gulf of Mexico, and were found to have been responsible for the deadly BP oil rig explosion that caused that spill. The explosion of the Deepwater Horizon killed 11, set off a weeks-long crisis for the Obama administration and spilled 4.9 million barrels of oil into the sea.” [New York Times, [4/27/17](#)]

**After The Explosion, Oil Flowed Into The Gulf Of Mexico For Almost 3 Months.** According to NPR, “Five years ago, BP’s out-of-control oil well deep in the Gulf of Mexico exploded. Eleven workers were killed on the Deepwater Horizon rig. But it was more than a deadly accident — the blast unleashed the nation’s worst offshore environmental catastrophe. In the spring and summer of 2010, oil gushed from the Macondo

well for nearly three months. More than 3 million barrels of Louisiana light crude fouled beaches and wetlands from Texas to Florida, affecting wildlife and livelihoods.” [NPR, [4/20/15](#)]

**More Than 3 Million Barrels Of Crude Oil Reached U.S. Beaches And Wetlands Spanning From Texas To Florida.** According to NPR, “In the spring and summer of 2010, oil gushed from the Macondo well for nearly three months. More than 3 million barrels of Louisiana light crude fouled beaches and wetlands from Texas to Florida, affecting wildlife and livelihoods.” [NPR, [4/20/15](#)]

**The Oil Spilled As A Result Of The Deepwater Horizon Explosion Stained 1,100 Miles Of Coastline.** According to The Telegraph, “It was five years ago today that an undersea BP oil well exploded in the Gulf of Mexico 40 miles off the Louisiana coastline, killing 11 workers on the Deepwater Horizon rig and causing one of the worst environmental disasters in US history. [...] Roughly 3.2 million barrels (134 million gallons) of crude oil spilled over the course of 87 days, staining 1,100 miles of coastline.” [The Telegraph, [4/20/15](#)]

*Residual Effects From The Spill Could Last Decades*

**According To Gulf Restoration Network Executive Director Cynthia Sarthou, Oil In The Gulf Of Mexico Could Be A “Plague” On The Marine Environment For “Decades” After The Spill.**

According to NPR, “Cynthia Sarthou, executive director of Gulf Restoration Network, says that after five years, there are more questions than answers about what the lingering impact of the spill means. [...] Sarthou says there's no certainty the spill won't be a problem for generations to come. ‘It's not publicly seen but it is out there. It's in the marine environment,’ she says. ‘And so whether we see it or not the potential impacts of its presence may plague us for decades.’” [NPR, [4/20/15](#)]

**As Of April 2015, As Much As 10 Million Gallons Of Oil Remained On The Sea Floor.** According to The Telegraph, “It was five years ago today that an undersea BP oil well exploded in the Gulf of Mexico 40 miles off the Louisiana coastline, killing 11 workers on the Deepwater Horizon rig and causing one of the worst environmental disasters in US history. [...] Most of the oil has evaporated or dissolved, but up to 10 million gallons remain on the sea floor, and gobs of oil can still be found nestled into marshes along the coast.” [The Telegraph, [4/20/15](#)]

**According To University Of Georgia Oceanologist Mandy Joye, Oil Spilled As A Result Of The Deepwater Horizon Explosion Was Scattered Over 1,200 Square Miles Of Sea Floor.** According to The Telegraph, “A study by Mandy Joye, an oceanologist at the University of Georgia, claims that oil is scattered over 1,200 square miles of sea floor. BP disputes those findings, and says that all of the oil is ‘accounted for.’” [The Telegraph, [4/20/15](#)]

**According To An April 2015 Survey Of 26 Marine Scientists, The Gulf Of Mexico’s Overall Health Dropped By About 11 Percent Since The Spill.** According to the Associated Press, “From above, five years after the BP well explosion, the Gulf of Mexico looks clean, green and whole again, teeming with life — a testament to the resilience of nature. [...] To assess the health of the Gulf of Mexico, The Associated Press surveyed 26 marine scientists about two dozen aspects of the fragile ecosystem to see how this vital waterway has changed since before the April 2010 spill. On average, the researchers graded an 11 percent drop in the overall health of the Gulf of Mexico.” [Associated Press, [4/17/15](#)]

*The Spilled Oil Led To Land Loss In Louisiana*

**Islands Off The Coast Of Louisiana Disappeared After Oil Killed The Mangrove Trees Holding Them Together.** According to NPR, “That's because some of the oil was buried beneath the sand just offshore, and it gets churned up when the surf is rough. Back out on Barataria Bay, Marshall points to where roots jut up in the open water. These used to be mangrove islands. ‘The oil coated the roots of those

mangrove trees and then they died,' Marshall says. 'And without the mangroves to hold the islands together, within three years most of those islands were gone.'" [NPR, [4/20/15](#)]

**The Oil Spill Accelerated Land Loss In Louisiana.** According to NPR, "Louisiana was already losing land at an alarming rate, but scientists confirm that the oil spill accelerated the pace. Barataria Bay has lost key bird nesting islands, and federal government studies indicate that dolphins here in the bay are sick and dying at a higher rate than normal and show signs of oil poisoning." [NPR, [4/20/15](#)]

*Species Living In The Gulf At The Time Of The Spill Saw Dramatic Decreases In Population During Subsequent Years*

**Dolphins In Barataria Bay, Which Was Affected By The Oil Spill, Were Dying At A Higher-Than-Normal Rate, And Showed Signs Of Oil Poisoning.** According to NPR, "Louisiana was already losing land at an alarming rate, but scientists confirm that the oil spill accelerated the pace. Barataria Bay has lost key bird nesting islands, and federal government studies indicate that dolphins here in the bay are sick and dying at a higher rate than normal and show signs of oil poisoning. On an afternoon boat tour, Marshall sees something that worries him. 'There's another dead dolphin. That's the second one we've seen,' he notes." [NPR, [4/20/15](#)]

**The Oil Spill Impacted Oyster Production In One Of The Most Productive Oyster Reefs In The U.S.** According to NPR, "Nelson is on the Gulf States Marine Fisheries Commission. He says one of the most productive public oyster reefs in the country — east of the Mississippi river off the Louisiana coast — is not producing like it should. 'That was maybe not coincidentally the closest place to where the spill was occurring, where the leak was,' Nelson says. 'That area still has not produced an appreciable number of oysters, and has not recruited any young oysters to speak of since the spill.' Nelson says it's not clear whether the reef was harmed by exposure to oil, or by the freshwater that was released in Louisiana in hopes of pushing it away. Either way, he says, it's a problem that needs resolving." [NPR, [4/20/15](#)]

**In 2011, A Record 335 Bottlenose Dolphins Living In The Gulf Of Mexico Died.** According to The Telegraph, "Bottlenose dolphins in the gulf have been dying at more than twice the normal rate over the past five years. In 2011 alone, a record 335 died." [The Telegraph, [4/20/15](#)]

- **As Of April 2015, Bottlenose Dolphins Had Been Dying At More Than Twice The Normal Rate Since The Deepwater Horizon Explosion.** According to The Telegraph, "It was five years ago today that an undersea BP oil well exploded in the Gulf of Mexico 40 miles off the Louisiana coastline, killing 11 workers on the Deepwater Horizon rig and causing one of the worst environmental disasters in US history. [...] Bottlenose dolphins in the gulf have been dying at more than twice the normal rate over the past five years. In 2011 alone, a record 335 died." [The Telegraph, [4/20/15](#)]

**The Telegraph: "The Nesting Habits Of The Endangered Kemp's Ridley Sea Turtle Changed Dramatically Around The Time Of The Spill."** According to The Telegraph, "It was five years ago today that an undersea BP oil well exploded in the Gulf of Mexico 40 miles off the Louisiana coastline, killing 11 workers on the Deepwater Horizon rig and causing one of the worst environmental disasters in US history. [...] A report released by BP claims that there is no evidence of any 'significant long-term population-level impact to any species', though scientists have cautioned that the full scope of the impact will not be known for some time. [...] Similarly, the nesting habits of the endangered Kemp's Ridley sea turtle changed dramatically around the time of the spill." [The Telegraph, [4/20/15](#)]

*Spill Cleanup Cost At Least \$28 Million*

**The Cleanup Operation For The Oil Spilled After The Deepwater Horizon Explosion Cost \$28 Million As of April 2015.** According to The Telegraph, “Even though BP was majority American-owned and had changed its name from British Petroleum years earlier, anti-British sentiment flowed as fast as the oil, causing tensions in the prized ‘special relationship’ between Downing Street and the White House. The company mounted a massive clean-up operation (the total cost after five years now stands at \$28 billion) and set up a \$20 billion compensation fund but that did little to allay the fury.” [The Telegraph, [4/20/15](#)]

## Many Coastal Communities Oppose Dangerous Offshore Drilling

### OVER 100 COASTAL CITIES AND TOWNS HAVE PASSED RESOLUTIONS AGAINST OFFSHORE DRILLING

**As Of April 2017, More Than 100 Cities And Towns Along The Atlantic Coast Passed Resolutions Against Offshore Drilling.** According to NPR, “Along the Atlantic coast, though, more than 100 cities and towns have passed resolutions against offshore drilling.” [NPR, [4/27/17](#)]

- **Kure Beach, NC Mayor Emilie Swearingen Said That “Devastation From An Oil Spill” Could Hurt Tourism In Her City.** According to NPR, “Along the Atlantic coast, though, more than 100 cities and towns have passed resolutions against offshore drilling. In Kure Beach, N.C., Mayor Emilie Swearingen said tourism is the second largest industry in the state. ‘We don't want the devastation from an oil spill,’ she said. ‘It's not whether it would happen, but when it would happen.’” [NPR, [4/27/17](#)]

**Inupiat Community of The Arctic Slope President George Edwardson Said His Council May Consider Filing A Lawsuit Challenging The Expansion Of Offshore Drilling.** According to NPR, “George Edwardson, president of the Inupiat Community of the Arctic Slope, said his council may consider filing suit at some point to challenge an expansion of offshore drilling. ‘Most of our food comes from the ocean,’ he said.” [NPR, [4/27/17](#)]

## Continued Reliance On Oil And Other Fossil Fuels Will Have Devastating Effects On The Planet And Human Health

### FOSSIL FUEL-RELATED CARBON EMISSIONS ARE ASSOCIATED WITH SERIOUS HEALTH CONDITIONS

#### Carbon Emissions Contribute To Climate Change

**Human Activity Increasing The Amount Of Carbon Dioxide In The Atmosphere Has Caused The Planet To Warm And Changed Weather Patterns.** According to NOAA, “Carbon dioxide belongs to a category of gases known as ‘greenhouse gases.’ These gases absorb warmth from their surroundings and re-radiate some of it back toward Earth’s surface, slowing the rate at which the planet loses heat. This ‘greenhouse effect’ is nothing new: plants and animals have enjoyed the benefits of its warming influence for billions of years. Without the greenhouse effect, Earth’s average temperature would fall below freezing. However, human activities are now increasing the concentration of carbon dioxide in our atmosphere, amplifying the natural warming caused by the greenhouse effect. During the Industrial Revolution, humans began burning coal, natural gas, and oil to power machines for manufacturing and transportation. Since then, we have burned more fossil fuels each decade, releasing vast amounts of carbon dioxide that were previously stored in the ground into the atmosphere. [...] The vast majority of climate scientists are concerned that the dramatic rise in carbon dioxide is causing the planet to warm. Likely consequences of global warming include

sea level rise, shifting precipitation patterns, expansion of areas affected by drought, increasing numbers of severe heat waves, and more intense precipitation events.” [NOAA, accessed [4/14/17](#)]

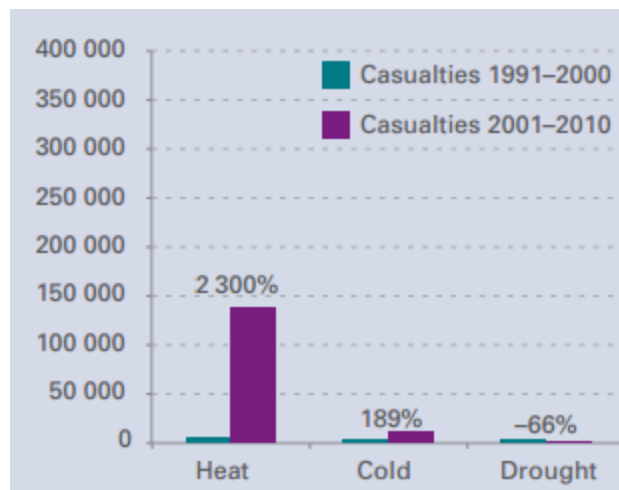
### **Climate Change Has Been Linked To Asthma, Child Lung Disease, Gastrointestinal Illnesses, And Heat-Related Deaths**

**Boston Resident Chiamaka Obiolo Testified To The Effect Of Climate Change And Pollution On Minority Neighborhoods As Half Of Her Classmates In Elementary School Had Asthma.** According to the Boston Globe, “[Chiamaka] Obiolo said the threat against science is a social justice issue. She said half of her classmates in elementary school had asthma, and she sees how pollution and climate change have affected minority neighborhoods in Boston.” [Boston Globe, [2/19/17](#)]

**University Of Michigan Professor Of Pediatrics And Director Of The Cystic Fibrosis Center Dr. Samya Nasr: Climate Change Has Had A Direct Impact On Child Health, Exacerbating Child Lung Disease.** According to an opinion by University of Michigan Professor of Pediatrics and Director of the Cystic Fibrosis Center Dr. Samya Nasr in the Detroit Free Press, “Despite what the court and governor might think, the climate will keep changing and those changes will have direct impact on human health. As a physician who treats children with lung diseases, I already see the impact of global climate change on my patients.” [Dr. Samya Nasr - Detroit Free Press, [2/26/16](#)]

**Climate Change Increases The Risk Of Gastrointestinal Illness As Well As Nervous And Respiratory Illness.** According to the EPA, “People can become ill if exposed to contaminated drinking or recreational water. Climate change increases the risk of illness through increasing temperature, more frequent heavy rains and runoff, and the effects of storms. Health impacts may include gastrointestinal illness like diarrhea, effects on the body's nervous and respiratory systems, or liver and kidney damage.” [EPA, accessed [2/21/17](#)]

**Between The 1990s And The 2000s, There Was A 2,300 Percent Increase In Deaths Related To Heat Worldwide.** According to a World Meteorological Organization chart, casualties related to heat increased by 2,300% between 1991-2000 and 2001-2010. This information is further detailed in the following chart:



[World Meteorological Organization, [2013](#)]

## **POLLUTION AND CLIMATE CHANGE HAS NEGATIVELY IMPACTED THE HEALTH OF EVERYDAY AMERICANS**

**Boston Resident Chiamaka Obiolo Testified To The Effect Of Climate Change And Pollution On**



**Minority Neighborhoods As Half Of Her Classmates In Elementary School Had Asthma.** According to the Boston Globe, “[Chiamaka] Obiolo said the threat against science is a social justice issue. She said half of her classmates in elementary school had asthma, and she sees how pollution and climate change have affected minority neighborhoods in Boston.” [Boston Globe, [2/19/17](#)]

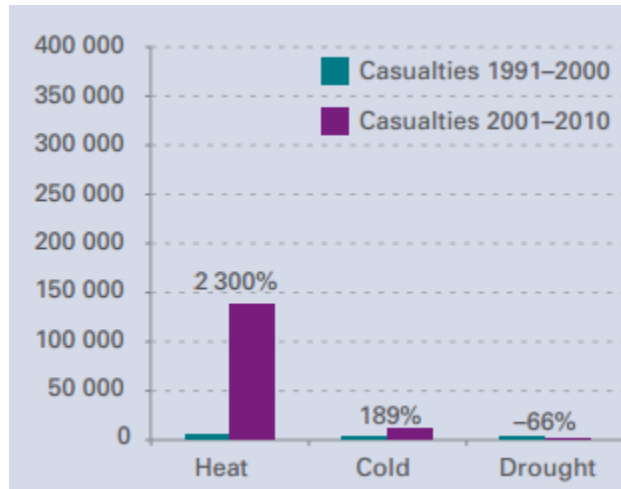
**University Of Michigan Professor Of Pediatrics And Director Of The Cystic Fibrosis Center Dr. Samya Nasr: Climate Change Has Had A Direct Impact On Child Health, Exacerbating Child Lung Disease.** According to an opinion by University of Michigan Professor of Pediatrics and Director of the Cystic Fibrosis Center Dr. Samya Nasr in the Detroit Free Press, “Despite what the court and governor might think, the climate will keep changing and those changes will have direct impact on human health. As a physician who treats children with lung diseases, I already see the impact of global climate change on my patients.” [Dr. Samya Nasr - Detroit Free Press, [2/26/16](#)]

## **CLIMATE CHANGE HAS LEAD TO A SPIKE IN HEAT-RELATED DEATHS, AND COULD COMPLETELY SUBMERGE 36 U.S. CITIES**

**Zillow Reported That Rising Sea Levels Could Completely Submerge 36 U.S. Cities By 2100, And Almost 300 U.S. Cities Could Lose More Than Half Of Their Homes.** According to Zillow, “If sea levels rise as much as climate scientists predict by the year 2100, almost 300 U.S. cities would lose at least half their homes, and 36 U.S. cities would be completely lost.” [Zillow, [8/2/16](#)]

- **By 2100, Over 12 Percent Of Homes In Florida Could Be Underwater.** According to Zillow, “If sea levels rise as much as climate scientists predict by the year 2100, almost 300 U.S. cities would lose at least half their homes, and 36 U.S. cities would be completely lost. One in eight Florida homes would be underwater, accounting for nearly half of the lost housing value nationwide.” According to a Zillow chart using data from the National Oceanic and Atmospheric Administration, 12.56% would be underwater if sea levels rise by six feet. [Zillow, [8/2/16](#)]
- **By 2100, Almost 1.9 Million Homes Could Be Underwater, Worth A Combined \$882 Billion.** According to Zillow, “Nationwide, almost 1.9 million homes (or roughly 2 percent of all U.S. homes) – worth a combined \$882 billion – are at risk of being underwater by 2100.” [Zillow, [8/2/16](#)]
- **By 2100, More Than 1 In 6 Homes In Boston Could Be Submerged, Along With Almost 3 Percent Of Homes In New York City.** According to Zillow, “More than 1 in 6 Boston homes are at risk, and New Yorkers may find almost 3 percent of homes in the city underwater if sea levels rise in line with climatologists’ predictions.” [Zillow, [8/2/16](#)]

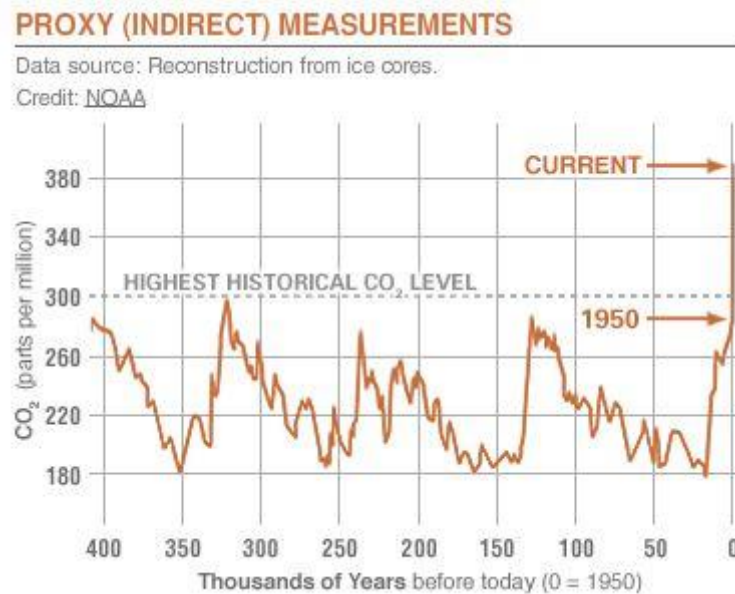
**Between The 1990s And The 2000s, There Was A 2,300 Percent Increase In Deaths Related To Heat Worldwide.** According to a World Meteorological Organization chart, casualties related to heat increased by 2,300% between 1991-2000 and 2001-2010. This information is further detailed in the following chart:



[World Meteorological Organization, [2013](#)]

## CO2 LEVELS HAVE NEVER BEEN HIGHER THAN THEY ARE TODAY

**Carbon Dioxide Content Is The Highest It's Ever Been.** The following chart from NASA shows the carbon dioxide levels in the atmosphere from over 400,000 years ago to the present day:



[Climate.NASA.gov, accessed [2/21/17](#)]

**Carbon Dioxide Emissions Jumped By The Largest Amount On Record In 2010.** According to the New York Times: “Global emissions of carbon dioxide from fossil-fuel burning jumped by the largest amount on record last year, upending the notion that the brief decline during the recession might persist through the recovery. Emissions rose 5.9 percent in 2010, according to an analysis released Sunday by the Global Carbon Project, an international collaboration of scientists tracking the numbers. Scientists with the group said the increase, a half-billion extra tons of carbon pumped into the air, was almost certainly the largest absolute jump in any year since the Industrial Revolution, and the largest percentage increase since 2003.” [New York Times, [12/4/11](#)]

## UNCHECKED CLIMATE CHANGE COULD LEAD TO NATURAL DISASTERS AND MORE EXTREME WEATHER

**At Least 14 Extreme Weather Events In 2014, Ranging From Droughts In Syria And East Africa To An Extremely Active Hawaiian Hurricane Season, Were Linked To Climate Change.** According to National Geographic, “From a deadly snowstorm in Nepal to a heat wave in Argentina that crashed power supplies, at least 14 extreme weather events last year bore the fingerprints of human-induced climate change, an international team of scientists reported Thursday. Researchers examined 28 weather extremes on all seven continents to see if they were influenced by climate change or were just normal weather. Their conclusion: Half of them showed some role of climate change. [...] Droughts in Syria and East Africa, record rains in New Zealand and France, Nepal’s extreme Himalayan snowstorm, flooding in southeastern Canada, and an extremely active Hawaiian hurricane season also had direct or indirect climate links, the report finds. So did increased Antarctic sea ice and hotter Pacific and Atlantic sea-surface temperatures.” [National Geographic, [11/2/15](#)]

**Climate Change Models Have Predicted That An Increase In Global Temperatures Will Lead To A Higher Risk Of Drought, High Intensity Storms Including Cyclones, Wetter Monsoons, And More Mid-Latitude Storms.** According to NASA, “Climate change may not be responsible for the recent skyrocketing cost of natural disasters, but it is very likely that it will impact future catastrophes. Climate models provide a glimpse of the future, and while they do not agree on all of the details, most models predict a few general trends. First, according to the Intergovernmental Panel on Climate Change, an increase of greenhouse gases in the atmosphere will probably boost temperatures over most land surfaces, though the exact change will vary regionally. More uncertain—but possible—outcomes of an increase in global temperatures include increased risk of drought and increased intensity of storms, including tropical cyclones with higher wind speeds, a wetter Asian monsoon, and, possibly, more intense mid-latitude storms.” [NASA, accessed [2/22/17](#)]

- **Researchers Have Found That Climate Change Will Make Hurricanes More Intense.** According to the Washington Post, “Researchers now think that a warming climate, by heating the oceans, will indeed make hurricanes more intense (on average), even though it may not increase their overall numbers (in fact, those may decrease). These storms will also dump more damaging rain in the future, as the atmosphere holds more water vapor on a warming planet.” [Washington Post, [10/6/16](#)]

**Without Cuts In Greenhouse Emissions, The U.S. Could See A 50 Percent Increase In Lightning Strikes By 2100.** According to Live Science, “A 50 percent increase in the number of lightning strikes within the United States can be expected by 2100 if temperatures continue to rise due to greenhouse gas emissions, a new study claims. Researchers found a 12 percent increase in lightning activity for every 1.8 degrees Fahrenheit (1 degree Celsius) of warming in the atmosphere, according to the study, published today (Nov. 13) in the journal *Science*. Without emissions cuts, scientists expect this century to end with global temperatures that are about 7 F (4 C) higher than current global temps.” [Live Science, [11/13/14](#)]

- **According To UC Berkeley Professor David Romps, An Increase In Lightning Strikes Could Lead To An Increase In Wildfires.** According to Live Science, “‘This is yet another noticeable change to climate and weather in the U.S. if we stay on our current [emissions] (*brackets in original*) trajectory,’ said lead study author David Romps, an atmospheric scientist at the University of California, Berkeley. ‘It’s certainly reasonable that a 50 percent increase will lead to an increase in wildfires.’” [Live Science, [11/13/14](#)]

## CLIMATE CHANGE HAS ALREADY DEVASTATED INDIGENOUS COMMUNITIES ACROSS THE COUNTRY

## Climate Change Has Left 31 Alaskan Villages At “Imminent Risk Of Destruction”

**Due To Its Proximity To The Arctic, Alaska Has Warmed Twice As Fast As The Rest Of The U.S., Leaving At Least 31 Alaskan Towns And Cities At “Imminent Risk Of Destruction.”** According to the New York Times, “With its proximity to the Arctic, Alaska is warming about twice as fast as the rest of the United States and the state is heading for the warmest year on record. The government has identified at least 31 Alaskan towns and cities at imminent risk of destruction, with Shaktoolik ranking among the top four. Some villages, climate change experts predict, will be uninhabitable by 2050, their residents joining a flow of climate refugees around the globe, in Bolivia, China, Niger and other countries.” [New York Times, [11/29/16](#)]

- **The Alaskan Villages Shishmaref And Kivalina Have Voted To Relocate Due To Climate Change And A Third, Newtok, Has Taken The First Steps Toward A Move.** According to the New York Times, “These endangered Alaskan communities face a choice. They could move to higher ground, a wrenching prospect that for a small village could cost as much as \$200 million. Or they could stand their ground and hope to find money to fortify their buildings and shore up their coastline. At least two villages farther up the western coast, Shishmaref and Kivalina, have voted to relocate when and if they can find a suitable site and the money to do so. A third, Newtok, in the soggy Yukon-Kuskokwim Delta farther south, has taken the first steps toward a move.” [New York Times, [11/29/16](#)]

### Kivalina, Alaska

*The Threat Of Climate Change Has Cut Off Investment In The Town, Leaving 80 Percent Of Homes Without Toilets*

**Since Climate Change Has Threatened Kivalina’s Long-Term Future, No Money Has Been Invested To Improve Residents’ Lives; Eighty Percent Of The Homes Do Not Even Have Toilets.** According to the Los Angeles Times, “Because the [Kivalina’s] days on the edge of the Chukchi Sea are numbered, no money has been invested to improve residents’ lives. Eighty percent of the homes do not have toilets. Most rely on homemade honey buckets — a receptacle lined with a garbage bag topped by a toilet seat.” [Los Angeles Times, [8/30/15](#)]

*Climate Change Has Threatened Kivalina Food Staples And Thus The Inupiat Culture*

**Kivalina Tribal President Millie Hawley: The Increasingly Warm Weather Has Threatened Many Of The Food Staples On Which Alaska Natives Here Depend.** According to the Los Angeles Times, “The Inupiat who live in Kivalina get most of their food from the land and sea around them. The increasingly warm weather means an abundance of cloudberry and low-bush blackberries, said Millie Hawley, Kivalina tribal president, but it also threatens many of the food staples on which Alaska natives here depend.” [Los Angeles Times, [8/30/15](#)]

- **Thinner Ice Has Made It More Difficult And Dangerous For The Alaskan Inupiat Of Kivalina To Go Whaling.** According to the Los Angeles Times, “Thinner ice also makes it harder for the Inupiat to go whaling. Normally, crews will build camps at the edge of the so-called shore-fast ice and hunt bowhead and beluga whales as they swim north in spring. ‘If the shore-fast ice is thin and weak, it’s not safe to make a camp,’ said Timothy Schuerch, president of the Maniilaq Assn., a tribally operated health services organization with clinics in Kivalina and the other borough villages. ‘Whaling crews have drifted out to sea.’” [Los Angeles Times, [8/30/15](#)]

- **Kivalina Tribal President Millie Hawley: The Inupiat Residents Of Kivalina Has Had To Go Without Their Staples Of Dried Meat And Oil After The Weather Has Caused Sharp Reductions In Caribou And Seal Catches.** According to the Los Angeles Times, “‘With the caribou, usually it’s like clockwork,’ Hawley said. ‘Every June, we’d hunt. We haven’t done that in years. It’s unpredictable. We don’t know when we’ll see them.’ Kivalina residents hang the caribou’s hindquarters outside of their homes to age. The frozen meat is eaten raw, dipped in seal oil, which is also harvested in June. Trout is eaten the same way. The Inupiat also depend on seal for meat. ‘Usually we get 80 to 100 seals for the whole community,’ Hawley said. ‘This year, we were looking to get eight. The community now has to go without dried meat and oil.’” [Los Angeles Times, [8/30/15](#)]

### *Storms Forced The Relocation Of 13 Year Old Shelby*

**As Warming Temperatures Have Stripped Kivalina Of Its Crucial Ice Protection, 13 Year Old Shelby Had To Relocate In 2011 Due To A Storm That Flooded The Island.** According to the Los Angeles Times, “Shelby, who just turned 13, has lived in Kivalina her entire life, and she loves her island home dearly. ‘It’s where I grew up, where everybody I know is,’ she said five days before Obama was scheduled to land in Kotzebue. ‘We need to relocate because the ocean is slowly eating away our island.’ Shelby was in fourth grade when much of Kivalina was forced to evacuate during a fierce storm in 2011. She and her family were on one of the few planes that made it to the mainland before flying conditions became too dangerous. Everyone else sheltered in the school, the highest point on the nearly flat island. ‘We had people sleeping in all the classrooms and the gym,’ said Emma Knowles, who was Shelby’s teacher at McQueen School that year. ‘Someone had gotten a caribou the day before, so we made a huge pot of caribou stew.... The school didn’t even budge. As dilapidated as it looks, it survived.’ Kivalina is no stranger to harsh weather, and erosion worries have dogged the 27-acre town almost since its inception in 1905. In the 21st century, however, warming temperatures and the perilous changes that cascade from them have stripped the island of its major source of protection: ice.” [Los Angeles Times, [8/30/15](#)]

### **Shaktoolik, Alaska**

#### *Shaktoolik Has Experienced Severe Flooding, Erosion, And Storms Related To Climate Change*

**Shaktoolik Has Faced An Imminent Threat From The Increased Flooding And Erosion That Have Come With A Changing Climate.** According to the New York Times, “But here in Shaktoolik, one need not be a prophet to predict flooding, especially during the fall storms. Laid out on a narrow spit of sand between the Tagoomenik River and the Bering Sea, the village of 250 or so people is facing an imminent threat from increased flooding and erosion, signs of a changing climate.” [New York Times, [11/29/16](#)]

- **Shaktoolik Residents Have Testified To More Frequent And Intense Storms.** According to the New York Times, “Some residents here say that the storms are becoming more frequent and more intense, although scientists do not have data to confirm this. But there is no question that higher ocean temperatures have resulted in less offshore ice, allowing storm surges and waves to hit with greater force and bringing more flooding and erosion. The loss of sea ice, said David Atkinson, a climate scientist at the University of Victoria in British Columbia, is ‘undeniably linked’ to a warming climate, as is the rising level of the sea as a result of melting glaciers, the increased volume of water lending even more strength to the ocean’s assault. Fifty years ago, when the beach was a quarter of a mile away, the increasing violence of the ocean might not have bothered Shaktoolik’s residents. But now the sea is almost at their doorsteps.” [New York Times, [11/29/16](#)]
- **Erosion Has Threatened Shaktoolik’s Fuel Tanks, Airport, And Drinking Water Supply.** According to the New York Times, “Erosion is threatening the village’s fuel tanks, its airport and its drinking water supply, which is pumped from the Tagoomenik River. The boundary between river

and sea has been so thinned by erosion in some spots that salt water from the ocean, normally a benign source of sustenance, briefly overtopped the bank and poured into the river during a recent storm.” [New York Times, [11/29/16](#)]

### *Shaktoolik Has Been Periled By How To Best Preserve Their Community And Culture*

**Shaktoolik Residents Have Been Faced With The Need To Relocate, Which Can Take Many Years, And Staying, Which Requires Stable Schools, Doctors, And Shelter.** According to the New York Times, “As Shaktoolik and other threatened villages have discovered, both staying and moving have their perils. The process of relocation can take years or even decades. In the meantime, residents still need to send their children to school, go to the doctor when they are sick, have functioning water lines and fuel tanks and a safe place to go when a severe storm comes.” [New York Times, [11/29/16](#)]

- **Just Announcing Its Intention To Move, Shaktoolik Lost Funds For Its Clinic.** According to the New York Times, “Even announcing the intention to relocate can scuttle a community’s request for financing. Some years ago, when Shaktoolik indicated on a grant proposal that it was hoping to move, it lost funds for its clinic, said Isabel Jackson, the city clerk.” [New York Times, [11/29/16](#)]
- **Shaktoolik Residents Fear Relocating Will Harm Their Culture.** According to the New York Times, “Shaktoolik’s leaders have identified a potential relocation site 11 miles southeast, near the foothills. But some residents say they fear that their culture, dependent on fishing and hunting, will suffer if they move.” [New York Times, [11/29/16](#)]

### **Barrow, Alaska**

#### *Climate Change Is Projected To Destroy Barrow And Its Eight Surrounding Villages, Forcing A 250-Mile Relocation*

**Washington Post: “Warming Air, Melting Permafrost And Rising Sea Levels” Have Threatened Barrow And Its Eight Surrounding Villages And “Researchers Predict That By Midcentury, The Homes, Schools And Land” Will Be Underwater.** According to the Washington Post, “Here in the northernmost municipality of the United States, 320 miles above the Arctic Circle, people are facing the idea that they may soon be among the world’s first climate-change refugees. Warming air, melting permafrost and rising sea levels are threatening their coastline, and researchers predict that by midcentury, the homes, schools and land around Barrow and its eight surrounding villages will be underwater. This despite decades of erecting barriers, dredging soil and building berms to hold back the water.” [Washington Post, [9/12/16](#)]

- **The Only Way To Protect Barrow And Its Surrounding Villages Of The North Slope Borough From Rising Seas Would Be To Move The Town 250 Miles South.** According to the Washington Post, “‘The only thing we can do, as far as I’m concerned, is move our towns inland,’ says Mike Aamodt, the former acting mayor of Barrow and its surrounding villages of the North Slope Borough, which stretches over 89,000 square miles, an area larger than Utah. Pointing out a window in his second-floor office, Aamodt isn’t joking when he declares that the sole refuge from erosion and rising seas is the Brooks mountain range — more than 250 miles south.” [Washington Post, [9/12/16](#)]

#### *Climate Change Has Led To Frequent States Of Emergency In Barrow And The Constant Threat Of Total Destruction*

**Washington Post: States Of Emergency Have Been Common In Barrow And “Given The Rising Seas And Coastal Erosion, Every Year Brings The Threat Of A Storm That Could Wipe The Town**

**Off The Map.”** According to the Washington Post, “When cyclones came through in 2000 and 2004, knocking out Barrow’s power supply, the result was flooded and contaminated drinking water. States of emergency are common occurrences here, and given the rising seas and coastal erosion, every year brings the threat of a storm that could wipe the town off the map, Aamodt says.” [Washington Post, [9/12/16](#)]

**Storms In Barrow Frequently Penetrate Sea Walls, Sometimes Sending Houses Floating Inland For Miles.** According to the Washington Post, “A stroll along one of Barrow’s handful of roads shows just how tenuous civilization’s perch is. Bulldozed mounds of sand and soil more than 20 feet high are all around town. But these sea walls are frequently penetrated as swells and storms overtop the walls, sometimes sending houses, built on stilts because of the impenetrability of permafrost, floating inland for miles.” [Washington Post, [9/12/16](#)]

*Climate Change Has Had A Devastating Impact On Barrow’s Cultural And Historical Preservation*

**Barrow’s Climate Change Problem Has Destroyed Remains Of Early Human Settlements, Creating A Knowledge Gap In Indigenous History.** According to the Washington Post, “Barrow’s climate-change problem has been years in the making, says Anne Jensen, an ethnographic archaeologist who arrived in Barrow in 1983 and has been excavating some of the earliest human settlements found in this frigid area. The increasing floods and erosion have made her job a scramble against nature. By the time she secures funding and gets ready to enlarge a dig, a site that is often now at water’s edge, surging oceans washes everything away. It’s a frustrating way to make a living, she says. “The entire north coast of the North Slope — most of the sites are already gone. We have a big knowledge gap up there.” [Washington Post, [9/12/16](#)]

### **Isle De Jean Charles, Louisiana**

*Louisiana Has Lost An Area The Size Of Delaware Since The 1930s*

**Louisiana Has Coped With Some Of The Fastest Rates Of Land Loss In The World, Losing An Area The Size Of Delaware Since The 1930s.** According to the New York Times, “Louisiana officials have been coping with some of the fastest rates of land loss in the world — an area the size of Delaware has disappeared from south Louisiana since the 1930s.” [New York Times, [5/3/16](#)]

*Climate Change Has Forced Isle De Jean Charles Tribes To Relocate, Giving Rise To Logistical And Moral Problems In The Process*

**Two Tribes Living On Isle De Jean Charles Have Been Forced Off Their Land From Climate Change.** According to BuzzFeed, “Last year, two tribes living on Isle de Jean Charles, off the Louisiana coast, made the news as ‘climate refugees.’ The Isle de Jean Charles Band of Biloxi Chitimacha Choctaw were named awardees of a Department of Housing and Urban Development grant to cities and states facing effects of changing climate. The money funds an effort to relocate the entire community to yet-to-be-chosen site on shore..” [BuzzFeed, [2/17/17](#)]

- **New York Times: “Since 1955, More Than 90 Percent Of The Island’s Original Land Mass Has Washed Away” And What Little Remains “Will Eventually Be Inundated As Burning Fossil Fuels Melt Polar Ice Sheets And Drive Up Sea Levels.”** According to the New York Times, “For over a century, the American Indians on the island fished, hunted, trapped and farmed among the lush banana and pecan trees that once spread out for acres. But since 1955, more than 90 percent of the island’s original land mass has washed away. Channels cut by loggers and oil companies eroded much of the island, and decades of flood control efforts have kept once free-flowing rivers from replenishing the wetlands’ sediments. Some of the island was swept away by hurricanes. What little remains will eventually be inundated as burning fossil fuels melt polar ice

sheets and drive up sea levels, projected the National Climate Assessment, a report of 13 federal agencies that highlighted the Isle de Jean Charles and its tribal residents as among the nation's most vulnerable." [New York Times, [5/3/16](#)]

**NYT: The Department Of Housing And Urban Development Gave Isle De Jean Charles "The First Allocation Of Federal Tax Dollars To Move An Entire Community Struggling With The Impacts Of Climate Change," Which "Exposed Logistical And Moral Dilemmas" In The Process.** According to the New York Times, "In January, the Department of Housing and Urban Development announced grants totaling \$1 billion in 13 states to help communities adapt to climate change, by building stronger levees, dams and drainage systems. One of those grants, \$48 million for Isle de Jean Charles, is something new: the first allocation of federal tax dollars to move an entire community struggling with the impacts of climate change. The divisions the effort has exposed and the logistical and moral dilemmas it has presented point up in microcosm the massive problems the world could face in the coming decades as it confronts a new category of displaced people who have become known as climate refugees." [New York Times, [5/3/16](#)]

- **The HUD Grant Won't Cover The Entire Cost Of Relocation, But Secretary For The Isle De Jean Charles Band Of Biloxi Chitimacha Choctaw Chantel Comardelle Feels The Plan Is The Tribe's Last Shot At Preserving History.** According to BuzzFeed, "But the HUD grant won't cover the whole cost of relocation, and there is some concern that the new administration may not make future grants available. [...] The relocation plan is the tribe's last shot at preserving history, [Chantel Comardelle, secretary for the Isle de Jean Charles Band of Biloxi Chitimacha Choctaw] said. 'If we lose that one central space and everybody continues to spread out, we'll lose our culture completely. This is our tribe's only hope for future survival.'" [BuzzFeed, [2/17/17](#)]

*Climate Change Has Had A Devastating Impact On The Lives Of Isle De Jean Charles Residents*

**Buzzfeed: Secretary For The Isle De Jean Charles Band Of Biloxi Chitimacha Choctaw Chantel Comardelle "Was Four When A Hurricane Flooded The Trailer Her Family Lived In, And Moved Off The Island When The Mold Started Making Her Ill."** According to BuzzFeed, "'We're just trying to stay hopeful,' Chantel Comardelle, secretary for the Isle de Jean Charles Band of Biloxi Chitimacha Choctaw. Comardelle was four when a hurricane flooded the trailer her family lived in, and moved off the island when the mold started making her ill. As successive storms sank gardens and drowned backyards, others followed; the island population has shrunk to about two dozen families, including Comardelle's aunt and grandparents." [BuzzFeed, [2/17/17](#)]

**Joann Bourg Lives In A Mildewed And Rusted House On The Isle De Jean Charles And Frequently Is Kept From Work When The Bridge From The Island Floods.** According to the New York Times, "Each morning at 3:30, when Joann Bourg leaves the mildewed and rusted house that her parents built on her grandfather's property, she worries that the bridge connecting this spit of waterlogged land to Louisiana's terra firma will again be flooded and she will miss another day's work. Ms. Bourg, a custodian at a sporting goods store on the mainland, lives with her two sisters, 82-year-old mother, son and niece on land where her ancestors, members of the Native American tribes of southeastern Louisiana, have lived for generations. That earth is now dying, drowning in salt and sinking into the sea, and she is ready to leave." [New York Times, [5/3/16](#)]

**Violet Handon Parfait Saw Her House Destroyed By Hurricane Gustav In 2008 And Show Now Lives In Fear That Weather May Prevent Her From Reaching A Doctor To Treat Her Lupus And Her Children From Going To School And Achieving Her Dream Of College For Them.** According to the New York Times, "Violet Handon Parfait sees nothing but a bleak future in the rising waters. She lives with her husband and two children in a small trailer behind the wreckage of their house, which Hurricane Gustav destroyed in 2008. The floods ruined the trailer's oven, so the family cooks on a hot plate. Water destroyed the family computer, too. Ms. Parfait, who has lupus, is afraid of what will happen if she is sick and



cannot reach a doctor over the flooded bridge. Ms. Parfait, who dropped out of high school, hopes for a brighter future, including college, for her children, Heather, 15, and Reggie, 13. But the children often miss school when flooding blocks their school bus. ‘I just want to get out of here,’ she said.” [New York Times, [5/3/16](#)]