

S4E & EOEC

Earth Week Research Panel

April 19, 2023

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JOSEPH R. BIDEN, JR. SCHOOL OF PUBLIC POLICY & ADMINISTRATION

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The Genius of Earth Day

How a 1970 Teach-In

Unexpectedly Made


the First Green Generation

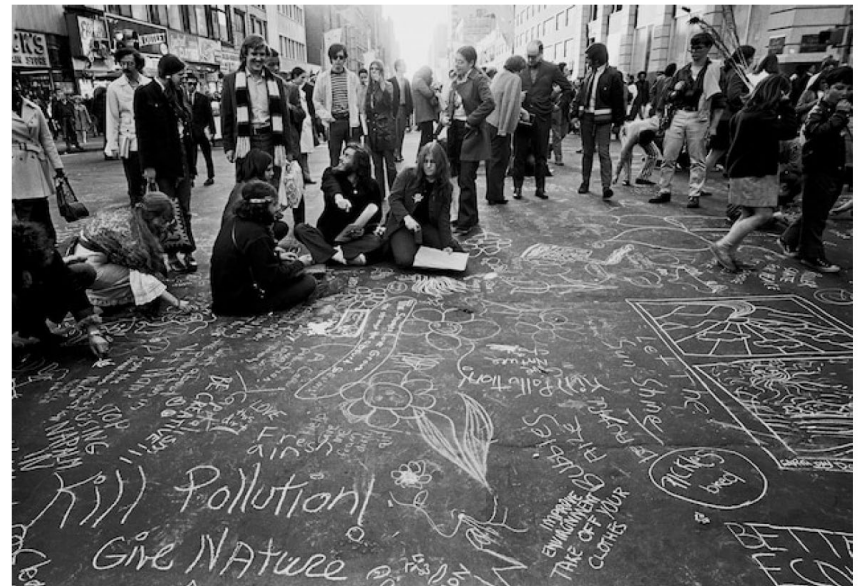
Adam Rome

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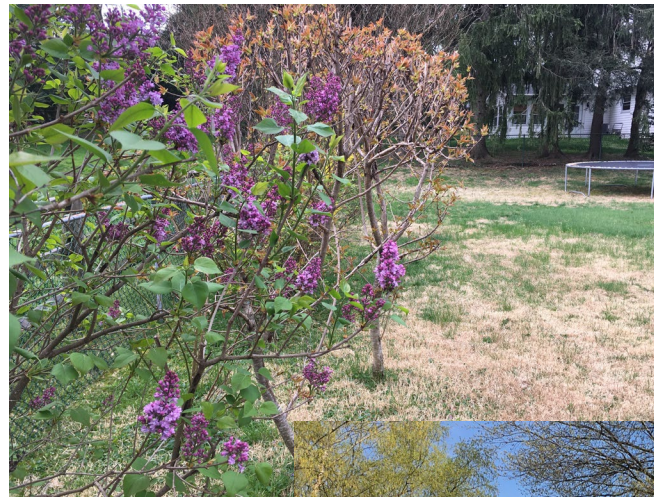
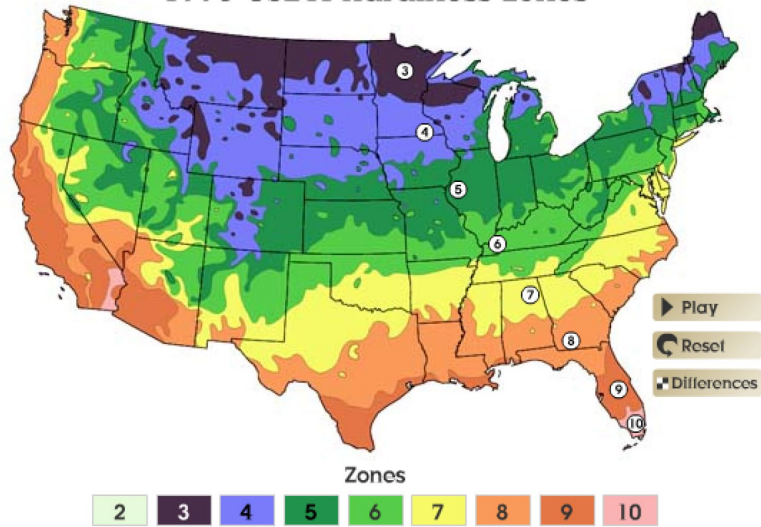
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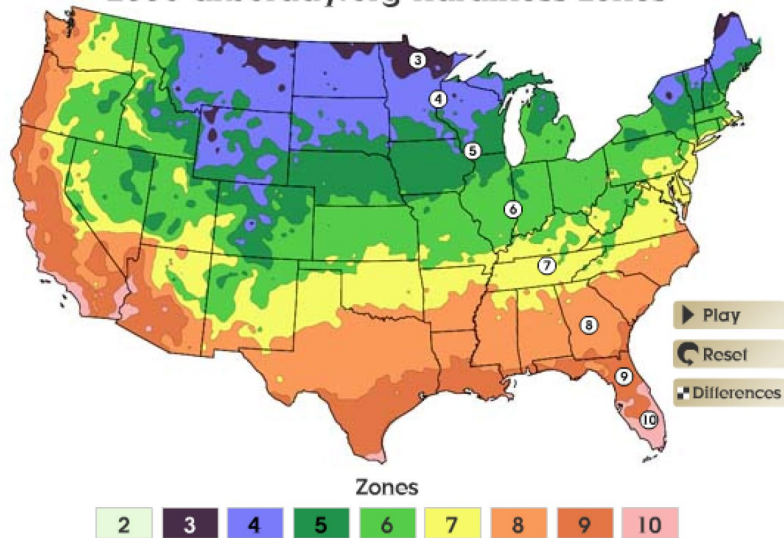
Some 20 million people took part in the first Earth Day protests held across the United States on April 22, 1970. In New York City, the streets near Union Square Park were turned into an "ecological carnival" in one of the largest demonstrations the city had seen in decades.

PHOTOGRAPH BY SANTI VISALLI, GETTY

1990 USDA hardiness zones



2006 arborday.org hardiness zones



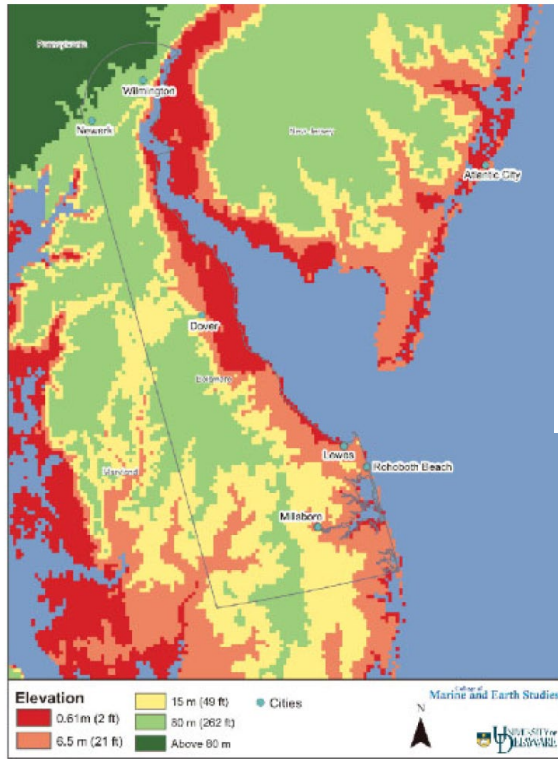


Figure 7: Areas of Delaware inundated by expected sea level rise from Greenland (orange), and by the West Antarctic (yellow). Light green at would be inundated by additional loss of the entire Antarctic, but

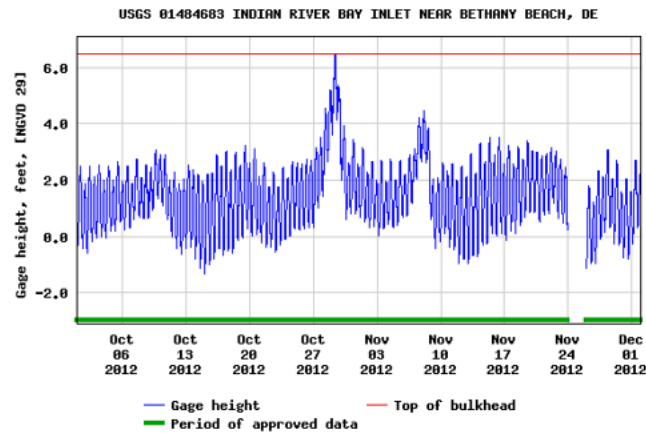
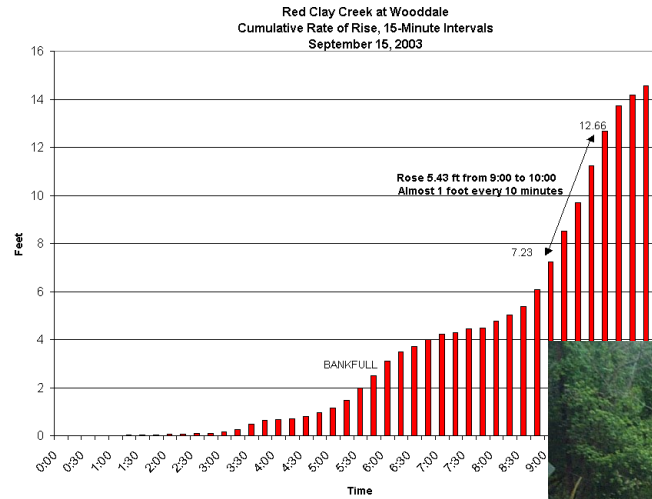


Figure 3.5 Historic peak flood tide at Indian River Bay inlet, Superstorm Sandy October 29, 2012

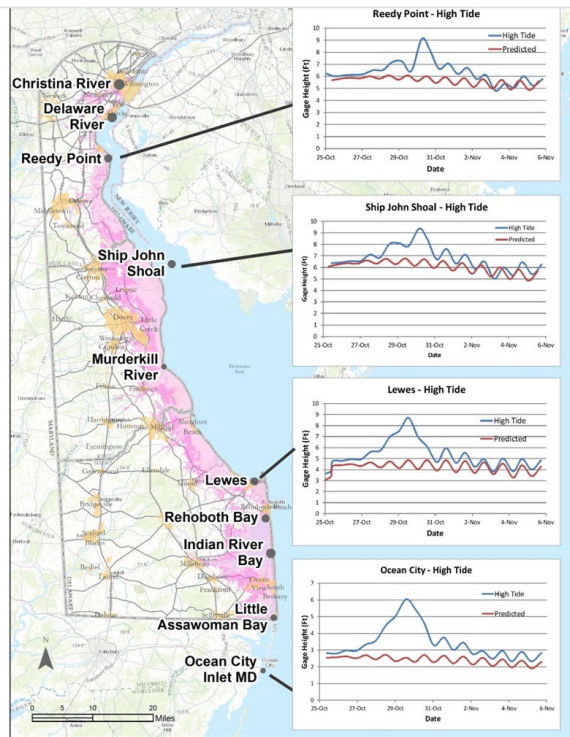


Figure 6 Tide levels at NOAA gages, Delaware Bay and River, Superstorm Sandy (October 2012)

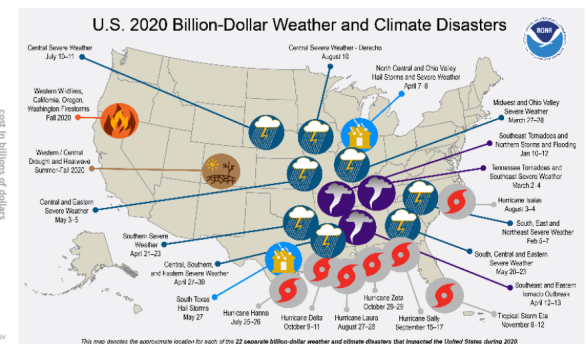
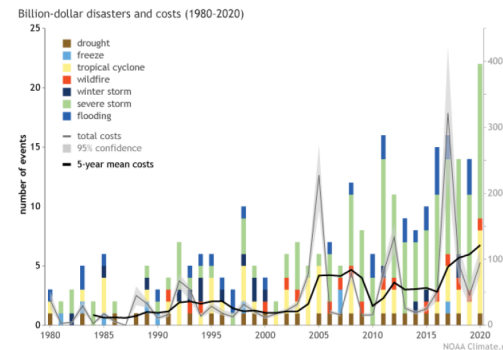
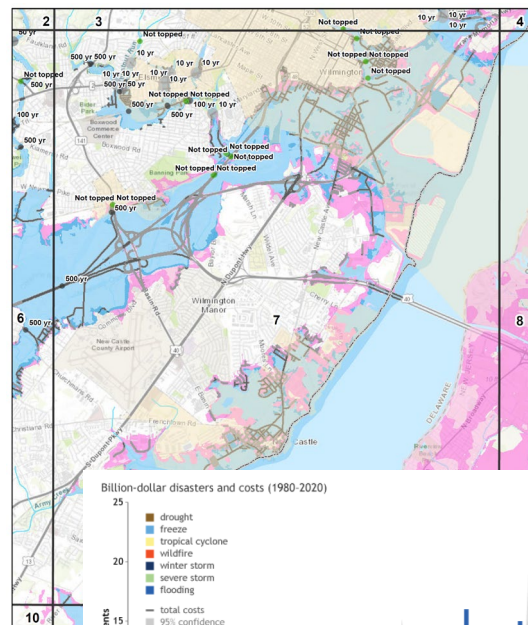
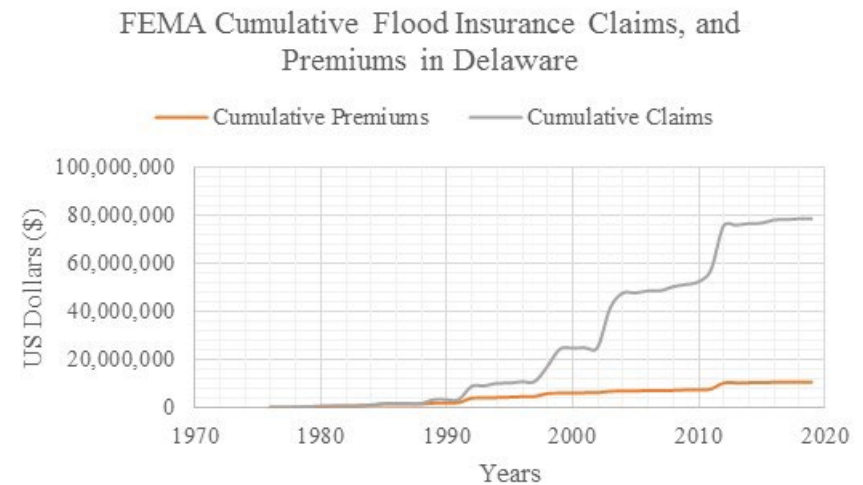
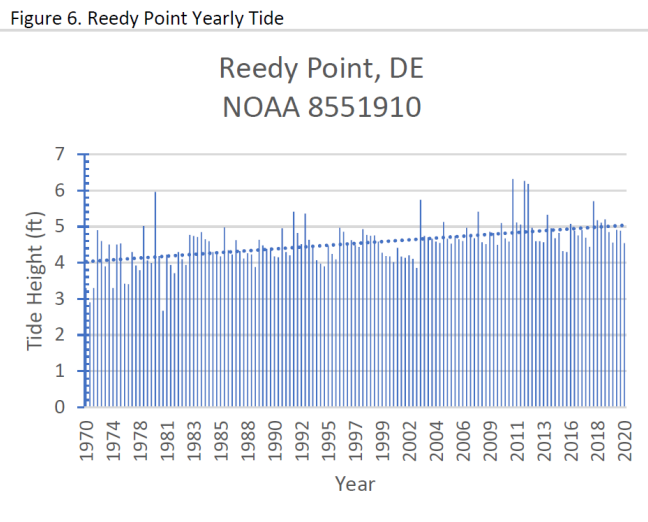


Figure 17. Billion-dollar disaster events (1980-2020) as reported by NOAA (Smith 2020)



White Paper
U.S. Water and Climate Change Policy
 Draft January 20, 2021 (rev. March 17, 2021)
 Gerald Joseph McAdams Kauffman, Jr.
 Newark, Del.

Climate Change is Water Change

In Barcelona during the November 2009 negotiations for the Copenhagen climate conference, the executive director Stockholm Water Institute said precisely that “climate change is water change.” This is explained in thermodynamic Clausius-Clapeyron relationship that for every 2 degrees F rise in temperature the atmosphere can hold 7% more water. That is, global warming causes more evaporation, higher humidity, and water saturation in the atmosphere resulting fires, damaging storms and floods, searing drought, burying blizzards, and melting of the glaciers leading to dwindling supplies and sea level rise. With a new President on January 20, 2021 and the 117th Congress, climate change is one priority of the Federal government and we are about to see a brand new age - a 4th era of environmentalism - in the U.S. The actions and deliberations on climate change ought to be apolitical and nonpartisan because after all to adapt an colleague at the University of Minnesota Water Resources Center: “clean water (and air) is neither red or blue, it is common.”

In this dawn of a new decade the four great challenges of the day are: (1) fight the pandemic, (2) revive the economy, (3) combat climate change, (4) and achieve racial justice. All of these issues are intertwined in the disciplines of sustainable water and environmental policy. Clean water provides necessary hygiene to control the spread of coronavirus. Clean water programs stimulate the economy and support high paying green jobs. Innovative economic investment in clean low carbon energy combats climate change. Investment in polluted neighborhoods provides the environmental justice to fight racism and provide good jobs for people of all races, creed, or color. The following white paper on U.S. water and climate change policy recommends priority actions in (1) science, (2) policy, (3) governance, and (4) finance to restore the economy and environment of America.

White House Water Summit

Five years ago on March 22, 2016, we were 200 scientists invited by President Obama to the White House Water Summit at 1600 Pennsylvania Avenue in Washington, D.C (Figure 1). On UN World Water Day, the White House hosted this first-ever national water summit to shine a spotlight on cross-cutting, creative solutions to solving the water problems of the day and announced \$4 billion in private capital committed to investment in water-infrastructure projects nationwide, over \$1 billion from the private sector to conduct research and develop new technologies, and nearly \$35 million a year in Federal grants from EPA, NOAA, NSF, and USDA to support cutting-edge water science. We heard from WH officials such as Ali Zaidi, Associate Director for Natural Resources, Energy, and Science at OMB and five U.S. Congress members that water science and policy research at universities such as the University of Delaware is especially pertinent because water is one of America's top domestic public policy and the push is on to invest more in this economic and environmental resource to reduce the chances of future disasters on River, the California drought, or coastal Delaware flood emergencies. It's been five years now and we're looking forward next White House summit that could be a “Bretton Woods” of water and climate modeled on the 1944 economic summit the 75 allied nations assembled in the White Mountains of New Hampshire to plan a new world order.



Figure 1. White House Water Summit on World Water Day (March 22, 2016) a model for a “Bretton Woods” of W

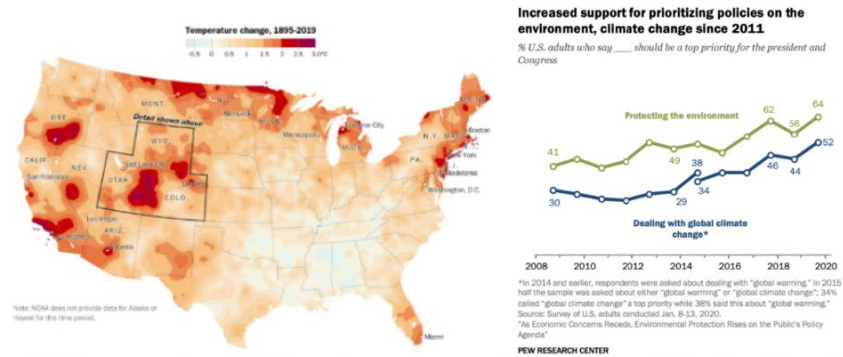


Figure 14. Temperature change (NOAA) and increased support for the environment in the United States (PEW)

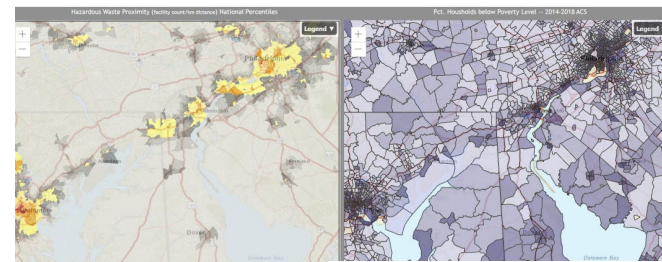


Figure 6. Poor communities have more hazardous v

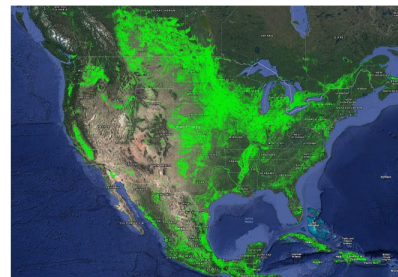


Figure 7. Cropland covers 20 percent of the United States (USGS)



Figure 8. Forests cover 36 percent of the continental U.S. (USGS)

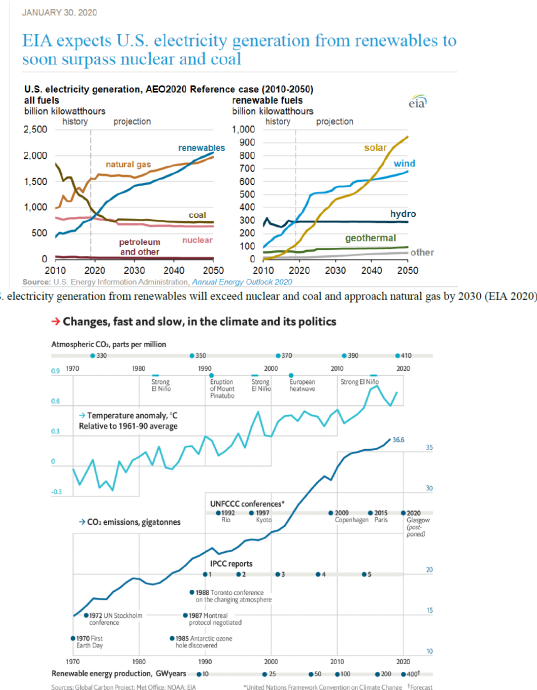
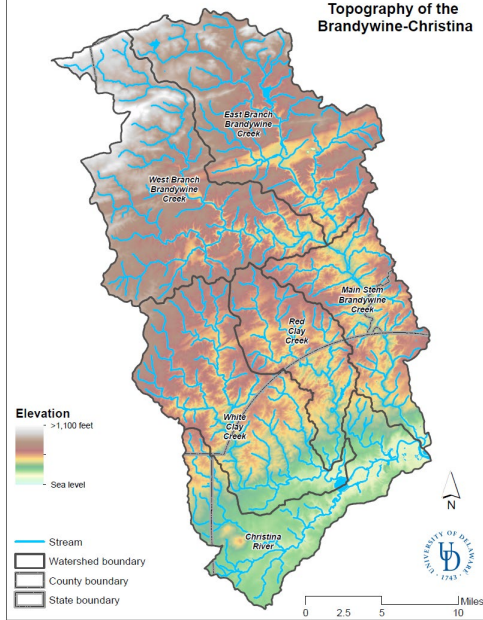
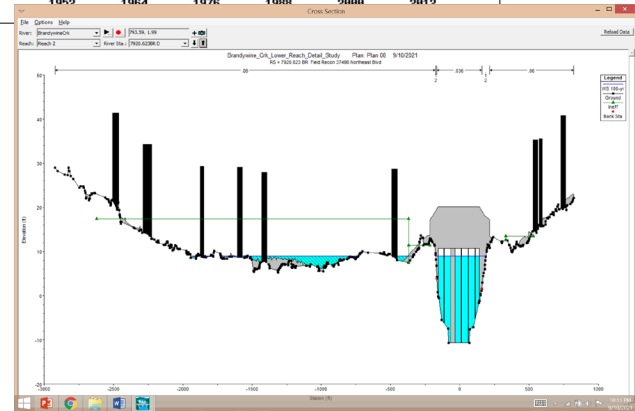
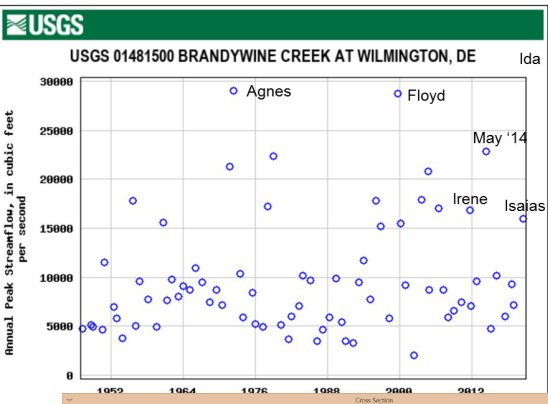


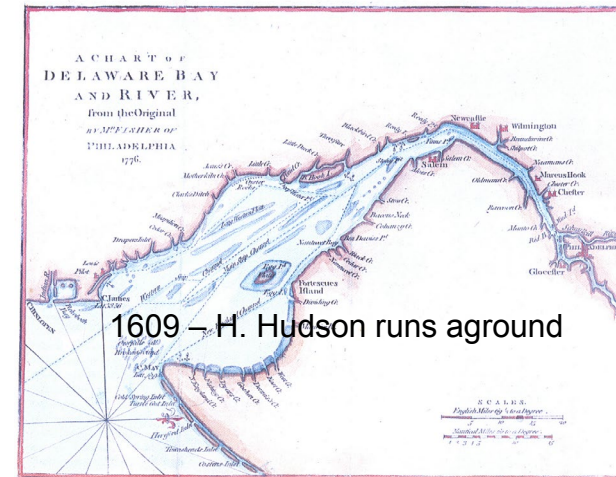
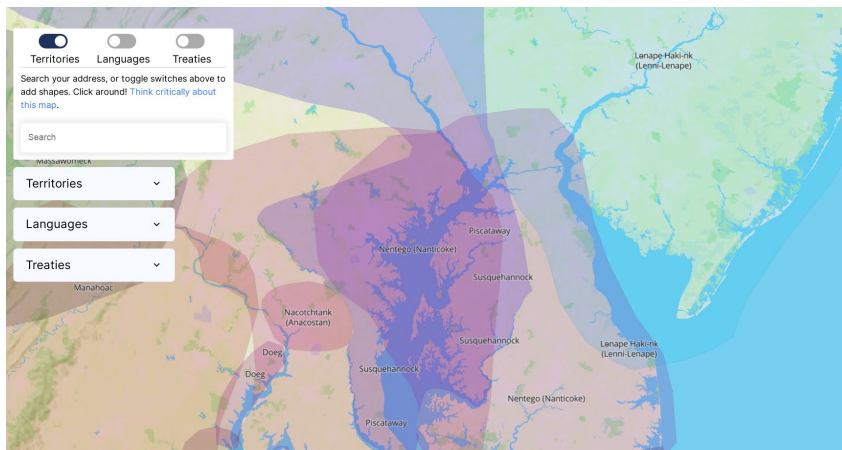
Figure 15. Climate change and politics (The Economist 2020)

Topography of the Brandywine-Christina



Northeast Brandywine Riverfront U.S. EPA Brownfields Area-Wide Plan X





1609 – H. Hudson runs aground

FOUR STATES SIGN DELAWARE PACT

President Joins in Approving Vast Program for Basin Backed by Governors

COMMISSION IS SET UP

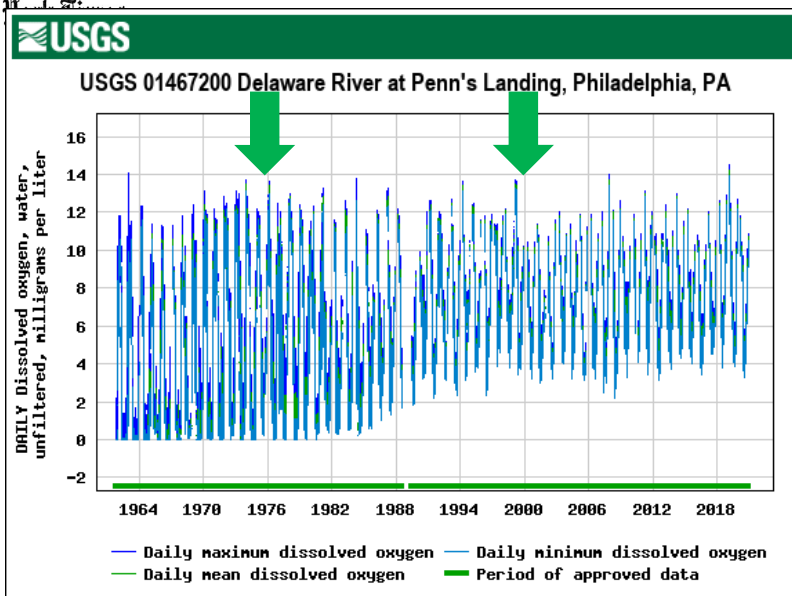
Developing of River Valley Will Use, Conserve and Protect Vital Supply

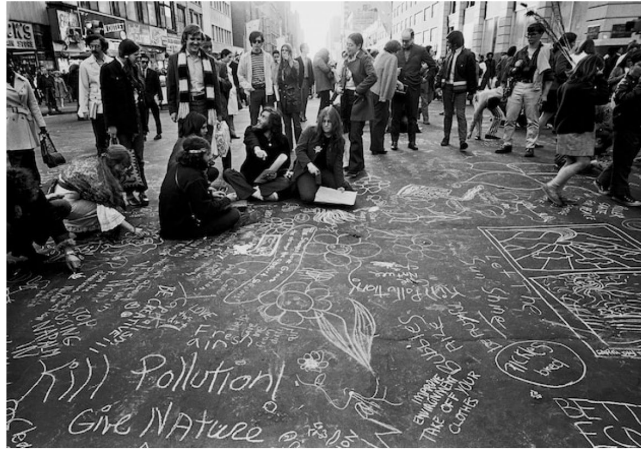
By RUSSELL BAKER
Special to The New York Times.



FRIDAY, NOVEMBER 3, 1961

The New York Times





Some 20 million people took part in the first Earth Day protests held across the United States on April 22, 1970. In New York City, the streets near Union Square Park were turned into an "ecological carnival" in one of the largest demonstrations the city had seen in decades. PHOTOGRAPH BY SANTI VISALLI, GETTY



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Water Resources Research Act Program



- HOME
- CURRENT BUDGET JUSTIFICATION
- PRIOR BUDGET JUSTIFICATIONS
- AUTHORIZATIONS**
- PERFORMANCE MEASURES

Authorizations

Water Resources Research Act Program (WRRAP) activities are conducted under the authority of various pieces of legislation. Many of the primary authorizations that allow the USGS and WRRAP to serve the American people are listed below, along with descriptions of either how the authorization relates to USGS or what WRRAP activities are performed under a particular authorization.

General USGS Authorizations

The ORGANIC ACT OF MARCH 3, 1879 (43 U.S.C. 31 et seq.) that established the Geological Survey as amended (1962); and restated in annual appropriation acts. This section provides, among others, that the Geological Survey is directed to classify the public lands and examine the geological



Marchers taking to the streets in Washington. Hillary Seiff for The New York Times

Northeast Wilmington Community Plan

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Northeast Wilmington Community Plan
May 23, 2022



REACH Riverside
May 23, 2022

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