

The background of the slide is a photograph of a large, multi-story university building with a series of prominent arches along its ground floor. The building is light-colored, possibly tan or beige. In the foreground, there is a well-maintained garden with a path leading towards the building. The garden features a large bed of pink flowers in the lower portion of the frame. The sky is blue with some light clouds.

Academic Libraries Join the Fight Against Climate Change

**Lisa Spiro and Ashley Fitzpatrick, Rice University
CNI Fall Membership Meeting
December 9, 2020**

Agenda

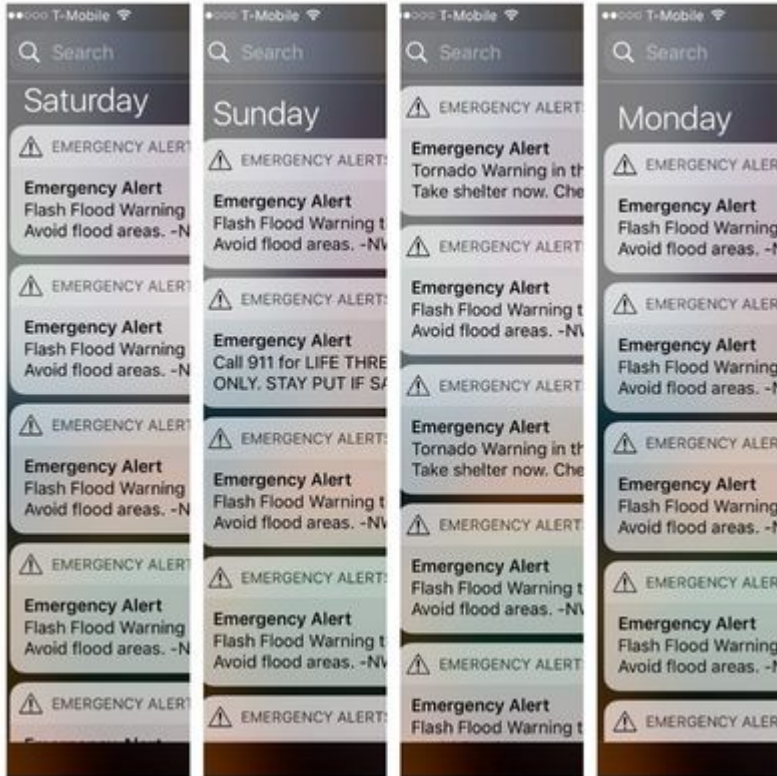
- Introductions
- Why libraries should act on climate change
- How libraries can act on climate change
- Fondren Library Actions
- Question & Answer

POLL:

How active is your organization in addressing climate change?

- Not at all active
- Somewhat active
- Active
- Very active

The Experience of Hurricane Harvey



Brandy McDaniel, "[Emergency Alerts](#)"



W White, "[Rescue boat on Riverview Dr](#)"

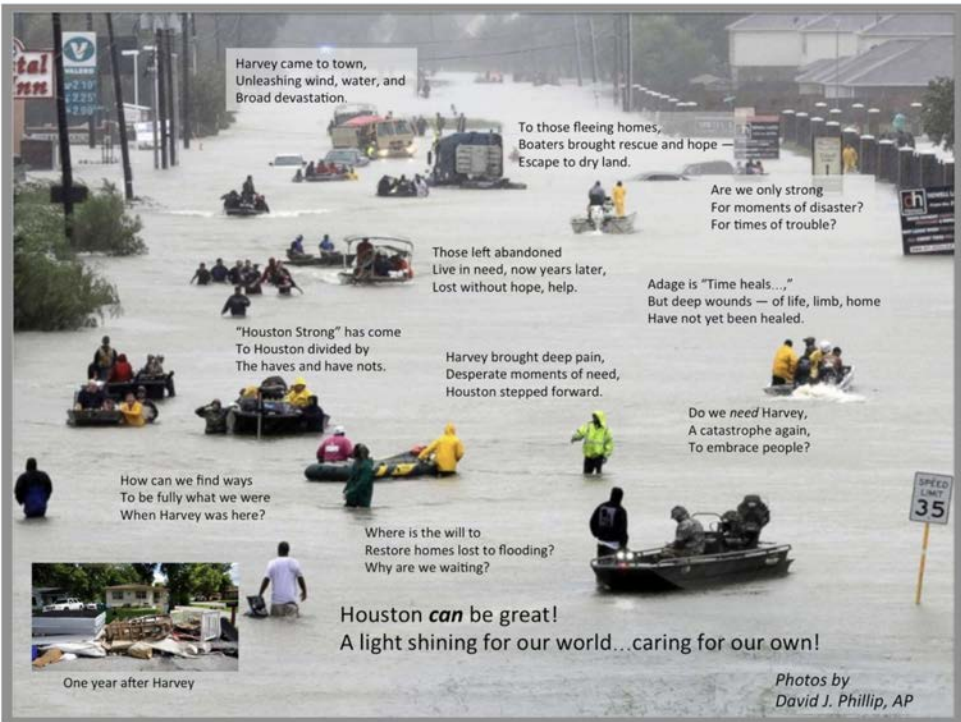
The Aftermath of Harvey



Arun Chaduhary, [Ambulance on Road with Trash Heaps](#)



HOUSTON STRONG HAIKU



Share your memories of Hurricane Harvey.

Where were you? What's your story?

In August 2017, Hurricane Harvey dropped more than 30 trillion gallons of water along the Texas Gulf Coast. This website is a place where you can [find memories](#) and digital artifacts about this historic natural disaster or [share your own](#) stories, images, and audiovisual recordings related to Hurricane Harvey.

Our mission is to collect, preserve, and share digital artifacts associated with the storm, as well as the many stories that Harvey left in its wake—stories of rescue, resilience, and recovery, as well as stories of painful loss and lingering questions.

Read our [About](#) page for more information or [Contact Us](#) with your questions. For past and upcoming events, see our [News and Events](#) page.

Student Experience at Rice University



Learning How to Die in the Anthropocene

BY ROY SCRANTON NOVEMBER 10, 2013 3:00 PM 475



Jeffery DeViscio

<https://opinionator.blogs.nytimes.com/2013/11/10/learning-how-to-die-in-the-anthropocene>

Rice Context

- Over 100 faculty conduct research related to the environment or sustainability
- More students choose environmental academic programs including majors, minors, and certificates
- 10+ student clubs focus on the environment



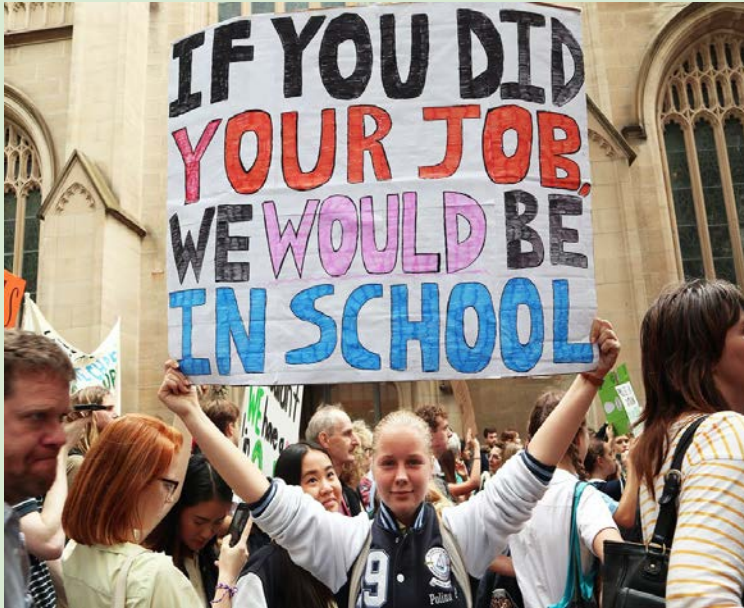
RICE NATURAL SCIENCES

Earth, Environmental and Planetary Sciences



1. **Why** should libraries and archives act on climate change?

We All Must Act on Climate Change

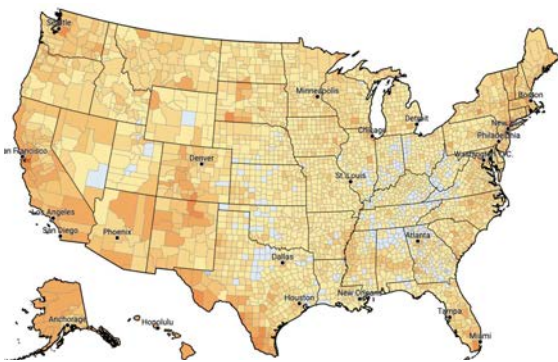


[Sydney Climate March, 2019](#)

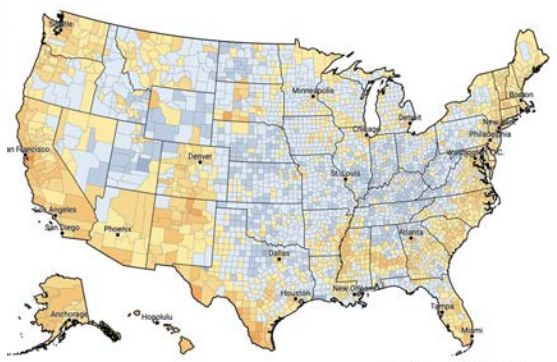
- 2018 IPCC report: limiting warming to 1.5C requires emissions dropping by ~45% by 2030 and reaching net-zero by 2050
- 23% of Fortune 500 cos. have [pledged](#) to be carbon neutral by 2030
- 600+ universities signed the [Carbon Commitment](#)

The Public Needs Good Information on Climate Change

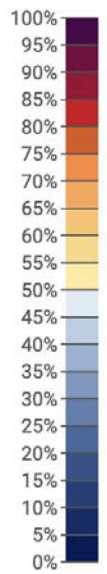
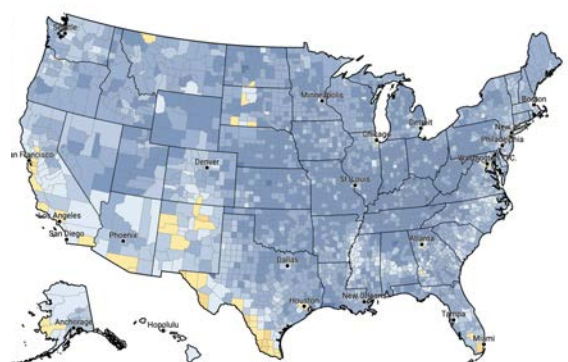
%Adults who think global warming will harm people in the US



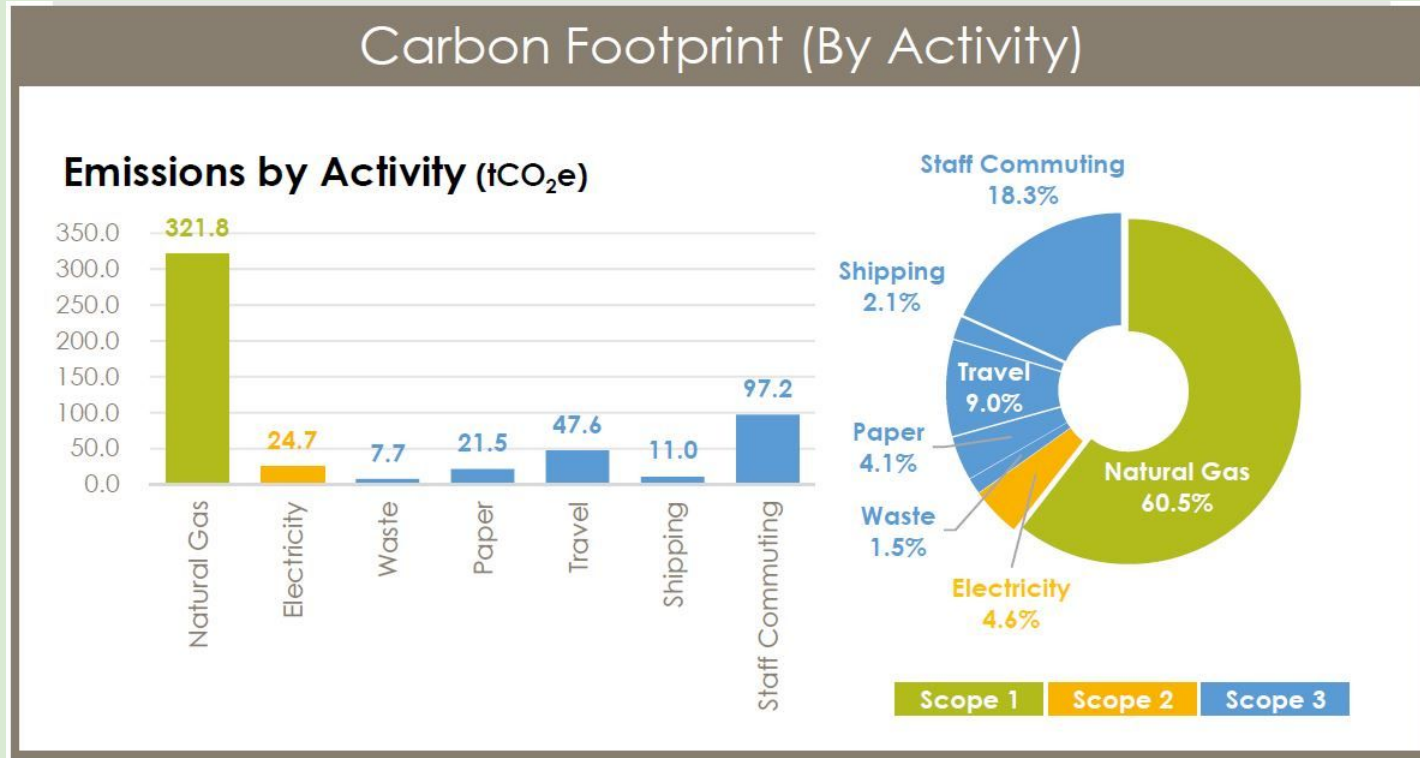
%Adults who think global warming is already harming people in the US, 2020



%Adults who think global warming will harm them personally, 2020



Libraries Impact the Environment



Climate Change Has Already Impacted Libraries

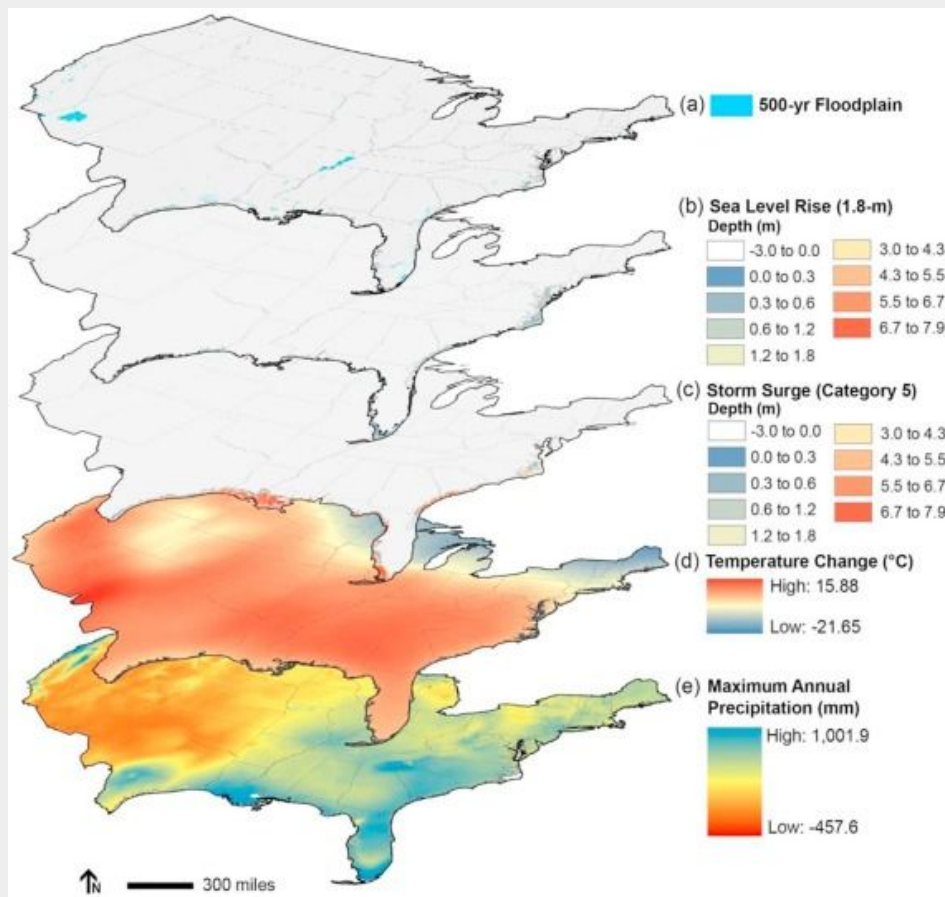


[Houston Public Library](#) after Hurricane Harvey

Libraries & Archives Face Future Risks from Climate Change

By 2100:

- **17.7%** of archives are at risk of “future **storm surge plus sea level rise**”
- More than **90%** of archives face a **temperature change over 1°C**, with “**7.5%** of sites likely to change by **10 °C**”



Mazurczyk, T., N. Piekielek, E. Tansey, and B. Goldman. “[American Archives and Climate Change: Risks and Adaptation.](#)”

Sustainability as a Library Value

- 2019: American Library Association adopts sustainability as a core value
 - Triple Bottom Line
 - “ALA is recognizing that libraries of all types can act as catalysts and inspire future generations to reach solutions that are not only sensible but essential to sustaining life on this planet.” -ALA President Loida Garcia-Febo, 2019



<https://sustain.wisconsin.edu/sustainability/triple-bottom-line/>

POLL:

Which argument is most persuasive in making the case for academic libraries to address climate change?

- Take responsibility for a common crisis.
- Protect their collections.
- Sustainability is a key value for libraries.
- Promote mission to support research and teaching.
- Serve as a community hub for information.
- Other (please enter into chat)



2. How might libraries and archives act on climate change?

Build Resilient Communities

“If we really want to strengthen our communities, and build up our social infrastructure and create more resilient places...maybe we should take a closer look at some of the resources that we already have....So in case the power goes out of a neighborhood, you can go to the library and call it a resilience center....”—[Eric Klinenberg](#)

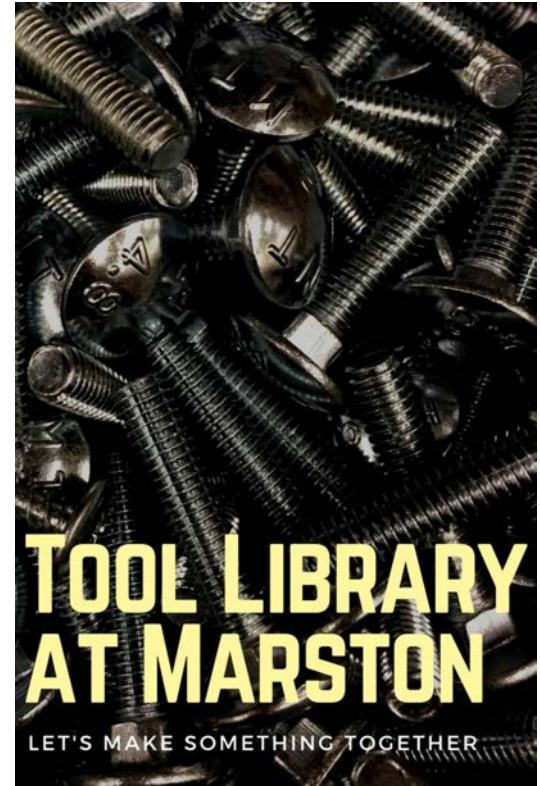
[Harris County Public Library](#) Pop Up Library,
NRG Arena (Hurricane Harvey)



Create Lending Programs: Tools, Seeds, etc.



[Austin Public Library Seed Collection](#)



University of Florida, [Marston Tool Library](#)

Reduce Waste and Resource Consumption

- Green Office Programs
- Composting during peak use
- Packaging reductions and recycling



<https://sustainability.usu.edu/getinvolved/green-office>



<https://library.oregonstate.edu/composting-recycling>

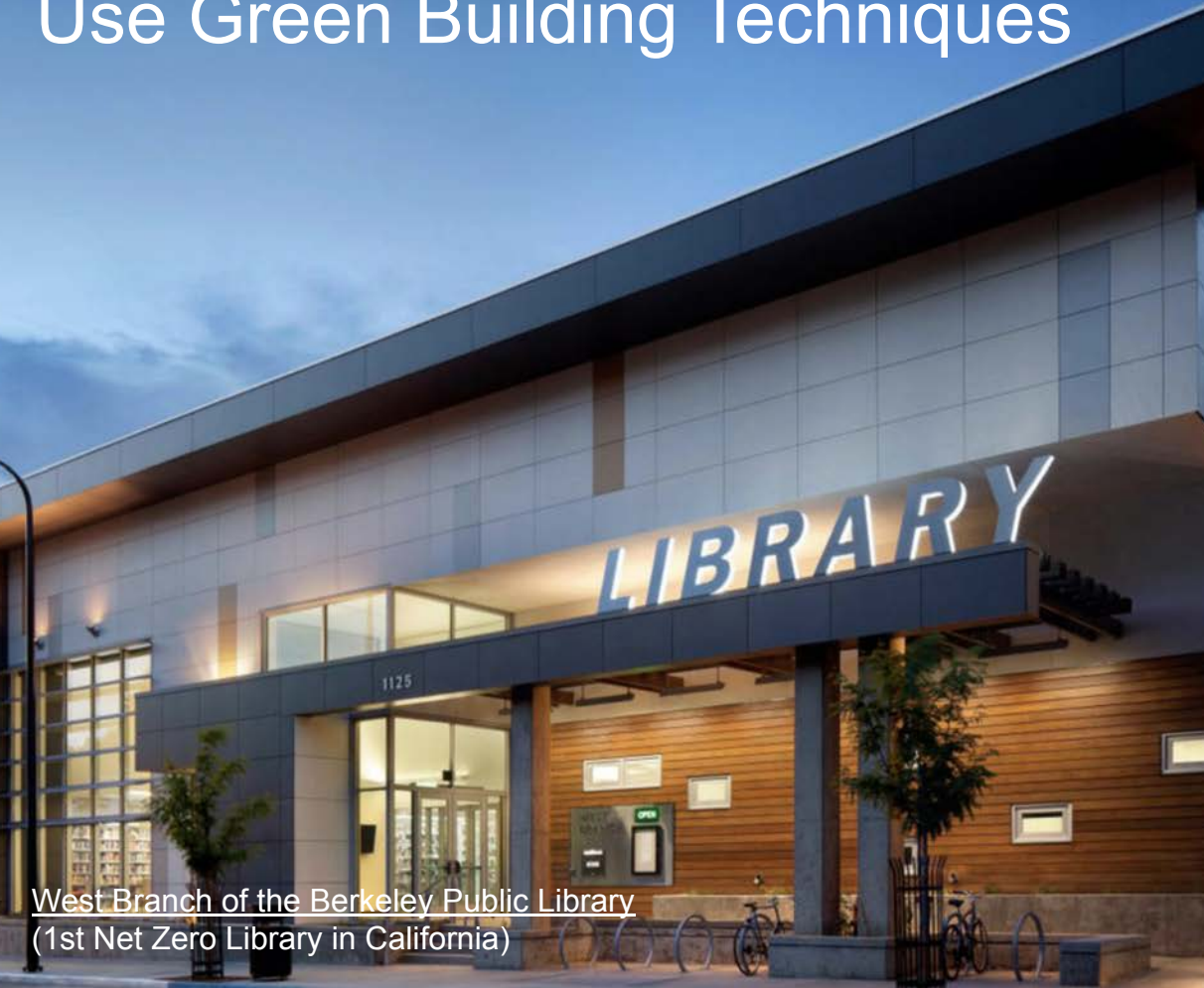
Reduce Carbon Footprint by Shifting to Electronic Resources

- 2020 Fondren Fellows project by James Sanders
- Makes ballpark estimates based on available data and models
- Finds that in general shifting from print to electronic books will reduce carbon footprint

Greenhouse Gas Emissions		Units
Emissions impact of each book acquired	3.36	kgCO2-eq
Emissions impact of each read of physical book	0.13	kgCO2-eq
Emissions impact of each read of online book	0.56	kgCO2-eq
Impact of one year of physical book acquisitions	67,150.00	kgCO2-eq
Impact of one year of online books	166,906.25	kgCO2-eq
Impact of one year of running building	701,415.00	kgCO2-eq
Total Yearly Impact of Library	935,471.25	kgCO2-eq

[Estimate of Library Environmental Impact](#)

Use Green Building Techniques



West Branch of the Berkeley Public Library
(1st Net Zero Library in California)

- Solar thermal collectors & heat pumps
- Daylighting
- Photovoltaics
- Wind chimney
- Proximal to public transit
- No parking
- Garden
- Stormwater management
- Community spaces

Facilitate Public Dialogue on Climate Change



- Group of libraries sponsoring events and activities aimed at helping the community address climate change
- Pivoted to podcast and blog after pandemic

<https://borrowed-time.org/>

Support Sustainability Research & Education

- Collections focused on sustainability
- Research guides
- Sustainability literacy
- Curriculum development

Provide Access to Archival Collections

A sample of handwritten tidal records from Port Arthur, February 1840. The records are organized into columns for date, time, and various measurements. The data is as follows:

Date	Time	1st	2nd	3rd	4th	5th	6th	7th	8th
24	AM	12.46	0.1	0.25	4.5	1.3	SW	2	
	PM	—	—	6.50	4.10	—	SW	2	
25	AM	1.7	7.0	7.10	3.7	3.5	SW	4	
	PM	1.30	5.5	7.32	4.6	—	SW	2	
26	AM	1.55	6.6	8.0	3.4	3.2	SW	2	
	PM	2.20	5.3	8.25	4.6	—	E	1	
27	AM	2.46	6.7	8.47	3.4	3.3	E	1	
	PM	3.12	5.2	9.12	4.6	—	S	1	
28	AM	3.36	6.1	9.37	3.3	3.3	NE	2	
	PM	4.0	5.2	10.0	4.6	—	NE	2	
29	AM	4.25	6.0	10.26	3.4	3.4	NE	2	
	PM	4.52	6.1	10.57	4.7	1.6	NE	1	

The records are signed by James J. Sappers, D.C.G.

A sample of tidal records from Port Arthur, February 1840 ([National Archives of Australia](#))

Old Weather

Help scientists transcribe Arctic and worldwide weather observations recorded in ship's logs since the mid-19th century.



[Old Weather](#): archived weather data from 19-20th C. ship logs

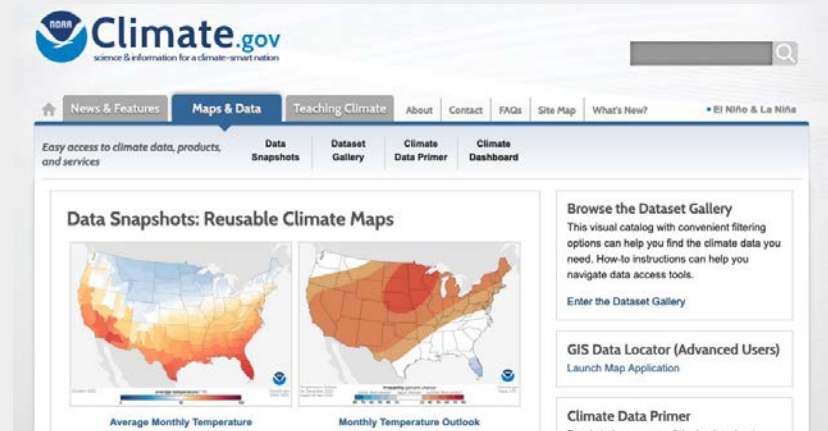
Support Open Science in Climate Research

“Given that global efforts to combat climate change impacts will require both rapid collaborative research and communication among academics, policymakers and the public, climate change research is in urgent need of strong OS stewardship.”

(Tai & Robinson, 2018)



<https://www.icos-cp.eu/>




What roles might libraries play in future climate crises?



[Bookends Scenarios](#) (2009)

- Shift to local in face of climate catastrophes and pandemics
- Focus on saving energy, reuse, and collective action
- Decline in use of tech
- Re-emergence of print
- Libraries as local information hubs & refuges

The image shows the Fondren Library building, a large, light-colored structure with a central tower and a row of arches at the base. A statue is positioned on top of the central tower. In the foreground, there is a garden with pink flowers. The sky is blue with some clouds.

3. Fondren Library's Climate Actions

Developing a Sustainability Plan

- Student-led research through Fondren Fellows
- 5 key focus areas
- Successes so far



Spaces



Resource Consumption



Education & Research



Collections & Archives



Engagement

Hiring Library Eco-Rep

- Extends existing program of “student-led peer-to-peer environmental outreach”
- Responsibilities include:
 - Research sustainability initiatives
 - Provide training
 - Conduct outreach
 - Coordinate with campus eco-reps

Sustainability Spotlight



Ashley Fitzpatrick

[Rice Sustainability Spotlight](#)

Creating Green Team



Responsibilities:

1. Implement, update, and steward Fondren's sustainability plan;
2. Assess implementation progress;
3. Communicate priorities and progress;
4. Educate library community on best practices;
5. Foster a culture of environmental responsibility;
6. Advocate for sustainable practices in current and future operations & future renovations of Fondren Library.

Resilient Communities




LIBRARIES RESPOND TO CLIMATE CHANGE

- 20 public & 5 academic libraries awarded \$1000 by [ALA](#) for programs and events that “engage their communities in programs and conversations that address the climate crisis.”
- Required to screen one film and run two other programs
- Rice’s focus: “Advancing Environmental Justice and Intersectionality in Houston”

“Justice and Transformation” Panel

- Featured Houston women on local climate problems and their roles in engaging the community in solutions
- Drew diverse audience of about 50 people from across Rice, Houston, and beyond



**Justice and Transformation:
Houston Women on Climate Action**

**Wednesday, October 28
6 p.m.**

From wildfires to floods, the consequences of climate change are increasingly evident, and underserved communities often face the most severe impacts.

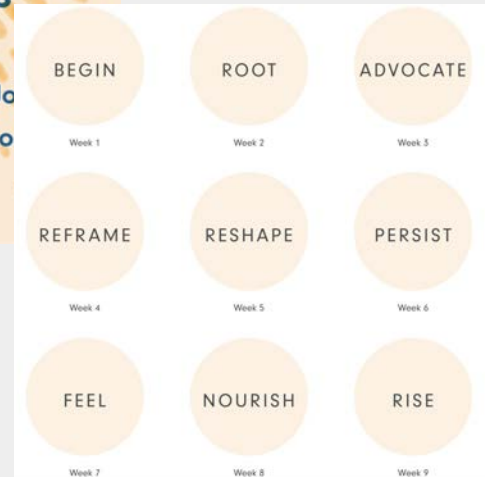
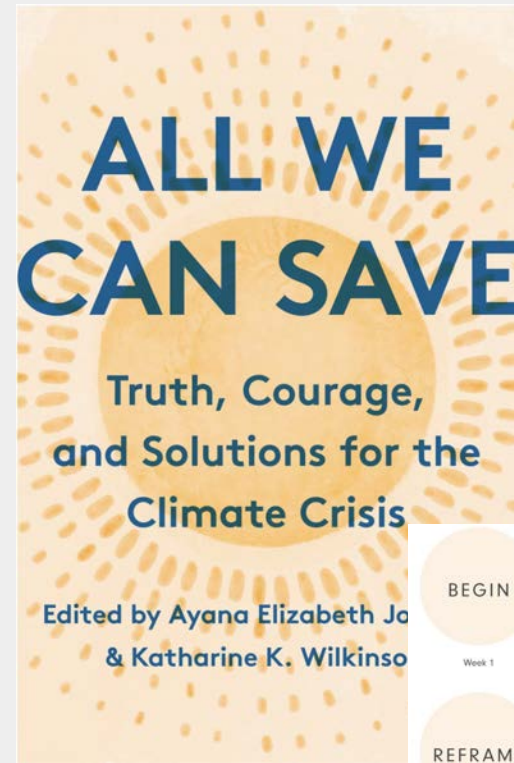
Inspired by Dr. Ayana Elizabeth Johnson and Dr. Katharine Wilkinson's *All We Can Save: Truth, Courage, and Solutions for the Climate Crisis*, this virtual panel discussion will bring together four Houston women whose work addresses climate justice:

- Dr. Denae King (TSU),
- Dr. Cymene Howe (Rice),
- Amy Catherine Dinn (Lone Star Legal Aid),
- Iris Gonzalez (Coalition for Environment, Equity & Resilience (CEER))

Join us on October 28, 2020 for a discussion about gender, climate change, and environmental justice. Co-sponsored by Rice's Fondren Library, Rice's Center for Environmental Studies, Houston's Citizens' Environmental Coalition (CEC), and Rice Environmental Society.

All We Can Save Book Circles

- Focus on collection of essays and poems about the climate crisis by women activists, scientists, and artists
- Uses guides developed by book's co-editors
- Discussions connect members of Rice community, raise awareness of climate change, and provide inspiration for action



Communities Responding to Extreme Weather (CREW) Climate Resilience Hub

- Provide help to community before, during & after extreme weather event
- Provide information about extreme weather
- Host annual event on extreme weather



Rev. Vernon Walker (CREW), “Finding Hope in Extreme Weather”

In Process: Partnership for Environmental Data Literacy



Bridgette Murray looks at an air quality monitor that was installed in her backyard in Houston's Pleasantsville neighborhood in March 2019. (Dan Joyce/Environmental Defense Fund)

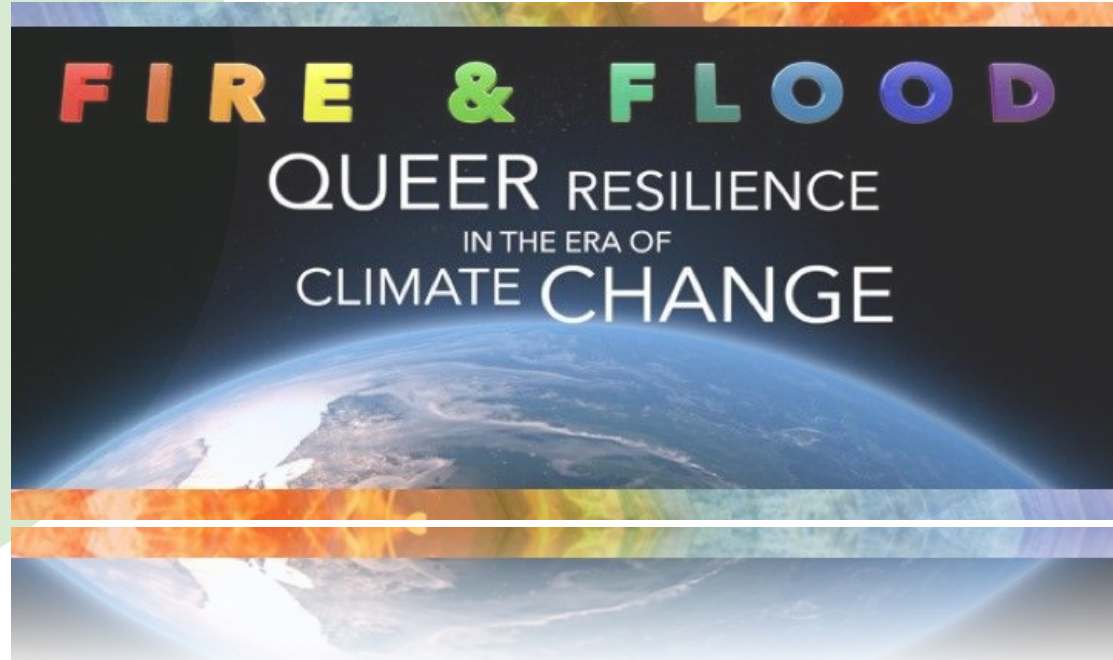
[Washington Post](#) (12/7/20)

- Builds on prior collaboration with Kinder Institute to provide civic data training to young people ([Civic Switchboard](#))
- Partnering with [ACTS](#) (frontline community group) and local middle school to help students understand air quality monitoring data



Upcoming: Screening *Fire and Flood*

Partner with **Citizens' Environmental Coalition** Houston Green Film Series and Rice environmental organizations



Elements of Success



- Engaging the expertise and energy of students
- Pursuing diverse partnerships
- Understanding local needs
- Including the library's different functions (e.g. space, research, teaching and learning)
- Starting small, then building

<http://news.rice.edu/2020/10/19/fondrens-green-team-hosting-sustainability-focused-events-thanks-to-ala-grant/>

POLL:

Which strategies seem most promising for libraries to address climate change?
(Pick top 2)

- Facilitating public dialogue
- Helping communities be resilient
- Reducing waste & resource use
- Creating lending programs
- Shifting to electronic collections
- Using green building techniques
- Supporting sustainability research
- Providing access to archives of climate data
- Supporting open science
- Other (please enter into chat)

4. Q&A / Discussion:

1. What is your organization doing to address climate change?
2. How might we act collectively to fight climate change?
3. How does sustainability fit into the mission of academic libraries?
4. What questions do you have for us?

Contact Information

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Note: A few of the images in this presentation have been switched from the video version; in addition, a typo has been corrected.

Resources

ALA, [Report of the ALA Special Task Force on Sustainability](#) (2018)

ALA, [Resilient Communities: Libraries Respond to Climate Change: A Programming Guide for Libraries](#) (2020)

ALA [Sustainability Round Table](#)

Charney, Madeleine, and Petra Hauke. “Global Action on the Urgency of Climate Change: Academic and Research Libraries’ Contributions.” *College & Research Libraries News* 81, no. 3 (March 3, 2020). <https://doi.org/10.5860/crln.81.3.114>.

[IFLA Green Library Award](#)

IFLA, [Sustainability is Libraries' Business: Libraries and Sustainable Development](#) (2019)