

# Climate Change Response Program

National Park Service  
U.S. Department of the Interior



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Climate change has been identified by Jonathan Jarvis, Director of the National Park Service, as a high priority for the service because implications for management practices are unprecedented. NPS is in a unique position to provide places to educate both staff and the public about this issue. Rangers provide a key source for productive dialogues about climate change complexities. This Climate Change Connections Photo Booklet is designed to help National Mall and Memorial Parks rangers successfully incorporate climate change stories into their interactions with visitors around the Mall. This booklet is divided into four different sections: the Tidal Basin, the Martin Luther King Jr. Memorial, the Franklin Delano Roosevelt Memorial, and the Thomas Jefferson Memorial. Each section includes both current and historic images that show the changes that have occurred over time in the Tidal Basin area. Text insets are provided to give context to the photos and their connection with climate change. This booklet can be used in the memorials around the Tidal Basin as a visual aid that demonstrates the historical, cultural, and scientific perspectives. It also provides examples to help start informal and formal discussions about the role of climate change in the Tidal Basin's past, present, and future.



Photo Courtesy of Smithsonian Institute CC BY 2.0 (1882) The Tidal Basin is composed of reclaimed land dredged by the Army Corps of Engineers in 1882 to make the Potomac more navigable and to flush out the Washington Channel. The area is vulnerable to severe floods due to sea level rise associated with warming temperatures and the sinking of the reclaimed land. Above: The dredging of the Potomac mud flats by the Army Corps of Engineers.



Photo Courtesy of the Library of Congress, National Photo Company Collection, Herbert French (1924). The Tidal Basin was a segregated beach and swimming area until 1925. It is still a public space today and the threat of severe and frequent flooding is an example of the concerns caused by climate change. Above: Visitors play push ball at the Tidal Basin's segregated beach.



Photo Courtesy of the National Park Service, Jazmin Garcia (2014). Flooding is already occurring at the Tidal Basin. Many areas have been fenced off and visitors must avoid certain areas at high tide. Above: A flooded path just outside the FDR Memorial.



Photo Courtesy of Glynn Lowe Photo Works, Flickr, CC BY 2.0 (2012). Severe storms and the flooding and increased precipitation that they cause will be more frequent as temperatures rise. Hurricane Sandy caused significant damage on the east coast of the United States and drenched Washington D.C. Above: The Tidal Basin flooded with logs and debris after Hurricane Sandy.



Photo Courtesy of Library of Congress (1963), Warren K. Leffler. Dr. King dedicated himself to fighting for equality. His assassination meant that he would not witness much of the change that he inspired. While here on the National Mall we may not have seen many of climate change's effects we must start to mitigate and adapt to the changes that are projected to occur. Above: Dr. King after meeting with President Johnson.

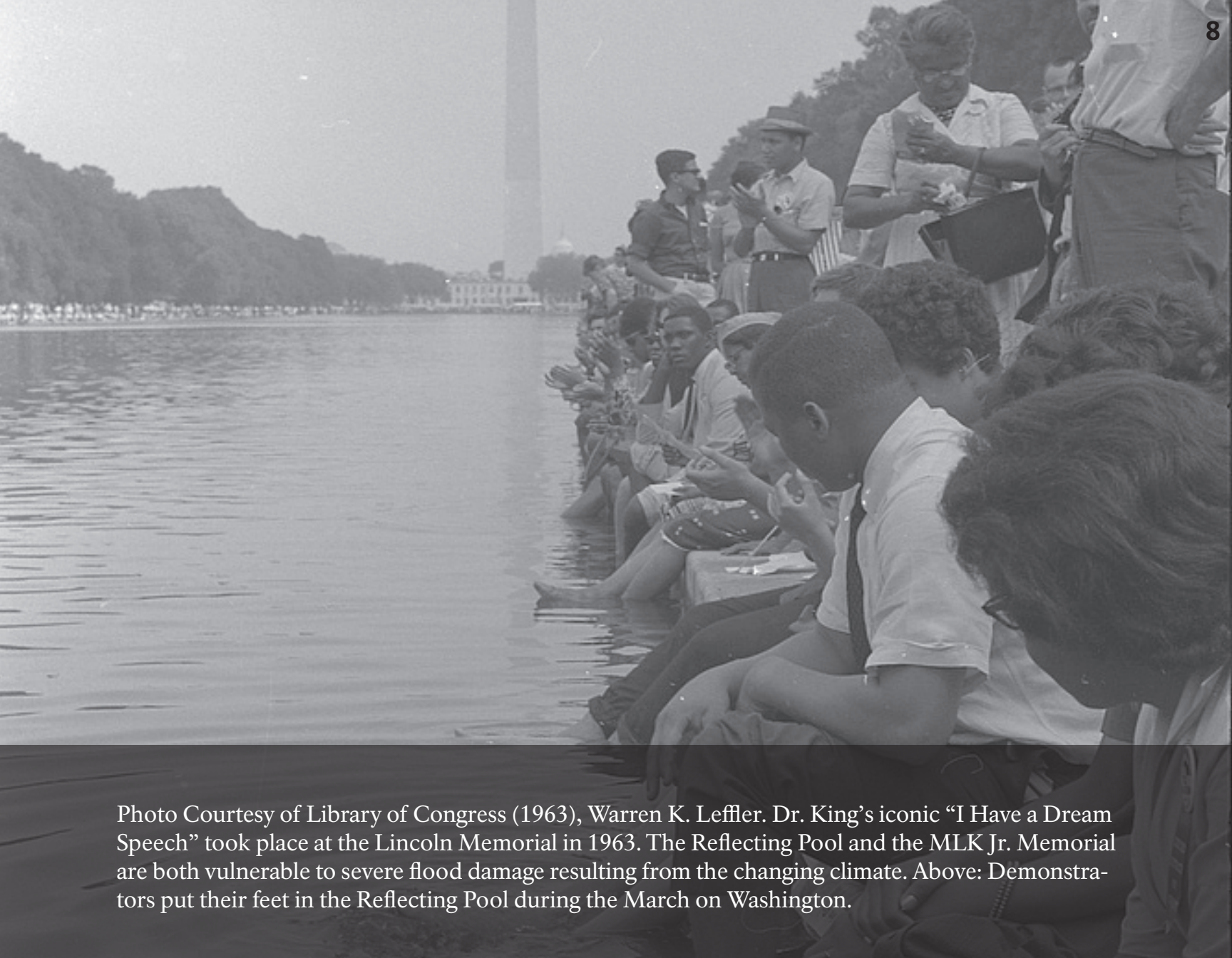


Photo Courtesy of Library of Congress (1963), Warren K. Leffler. Dr. King's iconic "I Have a Dream Speech" took place at the Lincoln Memorial in 1963. The Reflecting Pool and the MLK Jr. Memorial are both vulnerable to severe flood damage resulting from the changing climate. Above: Demonstrators put their feet in the Reflecting Pool during the March on Washington.

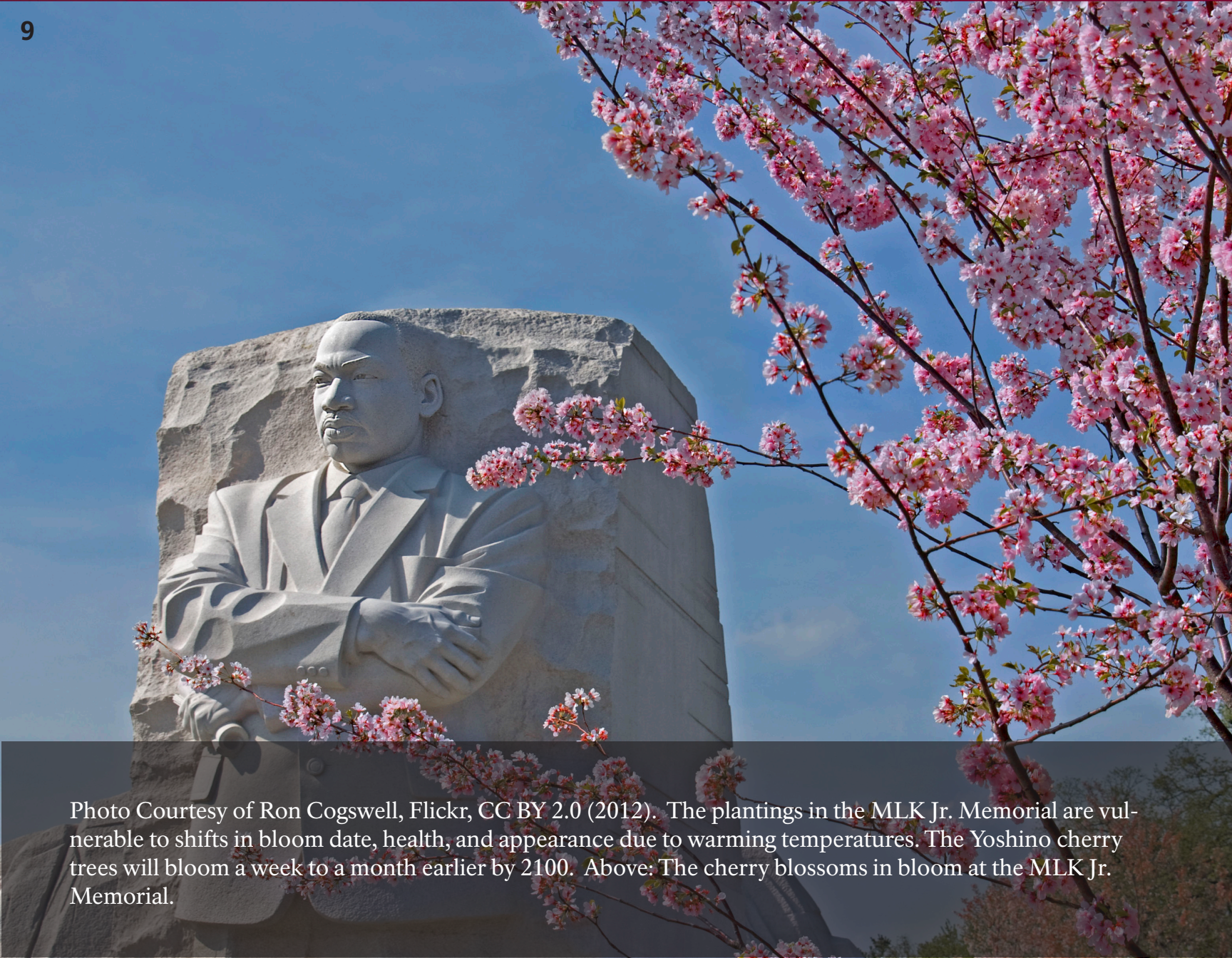
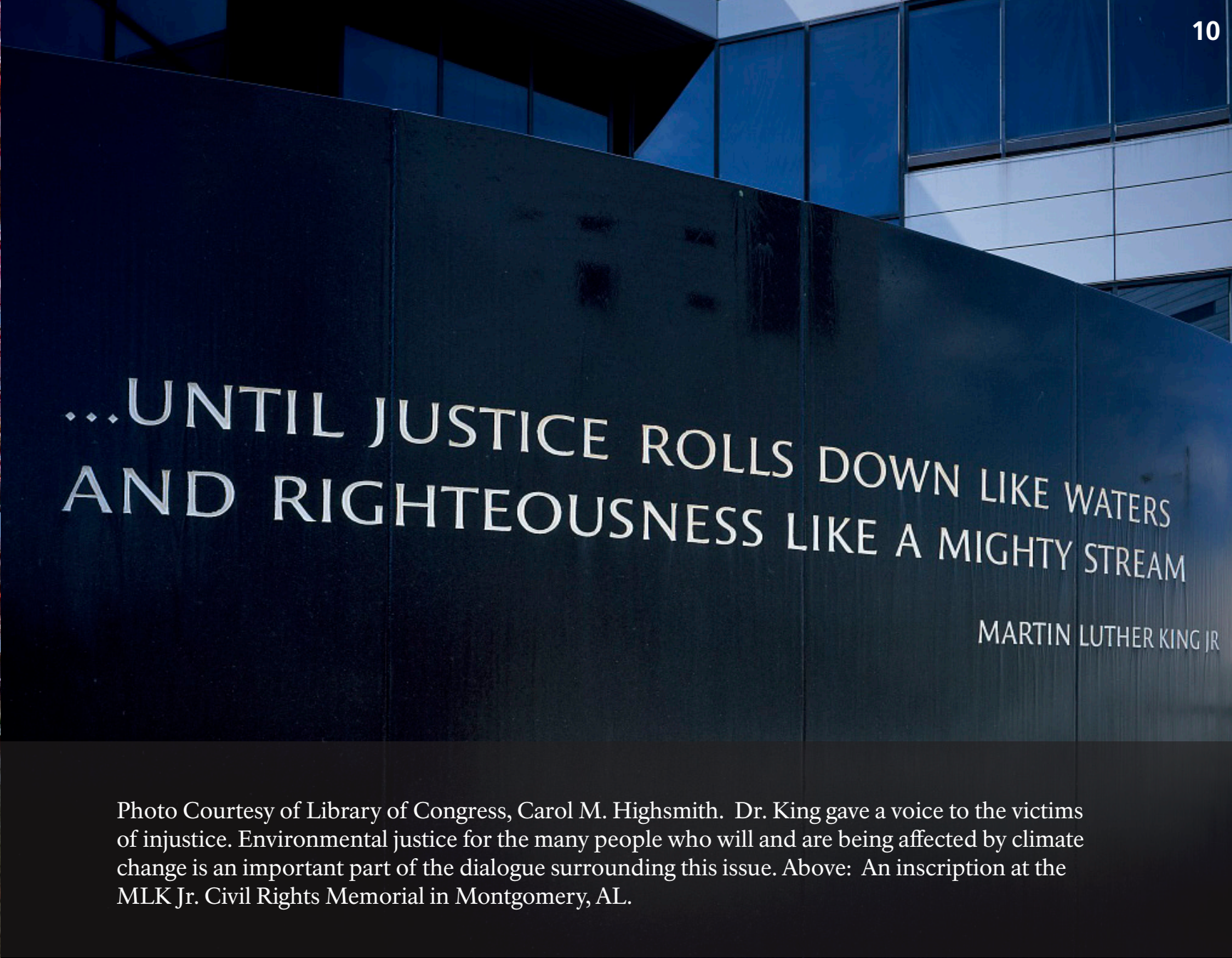


Photo Courtesy of Ron Cogswell, Flickr, CC BY 2.0 (2012). The plantings in the MLK Jr. Memorial are vulnerable to shifts in bloom date, health, and appearance due to warming temperatures. The Yoshino cherry trees will bloom a week to a month earlier by 2100. Above: The cherry blossoms in bloom at the MLK Jr. Memorial.



...UNTIL JUSTICE ROLLS DOWN LIKE WATERS  
AND RIGHTEOUSNESS LIKE A MIGHTY STREAM

MARTIN LUTHER KING JR

Photo Courtesy of Library of Congress, Carol M. Highsmith. Dr. King gave a voice to the victims of injustice. Environmental justice for the many people who will and are being affected by climate change is an important part of the dialogue surrounding this issue. Above: An inscription at the MLK Jr. Civil Rights Memorial in Montgomery, AL.

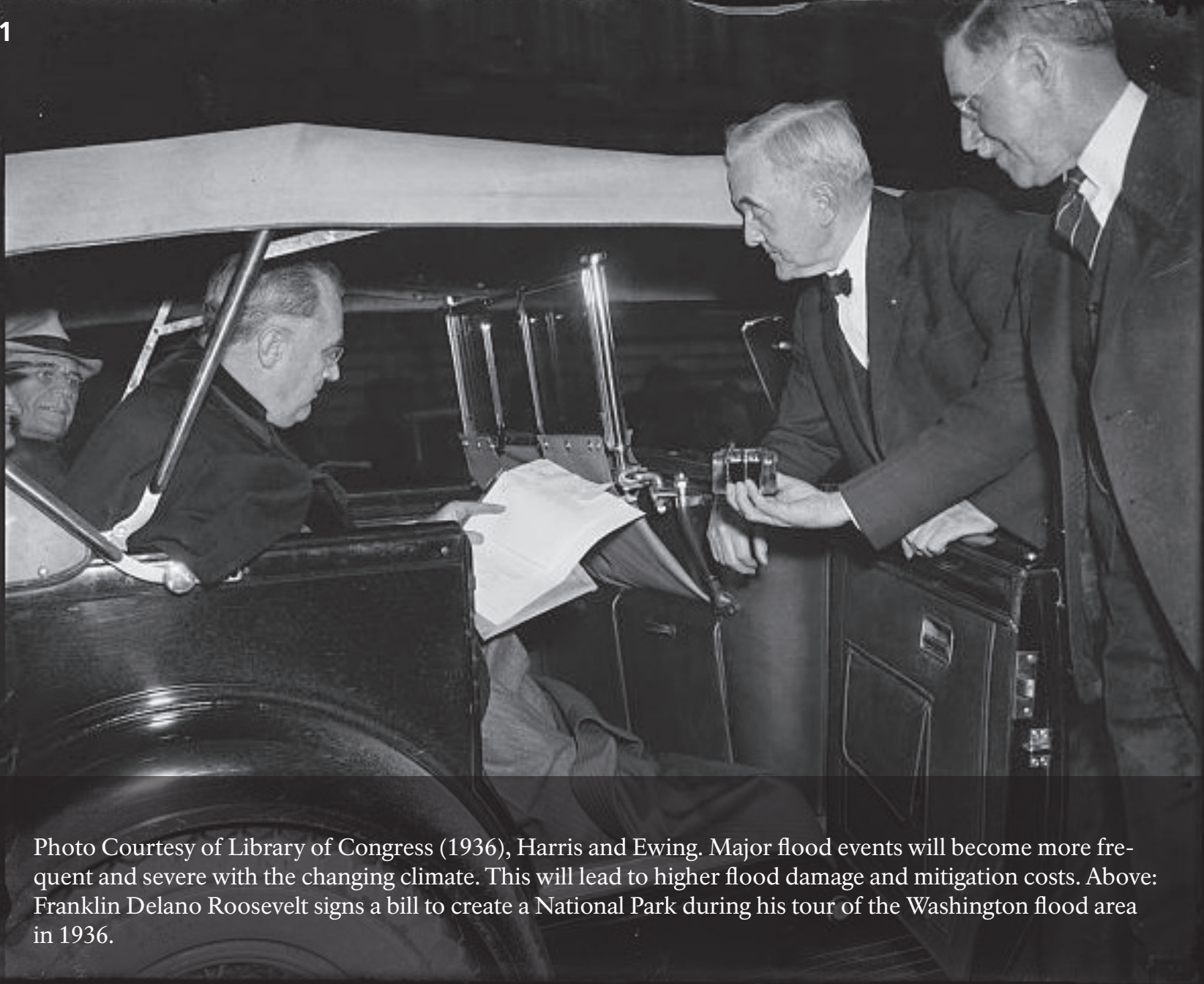


Photo Courtesy of Library of Congress (1936), Harris and Ewing. Major flood events will become more frequent and severe with the changing climate. This will lead to higher flood damage and mitigation costs. Above: Franklin Delano Roosevelt signs a bill to create a National Park during his tour of the Washington flood area in 1936.

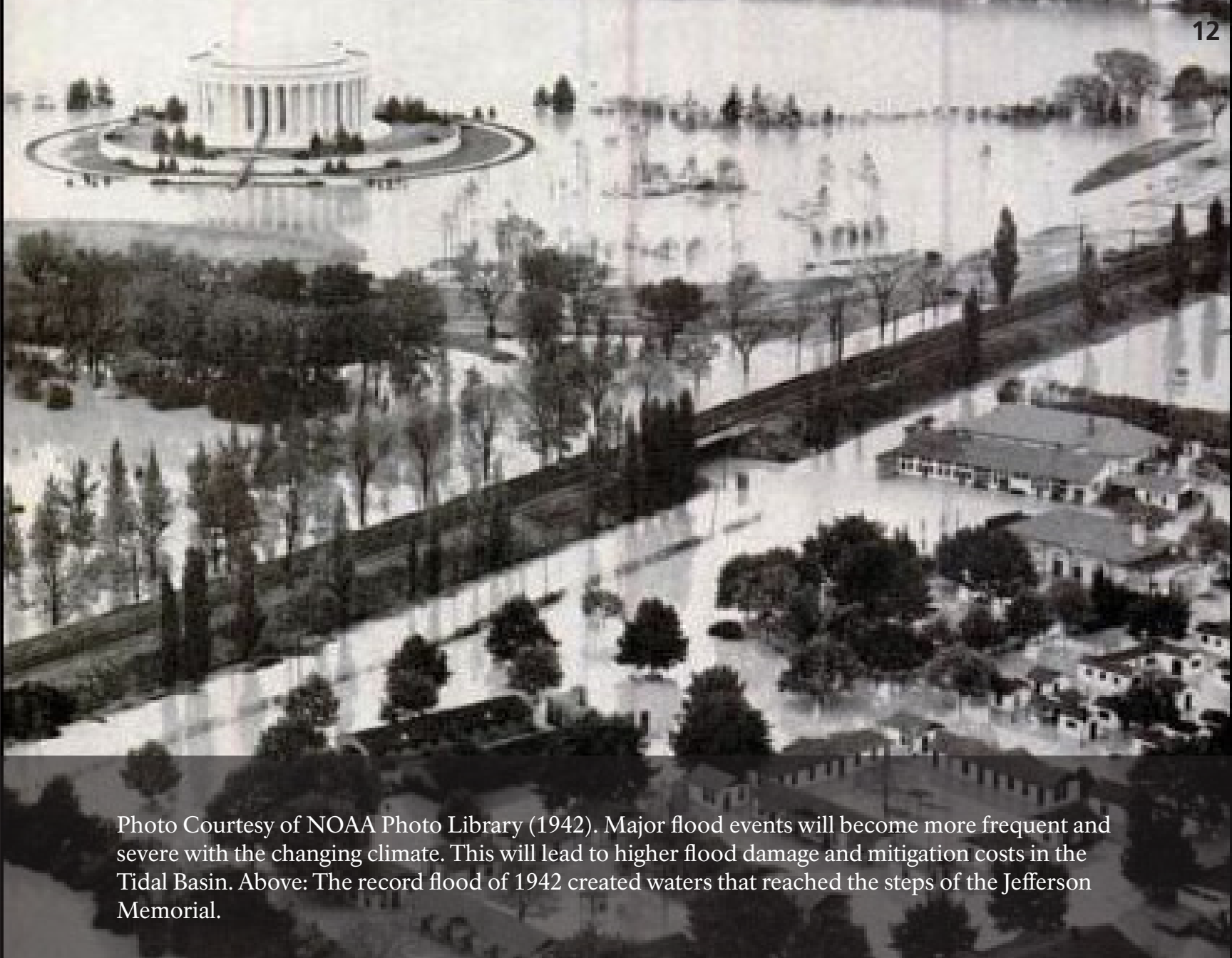


Photo Courtesy of NOAA Photo Library (1942). Major flood events will become more frequent and severe with the changing climate. This will lead to higher flood damage and mitigation costs in the Tidal Basin. Above: The record flood of 1942 created waters that reached the steps of the Jefferson Memorial.



Photo Courtesy of Library of Congress, Harris and Ewing (1937). The Civilian Conservation Corps was created by President Roosevelt and is a part of the National Park Service's history. NPS is committed to preserving parks for future generations and is taking steps to adapt to the changing climate. Above: President Roosevelt receives CCC national essay contest winner



Photo Courtesy of Library of Congress, Carol M. Highsmith (1991). The FDR Memorial features waterfalls and dam shaped stonework that reflects his incorporation of the environment into his policy and programs. Addressing the impacts of climate change will require a spirit of environmental conservation, protection and preservation. Above: The FDR Memorial stonework being carved.



Photo Courtesy of Library of Congress, (1941). Major flood events will become more frequent and severe with the changing climate, warranting more flood prevention. The sea wall near the Jefferson Memorial is just one example of the flood damage prevention projects on the National Mall. Above: The construction of the Jefferson sea wall.

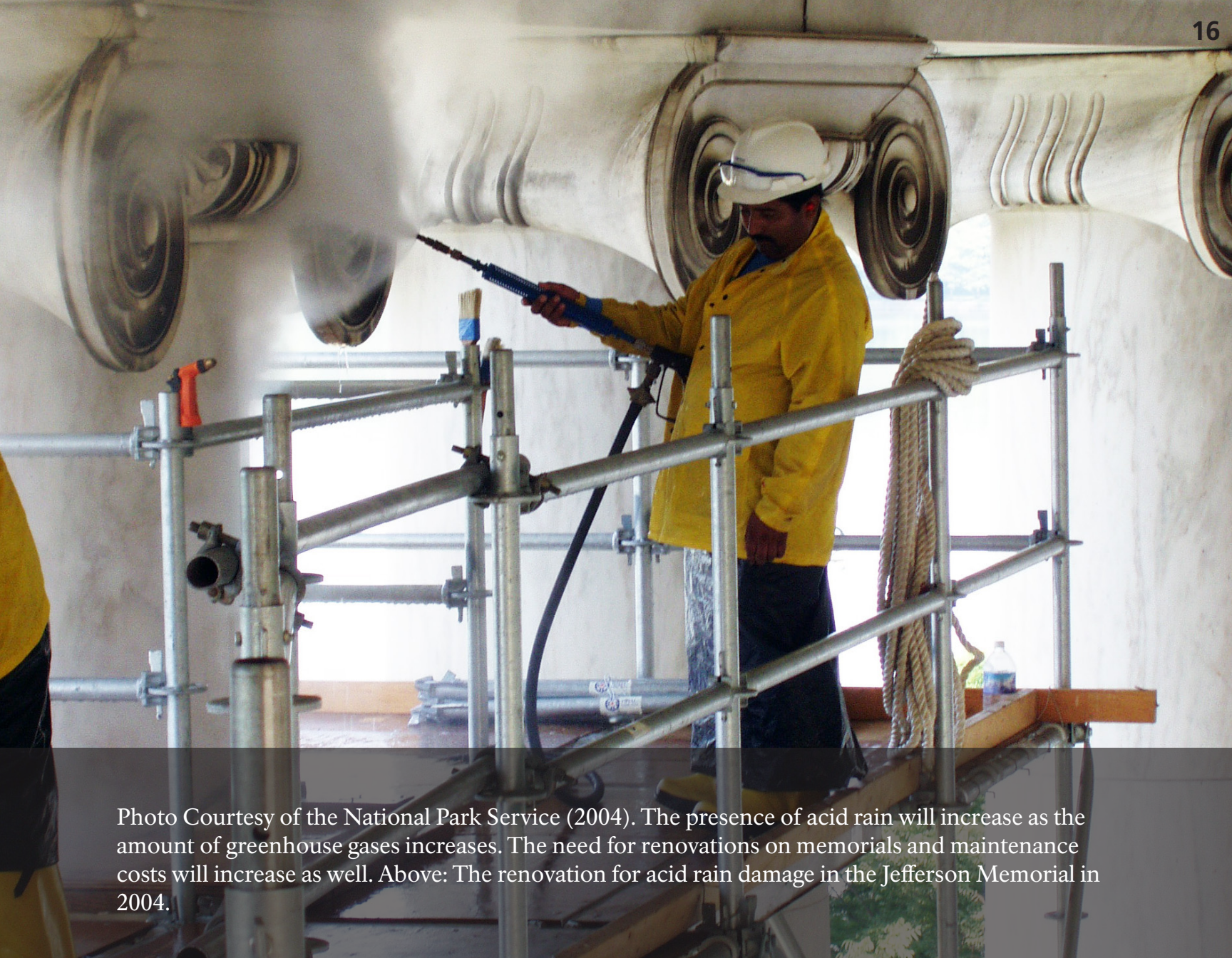


Photo Courtesy of the National Park Service (2004). The presence of acid rain will increase as the amount of greenhouse gases increases. The need for renovations on memorials and maintenance costs will increase as well. Above: The renovation for acid rain damage in the Jefferson Memorial in 2004.

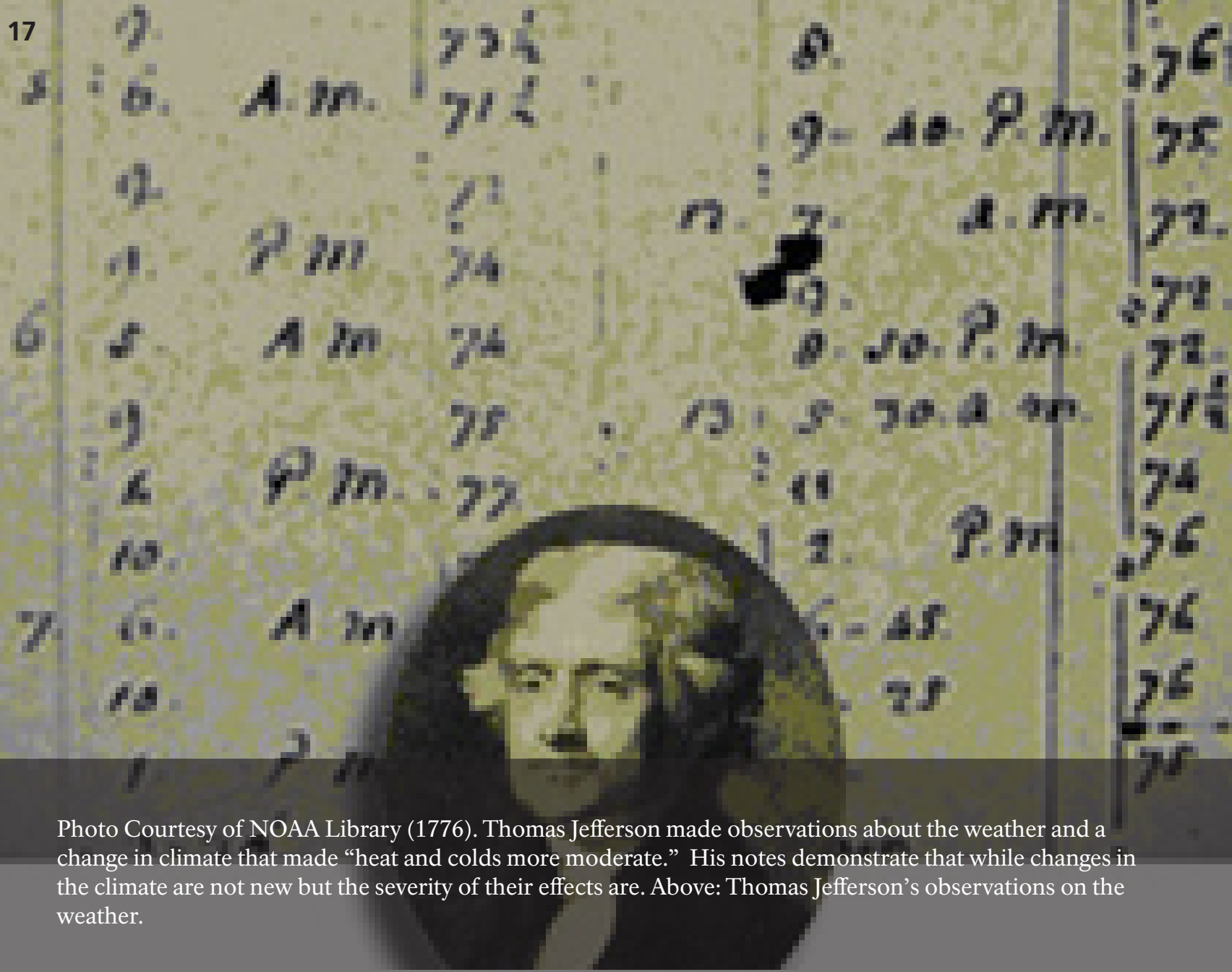


Photo Courtesy of NOAA Library (1776). Thomas Jefferson made observations about the weather and a change in climate that made “heat and colds more moderate.” His notes demonstrate that while changes in the climate are not new but the severity of their effects are. Above: Thomas Jefferson’s observations on the weather.



Photo Courtesy of Nickolay Lamm CC BY 2.0 (2013). The frequent flooding that will happen in the future at the Tidal Basin will have a significant impact on the Jefferson Memorial. Areas are already flooding at high tides and sea level rise will exacerbate this problem. Above: Future flooding at the Jefferson Memorial with sea level rise of 25 ft.



4C

George Mason University  
Center for Climate Change Communication



This photobook was made possible through a partnership between the National Park Service and the Center for Climate Change Communication (4C) at George Mason University. The content was developed by NPS Climate Change Communication Interns: Laura Hellmich, and Nick Stasiak, and designed by Sarah Erickson. We are greatly appreciative of the guidance and feedback received provided by Jenell Walsh-Thomas, Melissa Clark and Giselle Mora-Bourgeois.