

ORAL ARGUMENT NOT YET SCHEDULED

No. 19-1140 (and consolidated cases)

**UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

American Lung Association, *et al.*,
Petitioners,

v.

United States Environmental Protection Agency, *et al.*,
Respondents.

On Petition for Review of a Final Rule of the Environmental Protection Agency

**BRIEF OF AMICI CURIAE ENVIRONMENT AMERICA AND
NATIONAL TRUST FOR HISTORIC PRESERVATION
IN SUPPORT OF PETITIONERS**

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to D.C. Circuit Rule 28(a)(1), amici state as follows:

(A) Parties and Amici

All parties, intervenors, and amici that have appeared in this Court are listed in Environmental and Public Health Petitioners' Opening Brief, ECF No. 1838680, at i-iv, except for the following amici in support of petitioners:

Patagonia Works and Columbia Sportswear Company

Service Employees International Union

Senator Sheldon Whitehouse

Professor Michael Greenstone

Faith Organizations - National Council of Churches USA; Evangelical Environmental Network; Coalition on the Environment and Jewish Life; Hazon; Maryknoll Sisters; Sisters of Mercy of the Americas; Institute Leadership Team; Union for Reform Judaism; Women of Reform Judaism; Men of Reform Judaism; Central Conference of American Rabbis; National Baptist Convention, USA, Inc.

Energy Modelers - Dallas Burtraw; Charles T. Driscoll, Jr.; Amelia Keyes; Kathy Fallon Lambert.

Grid Experts - Benjamin F. Hobbs; Brendan Kirby; Kenneth J. Lutz; James D. McCalley.

National League of Cities; U.S. Conferences of Mayors; and 23 Cities, Counties, and Mayors - National League of Cities; City of Boston; U.S. Conference of Mayors;

County of Boulder; City of Albuquerque; Town of Chapel Hill; City of Asheville; City of Coral Gables; Mayor and City Council of Baltimore; Town of Cutler Bay; Detroit Mayor Mike Duggan; City of Houston; Mayor of City of Durham; City of Las Cruces; Mayor of the Borough of Glen Rock; City of Minneapolis; Harris County; City of New Orleans; City of Phoenix; Mayor of Salt Lake City; City of Pittsburgh; City of Santa Fe; City of Portland; City of Providence; City of Saint Paul.

Climate Scientists - David Battisti; Kim Cobb; Andrew E. Dessler; Kerry Emanuel; John Harte; Daniel Kirk-Davidoff; Katherine Mach; Michael MacCracken; Pamela Matson; James C. McWilliams; Mario J. Molina; Michael Oppenheimer; Joellen L. Russell; Noelle Eckley Selin; Drew Shindell; Abigail Swann; Kevin Trenberth; Diana H. Wall.

The amici curiae joining this brief are: Environment America; National Trust for Historic Preservation. The required corporate disclosure statement for each amicus curiae joining this brief is set forth below.

(B) Rulings Under Review

Reference to the rule under review is contained in Environmental and Public Health Petitioners' Opening Brief, ECF No. 1838680, at iv.

(C) Related Cases

Other than those cases consolidated with No. 19-1140, counsel for amici are not aware of any pending related cases.

CORPORATE DISCLOSURE STATEMENT

Pursuant to D.C. Circuit Rule 26.1, Environment America and the National Trust for Historic Preservation state that they are non-profit, non-stock corporations. They have no parent companies, and no publicly-traded companies have an ownership interest in them. Both organizations are committed to protecting America's historic places from the threats created by global warming and climate change.

CERTIFICATE REGARDING SEPARATE BRIEFING

Pursuant to D.C. Circuit Rule 29(d), counsel for amici certify that a separate brief is necessary to identify consequences of the challenged rule on historic preservation in the United States that are not discussed in other parties' briefs. Amicus National Trust for Historic Preservation has extensive knowledge of historic sites in the United States and how those sites are uniquely impacted by environmental factors such as climate change. Amicus Environment America is currently campaigning for global warming solutions to preserve the national heritage that these sites represent. Through these efforts, amici are well-suited to discuss the importance of historic places to our shared culture and the risks that climate change poses to our national heritage.

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INTERESTS OF AMICI CURIAE AND AUTHORITY TO FILE

Amici curiae Environment America and the National Trust for Historic Preservation respectfully submit this brief in support of State and Municipal, Public Health and Environmental, Power Company, and Clean Energy Trade Association petitioners. Amici file this brief with the consent of all parties. ECF No. 1834502; *see also* Fed. R. App. P. 29(a)(4)(D). Amici are specifically interested in this case to ensure this Court is informed of the detrimental impacts of climate change—and the challenged regulation—on historic places.

Environment America's mission is to transform the power of our imaginations and our ideas into change that makes our world a greener and healthier place for all. Environment America's staff works for clean air, clean water, clean energy, wildlife and open spaces, and a livable climate. Environment America's members put grassroots support behind Environment America's research and advocacy.

One of Environment America's current campaigns focuses on building support for global warming solutions. Goals of the campaign include building awareness of growing risks to our nation's historic sites and landscapes and engaging Americans in protecting our shared national heritage from the ravages of climate change. To help meet these goals, Environment America advocates for climate policies such as the Clean Power Plan. Environment America publicly opposes the rollback of the Clean Power Plan and promulgation of the replacement Affordable Clean Energy Rule. More

information on Environment America's Global Warming Solutions program is available at <https://environmentamerica.org/feature/ame/global-warming-solutions>.

The National Trust for Historic Preservation in the United States is a private nonprofit organization chartered by Congress in 1949 to facilitate public participation in the preservation of our nation's heritage, and to further the historic preservation policy of the United States. *See* 54 U.S.C. § 312102(a) (2018). In addition, the National Trust has been designated by Congress as a member of the Advisory Council on Historic Preservation, which is responsible for working with federal agencies to implement the National Historic Preservation Act. *Id.* §§ 304101(8), 304108(a). With more than one million members and supporters around the country, the National Trust works to protect significant historic sites and to advocate for historic preservation as a fundamental value in programs and policies at all levels of government.

The National Trust has participated in hundreds of cases in federal and state courts relating to the application and interpretation of legal issues that affect the preservation of historic places. The National Trust also has a long history of participating in the rulemaking process for the Clean Power Plan and the Affordable Clean Energy Rule. The National Trust submitted comments during the regulatory process for these EPA rules on April 26, 2018 and October 30, 2018. These comments highlighted concerns related to the impact of these rules on climate change and the ways in which climate change threatens the preservation of America's historic places.

RULE 29(a)(4)(E) STATEMENT

Amici curiae certify that amici and their counsel were the sole authors of this brief and that they bore all costs of this brief, with no financial contributions from any party, party's counsel, or any other person not affiliated with amici curiae or their counsel. Fed. R. App. P. 29(a)(4)(E).

INTRODUCTION

Climate change poses an imminent threat to the preservation of historic places around the country. The core idea behind historic preservation is that preserving places from our collective past enriches our present-day lives. We serve as stewards for historic places not only for their own sake, but for ourselves and for the benefit of future generations of Americans.¹ Failing to act on climate change will result in irreplaceable losses to these historic resources. EPA's failure to meaningfully act on climate change through the repeal of the Clean Power Plan (CPP) and promulgation of the less-protective Affordable Clean Energy (ACE) Rule therefore threatens America's cultural heritage by putting its historic places at greater risk.

While climate change presents obvious physical risks to historic places through impacts such as more frequent and more powerful hurricanes, the threat that climate change poses to our national heritage is much more profound than physical damage. As petitioners and many others have explained, there is a clear connection between climate change and increasingly severe weather events that physically damage historic properties, including heatwaves, wildfires, floods, and storms.² The purpose of this brief is to demonstrate that EPA's failure to meaningfully confront climate change goes further, threatening historic places that reflect our nation's cultural values.

¹ *See generally* THOMPSON M. MAYES, WHY OLD PLACES MATTER: HOW HISTORIC PLACES AFFECT OUR IDENTITY & WELL-BEING (2013).

² *See, e.g.*, Initial Opening Brief of Public Health and Environmental Petitioners, ECF No. 1834502, at 3.

Four specific examples of historic places on the east coast demonstrate this threat. These examples illustrate the broad impacts of climate change on historic places.

Ellis Island, New York demonstrates how climate change threatens to sever connections to our past and to one another. Millions of Americans can trace the history of their family's arrival to the United States through Ellis Island, which now houses records and artifacts of American immigrants' journeys. In 2016, Hurricane Sandy's storm surge, supercharged by warming in the Atlantic Ocean caused by climate change, submerged Ellis Island entirely, threatening the complete loss of records connecting more than half of all Americans to each other and our past.

Annapolis, Maryland demonstrates how climate change threatens our living connection with history. Annapolis has been at the center of American history from the founding of the United States, maintaining a centuries-old maritime economy and some of America's most venerable institutions, including the United States Naval Academy. Increasing sea levels in the Chesapeake Bay stemming from climate change now threaten Annapolis through more frequent and extreme flooding and increased vulnerability to storms, illustrating that climate change threatens living communities deeply interwoven with our history.

St. Augustine, Florida demonstrates that climate change presents irreparable and permanent threats even to some of the most resilient historic places in our country. St. Augustine is the oldest continuously-occupied European-established city in America, and home to the Cathedral Basilica, which has withstood wars, fires, and hurricanes for

over 400 years. The Cathedral now risks being lost to the sea forever, as unprecedented flooding and sea level rise caused by climate change threaten coastal Florida.

Charleston, South Carolina demonstrates that the impacts of climate change on historic resources extend beyond impacts to iconic sites and monuments. The National Historic Landmark District in Charleston was preserved through the efforts and commitment of thousands of individual property owners who share a preservation ethic that has permeated the community for over 100 years. Regular flooding and sea level rise stemming from climate change now threaten the Historic District in its entirety, causing “blue sky flooding” where the incoming tide floods the community. Charleston reveals the pervasive nature of climate change’s impact on historic communities.

While climate change’s threats to historic resources are far more extensive than these four examples, these places reflect shared features that the threats of unabated climate change pose to our historic places. EPA’s failure to meaningfully address climate change exacerbates these risks. For these reasons and the other reasons raised by petitioners and their supporting amici, this Court should vacate the ACE Rule and remand the matter back to EPA.

ARGUMENT

I. EPA did not adequately consider impacts to historic resources and communities when repealing the Clean Power Plan and promulgating the Affordable Clean Energy Rule.

A. In promulgating the Affordable Clean Energy Rule, EPA ignored its own prior findings and public comments demonstrating the urgent need for deep cuts in emissions.

The purpose of the Clean Air Act is to protect public health and welfare from air pollutants, including greenhouse gases. *Massachusetts v. EPA*, 549 U.S. 497, 532 (2007) (finding that greenhouse gases “fit well within the EPA’s capacious definition of ‘air pollutant’”).³ Following the Court’s opinion in *Massachusetts v. EPA*, EPA found in 2009 that greenhouse gases endanger the public health and welfare of current and future generations.⁴ Section 111 of the Clean Air Act “speaks directly” to a significant category of greenhouse gas emissions: carbon dioxide pollution from fossil fuel-fired power plants. *Am. Electric Power Co. v. Connecticut*, 564 U.S. 410, 424 (2011). Section 111(d) requires states or EPA to promulgate plans prescribing “standards of performance” for existing sources that reflect limits derived from what the Administrator identifies as “the best system of emission reduction ... adequately demonstrated[.]” 42 U.S.C. §§ 7411(a)(1), (d)(1)(A) (2018).

³ See also 42 U.S.C. § 7521 (2018).

⁴ U.S. EPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (Dec. 15, 2009).

In 2015, EPA promulgated the Clean Power Plan (CPP), which sought to reduce carbon dioxide emissions from fossil fuel-fired power plants based on certain measures already in widespread use across the power sector.⁵ In 2018, EPA proposed replacing the CPP with the Affordable Clean Energy (ACE) Rule.⁶ During that rulemaking process, the National Trust submitted two sets of comments analyzing the unique and irreversible threats climate change poses to the nation's most treasured places.⁷

However, in promulgating the ACE Rule and repealing the CPP, EPA ignored concerns about the climate change impacts raised in public comments, including those submitted by the National Trust, and therefore failed to “consider an important aspect of the problem” and to satisfy its obligations under the Clean Air Act. *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983).⁸ EPA's disregard for climate change impacts poses a special problem for amici because historic places and communities are uniquely affected by climate change.

B. Climate change seriously threatens historic resources and communities.

Historic places provide a tangible connection to the past as repositories for historic records and memories in addition to the historic buildings themselves. Some

⁵ Clean Power Plan, 80 Fed. Reg. 64,662 (Oct. 23, 2015).

⁶ Affordable Clean Energy Rule, 83 Fed. Reg. 44,746 (Aug. 31, 2018).

⁷ See National Trust for Historic Preservation's Comments on the Proposed Affordable Clean Energy Rule, EPA-HQ-OAR-2017-0355-24006; National Trust for Historic Preservation's Comments on the Proposed Repeal of the Clean Power Plan, EPA-HQ-OAR-2017-0355-19923.

⁸ See also Initial Opening Brief of Public Health and Environmental Petitioners, ECF No. 1834502, at 5, 10.

communities are so intertwined with history that the residents have an ethos of preservation. But even the strongest preservation efforts are undermined by the effects of climate change. Climate change is ravaging historic locations all over the country, and the nation must take comprehensive action to reduce emissions if these places are to be preserved. This brief discusses four places as examples to demonstrate common features of the threats posed by climate change to historic resources: climate change threatens to sever our connection with the past, damage living historic communities, cause irreparable harm to longstanding historic places, and cause a broad range of impacts to historic communities beyond impacts to individual buildings or sites.

1. The Statue of Liberty and Ellis Island, New York

Ellis Island, a historic site adjacent to the Statue of Liberty, demonstrates how climate change threatens America's tangible connection to the past. A universal symbol of freedom and democracy, "The Statue of Liberty Enlightening the World" is one of the most recognizable statues on the planet.⁹ Built with the goal of commemorating Abraham Lincoln and the perseverance of freedom and democracy, France gave the

⁹ See Adam Markham et al., *World Heritage and Tourism in a Changing Climate*, UNITED NATIONS ENV'T PROGRAMME & UNITED NATIONS EDUCATIONAL, SCI. & CULTURAL ORG. 1, 56-57 (May 23, 2016), <https://ucsusa.org/sites/default/files/attach/2016/05/world-heritage-and-tourism-in-a-changing-climate.pdf>; *Liberty Enlightening the World*, NAT'L PARK SERV., <https://www.nps.gov/stli/index.htm> (last visited Apr. 24, 2020).

statue to the United States in 1871.¹⁰ Shipped to the United States in 1885, the statue was reassembled from 350 individual pieces by a crew consisting mostly of immigrants.¹¹ The statue and Liberty Island, where it resides, are designated as a National Monument.¹²

The site grew in significance over time with the arrival of millions of immigrants entering the United States through Ellis Island.¹³ Following a surge of immigration from Europe due to political instability, religious persecution, and deteriorating economic conditions, the United States constructed a station to process newly arriving immigrants on Ellis Island in 1892.¹⁴ In 1907 alone, 1.25 million people entered the United States through Ellis Island.¹⁵ For the vast majority of immigrants, Ellis Island was the “Island of Hope” leading to new opportunity and experience, but for some who were denied entry, detained, or separated from family members, it became known as the “Island of

¹⁰ *The French Connection*, NAT'L PARK SERV., <https://www.nps.gov/stli/learn/historyculture/the-french-connection.htm> (last visited Apr. 24, 2020).

¹¹ *Statue Biography*, THE STATUE OF LIBERTY-ELLIS ISLAND FOUND., <https://www.libertyellisfoundation.org/statue-of-liberty-history> (last visited Apr. 24, 2020); *Statue History*, THE STATUE OF LIBERTY-ELLIS ISLAND FOUND., <https://www.libertyellisfoundation.org/statue-history> (last visited Mar. 23, 2020).

¹² *Liberty Enlightening the World*, *supra* note 9.

¹³ *Ellis Island History*, THE STATUE OF LIBERTY-ELLIS ISLAND FOUND., <https://www.libertyellisfoundation.org/ellis-island-history#Origin> (last visited Apr. 24, 2020).

¹⁴ *Id.*

¹⁵ *Id.*

Tears.”¹⁶ Like many historic places, Ellis Island reflects the complicated and tragic parts of our history as well as one of our most enduring stories of hope, emphasizing the importance of protecting such places of cultural experience and memory.

Over the course of 62 years until its official close in 1954, the Ellis Island port of entry processed over twelve million immigrants.¹⁷ Today, it is estimated that half of Americans can follow their family history to at least one person who passed through Ellis Island.¹⁸ Ellis Island therefore connects a huge portion of the United States population to the nation’s history.¹⁹

Like other coastal historic places, the Statue of Liberty and Ellis Island are vulnerable to extreme weather events like hurricanes. One of the most devastating in recent years was Hurricane Sandy in 2012. Sandy was the largest hurricane to ever to form in the Atlantic basin, demonstrating the increasing intensity of storms caused by climate change. Hurricane Sandy submerged the majority of Liberty Island and all of Ellis Island, closing both monuments for over eight months.²⁰ Sandy is an example of

¹⁶ *History and Culture*, NAT’L PARK SERV., <https://www.nps.gov/elis/learn/historyculture/index.htm> (last visited Apr. 24, 2020).

¹⁷ *About Ellis Island*, THE STATUE OF LIBERTY-ELLIS ISLAND FOUND., <https://www.libertyellisfoundation.org/about-the-ellis-island> (last visited Apr. 24, 2020).

¹⁸ *Id.*

¹⁹ See *Ellis Island History*, *supra* note 13.

²⁰ Debra Holtz et al., *National Landmarks at Risk*, Union of Concerned Scientists 1, 7 (2014), <https://www.ucsusa.org/sites/default/files/2019-09/National-Landmarks-at-Risk-Full-Report.pdf>; Christina Deconcini & Forbes Tompkins, *Impacts of Hurricane Sandy and the Climate Change Connection*, WORLD RESOURCES INSTITUTE 1, 1 (2012),

how coastal historic landmarks are vulnerable to increasingly extreme weather events. Storms that form in the Atlantic and hit the northeast coastline, like Sandy, are of particular concern because the rate of sea-level rise along the northeastern U.S. coastline is four times faster than the global average.²¹

Hurricane Sandy severely damaged the physical structures on Liberty and Ellis Islands, resulting in millions of dollars of damage.²² Between flood waters and high winds, the heating and electrical systems on Liberty Island were nearly destroyed.²³ After the storm, the National Park Service elevated those systems, fearing destruction if another disaster were to occur.²⁴ Additionally, the entirety of Liberty Island's 7,060-square-foot dock and the majority of the promenade walkway had to be replaced with more sustainable and stable foundations.²⁵ The National Park Service spent \$39.4 million on mechanical and electrical infrastructure improvements on Ellis Island to try to safeguard against the anticipated effects of future storms.²⁶

Recovery from Hurricane Sandy also required that more than one million documents and artifacts be removed from Ellis Island for three years, including

(available at <https://www.wri.org/publication/impacts-hurricane-sandy-and-climate-change-connection>).

²¹ Deconcini & Tomkins, *supra* note 20 at 2.

²² Holtz et al., *supra*, note 20 at 7.

²³ *Hurricane Sandy Recovery*, NAT'L PARK SERV., <https://www.nps.gov/stli/after-hurricane-sandy.htm> (last visited Apr. 24, 2020).

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*; *Billion Dollar Weather and Climate Disasters: Events*, NAT'L OCEANIC & ATMOSPHERIC ADMIN., <https://www.ncdc.noaa.gov/billions/events/US/1980-2019>.

children's shoes from Austria, postcards from steamships, and the steering wheel from the *Ferry Ellis Island*.²⁷ As the president and CEO of the Statue of Liberty-Ellis Island Foundation stated, "Personal artifacts, many donated by individual families from across the country, truly bring the immigrant experience to life."²⁸ These historic artifacts, brought to America from all over the world, were missing for the public to experience at the museums for years. While these collections were ultimately preserved and returned to public view, future severe weather events caused by climate change are likely to place them at continued risk and are one example of the type of loss Americans will face from climate change.²⁹

Ellis Island therefore serves as a cautionary tale of how climate change endangers our national heritage. Beyond structural damage to the islands' facilities, Hurricane

²⁷ Sarah Cascone, *One Million Artifacts Salvaged from Hurricane Sandy Return to Ellis Island*, ARTNET NEWS (Sept. 10, 2015), <https://news.artnet.com/art-world/ellis-island-artifacts-return-after-hurricane-sandy-331184>. Many individuals visit Ellis Island to trace their genealogy and learn about their family history, as the island houses archives where immigration and shipping records can be reviewed to trace one's family ties to the United States. *Family History Center*, THE STATUE OF LIBERTY-ELLIS ISLAND FOUND., <https://www.libertyellisfoundation.org/family-history-center> (last visited Apr. 24, 2020). In addition to the museum collections, the paper archives on Ellis Island, which assist millions of Americans learning about their families' immigration stories, are also threatened. Jerry Willis, *Artifacts Removed After Hurricane Sandy Return Home to Ellis Island National Museum of Immigration*, NAT'L PARK SERV. (Sept. 9, 2015), <https://www.nps.gov/elis/learn/news/artifacts-return-to-ellis-island.htm>.

²⁸ Cascone, *supra* note 27.

²⁹ *Id.*; see generally Z. Huijbregts et al., *A proposed method to assess the damage risk of future climate change to museum objects in historic buildings*, 55 BLDG. & ENV'T 43 (2012) (evaluating the impacts of future climate change on valuable museum collections in historic buildings).

Sandy showed how the worsening impacts of extreme weather can destroy significant and tangible connections to America's past.³⁰ The risks from climate change, including stronger storm surges, threaten Ellis Island—a place that links millions of Americans to an ancestor passing through its historic buildings, the history of the United States, and each other.

In response to the increasing frequency and intensity of severe weather events, America's historic locations need an energy policy that adequately addresses carbon emissions to help keep them above water. As a reminder of freedom and democracy, a starting point for Americans to assemble generations of family history, and a tangible connection to our past through the physical existence of archives and records, the Statue of Liberty and Ellis Island symbolize the critical national imperative to save our nation's historic treasures from the effects of climate change.

2. Annapolis, Maryland

In addition to threatening monuments, museums, and collections, climate change threatens present-day, living historic communities. An example of a city that embodies this living history is Annapolis, Maryland, whose role and influence in our culture dates back to the very founding of the United States.³¹

Located on the shores of the Chesapeake Bay, Annapolis, Maryland has been welcoming visitors for over 300 years. Yet today, this city is under siege by climate

³⁰ See *Hurricane Sandy Recovery*, *supra* note 23; Willis, *supra* note 27.

³¹ Holtz, et al., *supra* note 20 at 13.

change. Originally named Providence, Annapolis was one of the first planned cities in the United States.³² Annapolis quickly became affluent in the colonial economy due in large part to its location. The waterfront of the Chesapeake Bay provided an ideal port for merchants to bring their goods ashore to sell them at market. Annapolis soon became the capital of the colony, and later the capital of the State of Maryland.³³

Annapolis also continues to be celebrated as a center of military history, playing an important role in the Revolutionary War and the period shortly thereafter. Between 1783 and 1784, Annapolis was the capitol of the United States while the city hosted Congress.³⁴ In 1783, after England's defeat, George Washington resigned his commission as the Commander of the Continental Army at the State House in Annapolis.³⁵ In 1784, Congress ratified the Treaty of Paris in the same State House, marking the official end of the Revolutionary War.³⁶ Later, in 1845, the prestigious United States Naval Academy was founded in Annapolis, and has trained officers to serve in the United States Navy ever since.³⁷

Not only is Annapolis a city with robust historical value, it is also a thriving coastal city. Currently, Annapolis has approximately 39,000 residents and is the home

³² *Id.*

³³ *Id.*

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.*

of the third-oldest American institution of higher learning, St. John's College.³⁸ Annapolis' economy benefits from vibrant heritage tourism, welcoming around two million visitors a year.³⁹ Annapolis continues to be cherished by locals and visitors alike for its historic neighborhoods, scenic views, and outdoor activities. For example, the historic City Dock, which is now home to many boutique shops, art galleries, inns, pubs, and restaurants, remains a major place of commerce.⁴⁰

At present, Annapolis' greatest danger is not a military attack, but a rising ocean, increased flooding, and hurricanes, all of which are exacerbated by climate change. According to scientists at the University of Maryland, the Chesapeake Bay's water levels could rise by one to two-and-a-half feet by the middle of this century.⁴¹ The existing water levels already result in frequent flooding in Annapolis, and the damage will only continue to worsen. Routine high tides cause flooding, and warmer ocean temperatures cause stronger tropical storms off the Atlantic coast. Record-breaking storm surges fueled by climate change threaten to wreak havoc on Annapolis and other coastal cities.⁴²

³⁸ *Id.* at 15.

³⁹ *Demographic Information*, ANNAPOLIS MD, <https://www.annapolis.gov/766/Demographic-Information> (last visited Apr. 24, 2020).

⁴⁰ *City Dock*, VISIT ANNAPOLIS, <https://www.visitannapolis.org/discover/interests/city-dock> (last visited Apr. 23, 2020).

⁴¹ Holtz, et al., *supra* note 20 at 14.

⁴² Lauren Morello, *Scientists see extent of storm's damage linked to climate change*, E&E NEWS (Oct. 31, 2012), <https://www.eenews.net/stories/1059971867>.

One such storm to hit Annapolis was Hurricane Isabel, which slammed into the east coast in September 2003. Hurricane Isabel caused widespread and severe flooding throughout the city, including the Naval Academy. During Hurricane Isabel, the flooding at the Naval Academy reached water levels previously unheard of: six-and-a-half feet higher than average.⁴³ The flooding destroyed classrooms, athletic facilities, residence halls, and a utility tunnel under the Naval Academy's library.⁴⁴ In all, Hurricane Isabel caused \$120 million in damage to the Naval Academy alone.⁴⁵

The historic heart of Annapolis, City Dock, was severely damaged as well. Located directly on the bay, City Dock was especially vulnerable to Hurricane Isabel. Dozens of buildings in City Dock were damaged, including the iconic 1858 Market House.⁴⁶ The Market House was so severely damaged that the building was forced to close for a decade.⁴⁷ In an effort to restore the Market House, Annapolis spent a million dollars on repairs.⁴⁸ However, the total losses caused by Isabel were much greater. In implementing the repairs, the city was forced to evict all of the existing merchants in the Market House.⁴⁹ These merchants mostly catered to tourists, who utilized the

⁴³ Holtz et al., *supra* note 20 at 14.

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ Nicole Fuller, *Annapolis Market House Reopens*, BALTIMORE SUN (July 11, 2011) <https://www.baltimoresun.com/maryland/anne-arundel/bs-md-ar-annapolis-market-house-20110711-story.html>.

⁴⁹ *Id.*

Market House as a gathering space while visiting Annapolis.

To successfully preserve Annapolis' living history, comprehensive action on the root causes of climate change is necessary. The City of Annapolis, a small municipal government, cannot tackle the global threat of climate change alone. Federal agencies, like EPA, must recognize and respond to the true scope of the problem to ensure that historic living communities continue to thrive.

3. St. Augustine, Florida

The threats posed by climate change are of a magnitude and scope many historic communities have not previously encountered. Places that have withstood war may not survive climate change. Wars eventually end, but if the climate is permanently altered, even the most resilient communities will be no match for the onslaught that comes.

One example of a historic community that has survived for centuries, yet now may never recover from the increasing effects of climate change, is St. Augustine, Florida. Founded in 1565, St. Augustine is the nation's oldest continuously occupied European-established city, and is home to the Cathedral Basilica.⁵⁰ The Cathedral is a beacon of Catholic history renowned for its American Latino heritage and a symbol of resilience.⁵¹ Today, St. Augustine is a small beachfront town with about 14,000 residents

⁵⁰ *Id.*

⁵¹ *Cathedral of St. Augustine*, NAT'L PARK SERV., https://www.nps.gov/nr/travel/american_latino_heritage/Cathedral_of_St_Augustine.html (last visited Apr. 24, 2020).

welcoming millions of tourists every year.⁵²

The Cathedral, along with the city of St. Augustine, has been controlled by multiple countries throughout the centuries, including Spain, England, and eventually the United States.⁵³ During its history, the Cathedral was destroyed three times: during a raid by Sir Francis Drake in 1586, by a fire and hurricane in 1599, and again when the British burned it to the ground in 1702.⁵⁴ The Cathedral was rebuilt each time, and now stands as an icon of resilience. In 1966, the Cathedral was renovated to celebrate 400 years since its founding.⁵⁵

If drastic measures are not taken to address climate change, the long-enduring Cathedral and St. Augustine as a whole could be permanently lost to the sea.⁵⁶ The Cathedral is now threatened by unprecedented flooding, rising sea levels, and more powerful hurricanes caused by climate change. For example, in 2016 Florida was ravaged by Hurricane Matthew and the Cathedral Basilica flooded.⁵⁷ A large portion of

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *New Study Finds One Million Florida Homes Worth \$351 Billion will be at Risk from Tidal Flooding*, Union of Concerned Scientists (June 18, 2018), <https://www.ucsusa.org/about/news/1-million-florida-homes-risk-tidal-flooding#.XEiP2M9Kg8Z>.

⁵⁷ Dennis Sadowski, *Catholic Charities agencies assess damage, begin helping storm victims*, CATHOLICPHILLY.COM (Oct. 11, 2016), <https://catholicphilly.com/2016/10/news/national-news/catholic-charities-agencies-assess-damage-begin-helping-storm-victims/>.

St. Augustine has an elevation of only a few feet.⁵⁸ Even the resilient Cathedral, able to recover from multiple armed conflicts, fire, and hurricanes, is less than four feet above sea level.⁵⁹ If left unchecked, the destruction Hurricane Matthew left in its wake in 2016 will only be the beginning of the colossal damage caused by climate change.⁶⁰

4. Charleston, South Carolina

The National Historical Landmark District in Charleston, South Carolina is a place where the ethos of historic preservation has become interwoven with the fabric of the community. Such a place demonstrates that the effects of climate change on historic resources are personal and widespread, extending beyond impacts to iconic buildings and monuments.

Charleston has a long and storied history. The city played a key role in the American Revolution.⁶¹ It was the arrival point for 40% of the approximately 400,000 enslaved people brought to the United States and was the location of the start of the Civil War at Fort Sumter.⁶² Today, individual property owners continue to preserve

⁵⁸ Kathryn Frank et al., *Planning for Sea Level Rise in the Matanzas Basin*, UNIV. OF FLA. 1, 21 (Aug. 2015).

⁵⁹ *Id.*

⁶⁰ Sadowski, *supra* note 58.

⁶¹ *Fort Sumter and Fort Moultrie National Historical Park*, NAT'L PARK SERV., <https://www.nps.gov/fosu/index.htm> (last visited Apr. 22, 2020).

⁶² Jessica Campisi & Saeed Ahmed, *Charleston, where 40% of all US slaves entered the country, finally apologizes for its role in the slave trade*, CNN (June 19, 2018), <https://www.cnn.com/2018/06/19/us/charleston-apology-slavery-juneteenth-trnd/index.html> (last visited Apr. 24, 2020); *See Fort Sumter and Fort Moultrie National Historical Park*, *supra* note 62.

Charleston's history by maintaining its historic homes and neighborhoods. Historic buildings throughout Charleston are not only beautiful. They tell the stories of the families who lived there, including the enslaved African-Americans whose labor built and created the wealth to support many of these homes.⁶³ History attracts people, and in 2018, the city welcomed 7.3 million visitors that generated a record-breaking \$8 billion in tourism-related economic activity.⁶⁴

In Charleston, history and community are inseparable, highlighting that the impacts of climate change are as threatening to cultural identity as they are to historic buildings. The city has promoted a preservation ethic for over 100 years but faces increasing challenges with the effects of climate change. In 1902, groups interested in protecting and commemorating Charleston's contribution to the development of the nation began saving the city's remaining colonial-era structures for educational uses.⁶⁵ In the 1920s, the city council implemented zoning laws in areas of concentrated historical significance, making preservation a formal and institutionalized ethic.⁶⁶ Through purchase and resale, relocation, federal funding, and widespread community

⁶³ Tariro Mzezewa, *Enslaved People Who Lived Here, These Museums Want You to Know*, N.Y. TIMES (June 26, 2019), <https://www.nytimes.com/2019/06/26/travel/house-tours-charleston-savannah.html>.

⁶⁴ Linda Poon, *In Charleston, the Real Flooding Crisis is Only Beginning*, CITYLAB (Sept. 6, 2019), <https://www.citylab.com/environment/2019/09/hurricane-dorian-charleston-flood-climate-change-high-tides/597475/>.

⁶⁵ *Charleston and Preservation*, NAT'L PARK SERV., <https://www.nps.gov/articles/charleston-and-preservation.htm> (last visited Apr. 24, 2020).

⁶⁶ *Id.*

involvement, Charleston has been able to keep many of its historic structures intact.⁶⁷

Without the people who live in the urban historic area, preservation of the historic buildings enjoyed by residents and visitors alike would not have been possible.

Despite this record of outstanding historic preservation, the Historic District is now threatened by sea level rise, storms, and flooding exacerbated by climate change.⁶⁸ The sea level on the coast of South Carolina is ten inches higher than in 1950, and is now rising one inch every two years.⁶⁹ This rise has increased flooding across the state by 75% since 2000.⁷⁰ By 2045, Charleston could experience 180 days of “blue-sky flooding” a year, where the tide coming in simply floods the city.⁷¹ Flooding not only damages buildings, but disrupts the entire city, including travel to the city’s hospital district.⁷² The president and CEO of the Historic Charleston Foundation has stated that the community may need to retreat after a certain period of time; “that’s just where we’re headed and that’s a global situation.”⁷³ With the ocean rising at these levels,

⁶⁷ *See id.*

⁶⁸ *Charleston*, Nat’l Trust for Historic Pres., <https://savingplaces.org/places/charleston#.XmaTi0BFyUk> (last visited Apr. 24, 2020).

⁶⁹ *Id.*

⁷⁰ *South Carolina’s Sea Level is Rising*, SEALEVELRISE.ORG, <https://sealevelrise.org/states/south-carolina/> (last visited Apr. 24, 2020).

⁷¹ *Id.*; Jim Morrison, *As High-Tide Flooding Worsens, More Pollution Is Washing to the Sea*, YALE ENV’T 360 (Mar. 14, 2019), <https://e360.yale.edu/features/as-high-tide-flooding-worsens-more-pollution-is-washing-to-the-sea>.

⁷² *See Morrison, supra* note 72.

⁷³ Heath Ellison, *Charleston Preservationists Batten Down the Hatches*, Charleston City Paper (July 31, 2019), <https://www.charlestoncitypaper.com/charleston/charleston->

Charleston may lose its long fight to preserve its historic character by having to abandon parts of its community.

Even unique sites that enjoy the focus and dedication of institutional stakeholders are threatened by climate change.⁷⁴ For example, Drayton Hall is a historic property located near Charleston protected by the National Trust for Historic Preservation. It is the oldest example of Palladian architecture in North America, imitated for centuries and open to the public for study and inspiration. Established in 1738 and representing seven generations of history, the plantation house is nearly in its original condition having survived the Revolutionary and Civil wars as well as hurricanes and earthquakes.⁷⁵ It was conveyed to the National Trust in 1974 and is now a National Trust Historic Site that integrates African-American history as a vital part of the visitor experience.⁷⁶

While the National Trust can make efforts to extend specific protection and resources to National Trust Historic Sites such as Drayton Hall, the Trust's ability to mitigate all the negative impacts of climate change as a private owner are limited. For example, Drayton Hall's unique condition has allowed the National Trust to prepare

preservationists-batten-down-the-hatches-to-protect-the-citys-historic-resources-from-rising-waters/Content?oid=28986506.

⁷⁴ Drayton Hall, Nat'l Trust for Historic Pres., <https://savingplaces.org/places/drayton-hall> (last visited Apr. 24, 2020).

⁷⁵ *Id.*

⁷⁶ *Id.*; Mary Battle, *Changing Representations of African American History at Drayton Hall*, DRAYTON HALL, <http://www.draytonhall.org/changing-representations-of-african-american-history-at-drayton-hall/> (last visited Apr. 24, 2020).

the property for past weather events.⁷⁷ The estate and its historic trees survived Hurricanes Matthew and Hugo due to decades of disaster preparation and management, including door and window barricades and preventative tree maintenance.⁷⁸ But as climate change inevitably makes storms stronger, the threats to Drayton Hall may outpace even the National Trust's protection.

Many historic building owners have much less access to necessary funding and expertise to protect the historic places under their care from the increased risks and costs of climate change.⁷⁹ The city and individual owners of historic properties in Charleston have only limited and difficult choices available: they must choose between the costly option of elevating hundreds of historic structures, forever altering their character, or risking permanent destruction from severe storms and flooding.

To save buildings from flooding and storm surge, one of the few options available to Charleston preservationists is to raise historic buildings. This can be difficult or even impossible for individual homeowners, since the cost to elevate a building may reach \$400,000.⁸⁰ The scope of loss is compounded when one considers the high

⁷⁷ *Preservation*, DRAYTON HALL, <http://www.draytonhall.org/the-estate/preservation/> (last visited Apr. 7, 2020).

⁷⁸ Carter Hudgins, *A Historic Survivor*, DRAYTON HALL, <http://www.draytonhall.org/a-historic-survivor/> (last visited Apr. 24, 2020); *Hugo Remembered*, DRAYTON HALL, <http://www.draytonhall.org/hugo-remembered/> (last visited Apr. 24, 2020).

⁷⁹ Hudgins, *supra* note 79.

⁸⁰ Ellison, *supra* note 74.

number of potentially-impacted homeowners.⁸¹ Additionally, raising buildings can disrupt architectural proportions and lead to structural integrity issues, often because of the high content of salt in flood waters, which damages wiring, mechanical ductwork, and interior finishes.⁸² And large monumental buildings like churches simply cannot be elevated, much less their historic graveyards. But if smaller buildings are not raised, owners may lose their historic homes altogether.

Over 90,000 properties are at risk from tidal flooding in South Carolina, and the City of Charleston requires homes in flood-prone areas that suffer damage amounting to more than half their value to be elevated one foot higher than FEMA's standards, which can be difficult, time consuming, and expensive.⁸³ The state also plans to spend over two billion dollars on seawalls, improved drainage, and raising roads.⁸⁴ Charleston's existing preservation efforts have been made possible by individuals, organizations, and governments.⁸⁵ But without climate change mitigation at a federal level to support community actions, the efforts of generations of people and billions of dollars spent to preserve Charleston's historic character will be lost.

⁸¹ *Flooding: An Increasing Threat to Local Historic Preservation*, HISTORIC CHARLESTON FOUND. (Oct. 23, 2017), <https://www.historiccharleston.org/blog/flooding-increasing-threat-local-historic-preservation>; Ellison, *supra* note 74.

⁸² *Flooding: An Increasing Threat to Local Historic Preservation*, *supra* note 82.

⁸³ *South Carolina's Sea Level is Rising*, *supra* note 71.

⁸⁴ *Id.*

⁸⁵ *Charleston and Preservation*, *supra* note 66.

C. EPA's failure to consider impacts to historic resources supports petitioners' arguments that the ACE Rule should be vacated and remanded.

EPA ignoring the unique impacts of climate change on historic resources is one example of the agency's larger failure to consider the serious impacts of postponing action on climate change. The damage to historic places from climate change includes damage to a wide variety of places, as well as to our broader culture, community, and irreplaceable ties to our past. These impacts should have been considered when EPA examined the impacts of climate change, but were overlooked. In such circumstances, the proper remedy is to vacate the rule and remand the matter back to EPA. *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 545 (D.C. Cir. 1983).

CONCLUSION

This Court should vacate the ACE Rule and remand the matter to EPA.*

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Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

Pursuant to Federal Rule of Appellate Procedure 32(a)(7)(C) and D.C. Circuit Rule 32(g)(1), I certify that this Brief of Amici Curiae Environment America and National Trust for Historic Preservation in Support of Petitioners is prepared in a format, typeface, and type style that complies with Federal Rules of Appellate Procedure 32(a)(4)-(6) and contains the following number of words: 5802.

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CERTIFICATE OF SERVICE

I hereby certify that on April 24, 2020, I electronically filed the foregoing document with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit using the Appellate Electronic Filing System.

/s/Wyatt G. Sassman

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