

Welcome to the

CLIMATE READY DC

and

IVY CITY

Climate Resilience Strategy

2.0

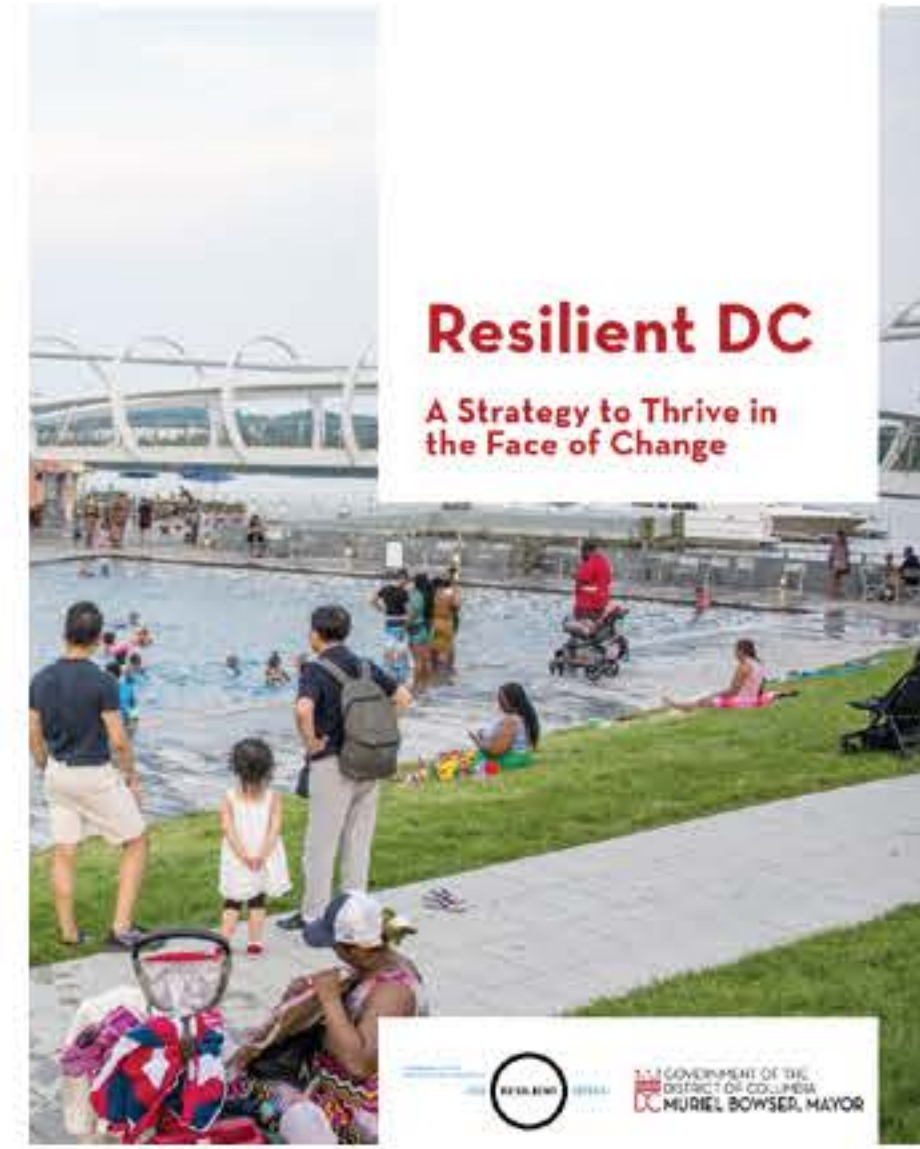
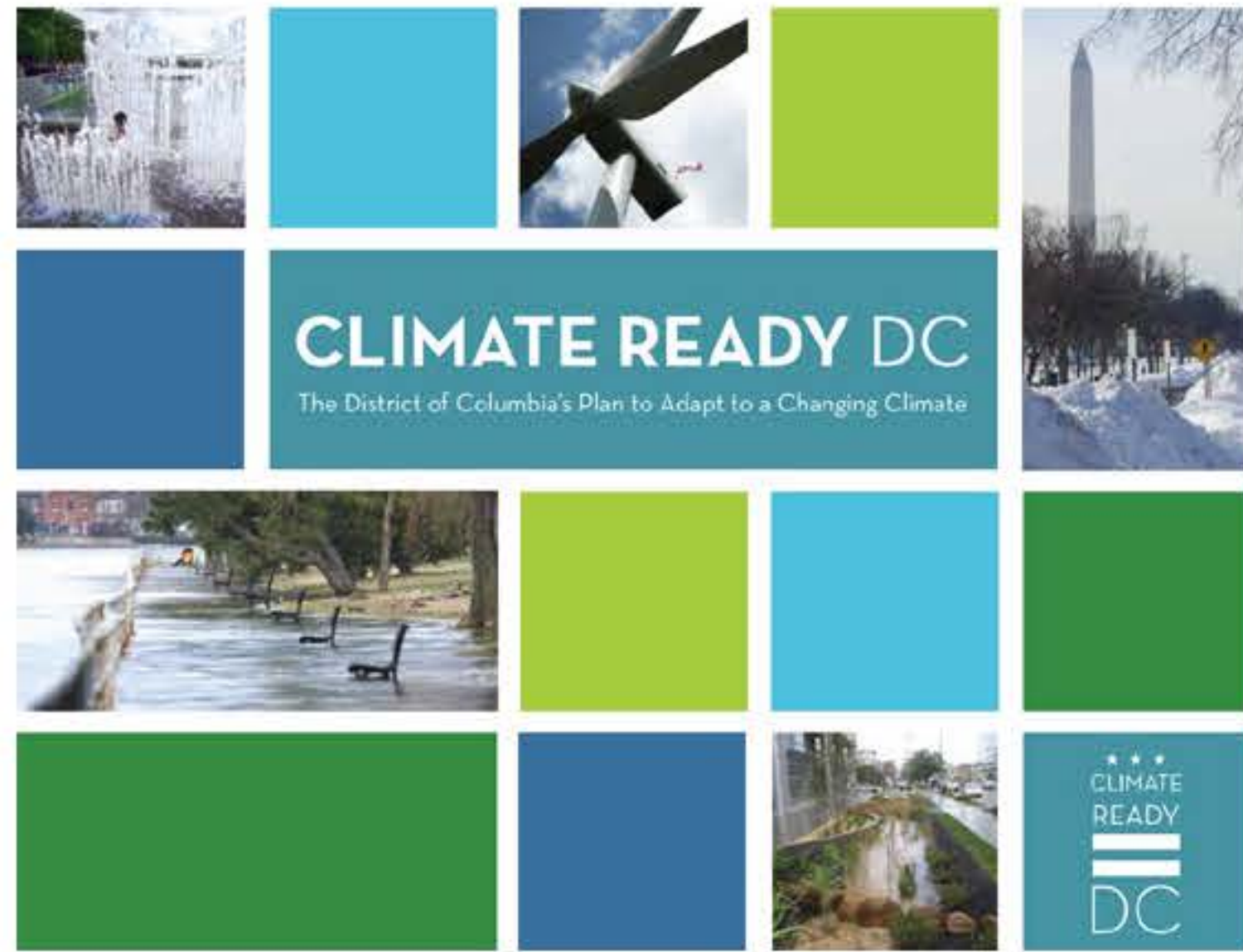
Open House



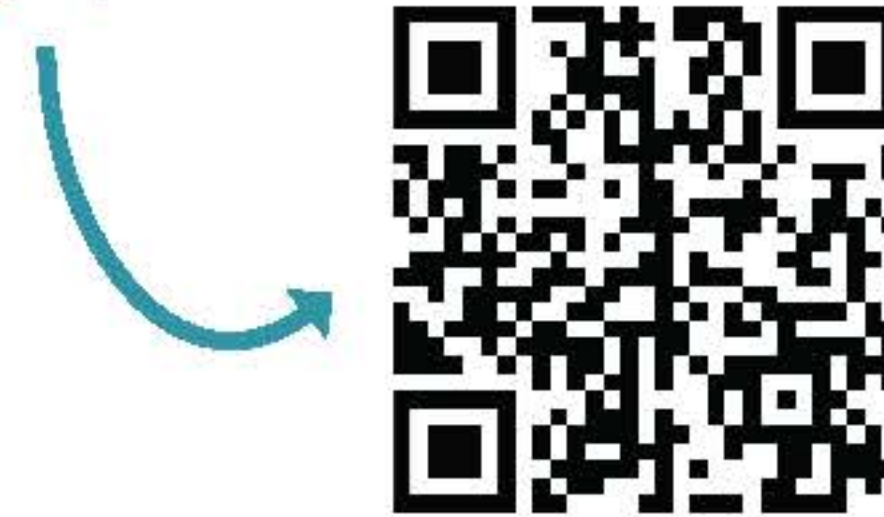
Visit every station to win a prize!



What is Climate Ready DC?



Annual progress reports



sustainable.dc.gov/progress



What is Climate Ready DC?

Climate Ready DC is the District's plan to adapt to a changing climate. While the District is doing its part to reduce greenhouse gas emissions, we are already seeing the impacts of climate change and must be prepared for them.

Climate adaptation means taking action today to change, transform or renovate systems in order to prepare people, homes, communities, businesses and infrastructure for the potential impacts of climate change.

Climate Ready DC was published in 2016.

What is Resilient DC?

Driven by the 100 Resilient Cities Network, a Rockefeller Foundation project, this strategy provides a roadmap for building greater resilience to the shocks and stressors that threaten the District.

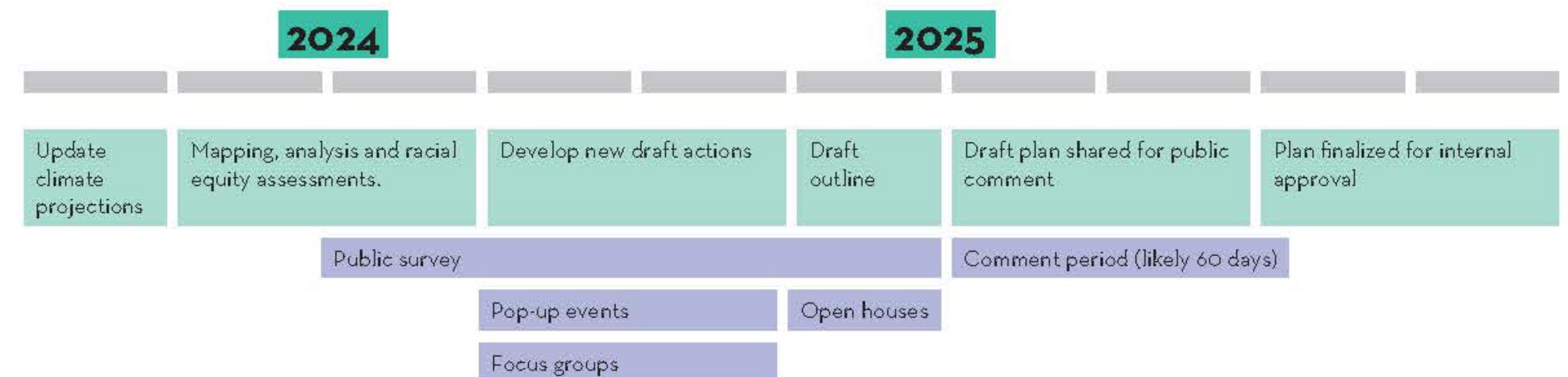
Resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and thrive no matter what kinds of chronic stresses and acute shocks they experience.

Resilient DC was published in 2019.

Why are we updating the plan?

- Incorporate new climate science
- Focus on District residents and businesses
- Apply a racial equity lens
- Institutionalize action throughout public and private sector
- Clarify Climate Ready DC's role compared to other plans
- Develop metrics that will more accurately show progress

Timeline



Ivy City Climate Resilience Strategy

introduction

What is the Ivy City Climate Resilience Strategy?

The DC Department of Energy and Environment (DOEE) is working with the Ivy City community to create a Climate Resilience Strategy that addresses rainwater flooding and extreme heat.

The Strategy will include the design of a network of flood and heat mitigation projects to increase climate resilience while also providing additional benefits for the community, such as improved park space, safer streets, and better air quality.

The integrated network of flood and heat mitigation projects will be designed to protect the community from flooding during extreme rain events, while also reducing temperatures in the summer by providing shade and greenery.

What do we mean by “resilience”?

For this project, resilience refers to the ability of the Ivy City community to withstand, adapt to, and recover from the effects of climate variability and extremes. Community resilience involves understanding and addressing both immediate and long-term risks posed by climate change so that individuals, community groups, and the District can take appropriate action to reduce the vulnerability of people, places, and infrastructure.

Project partners:



Who is involved in the process?

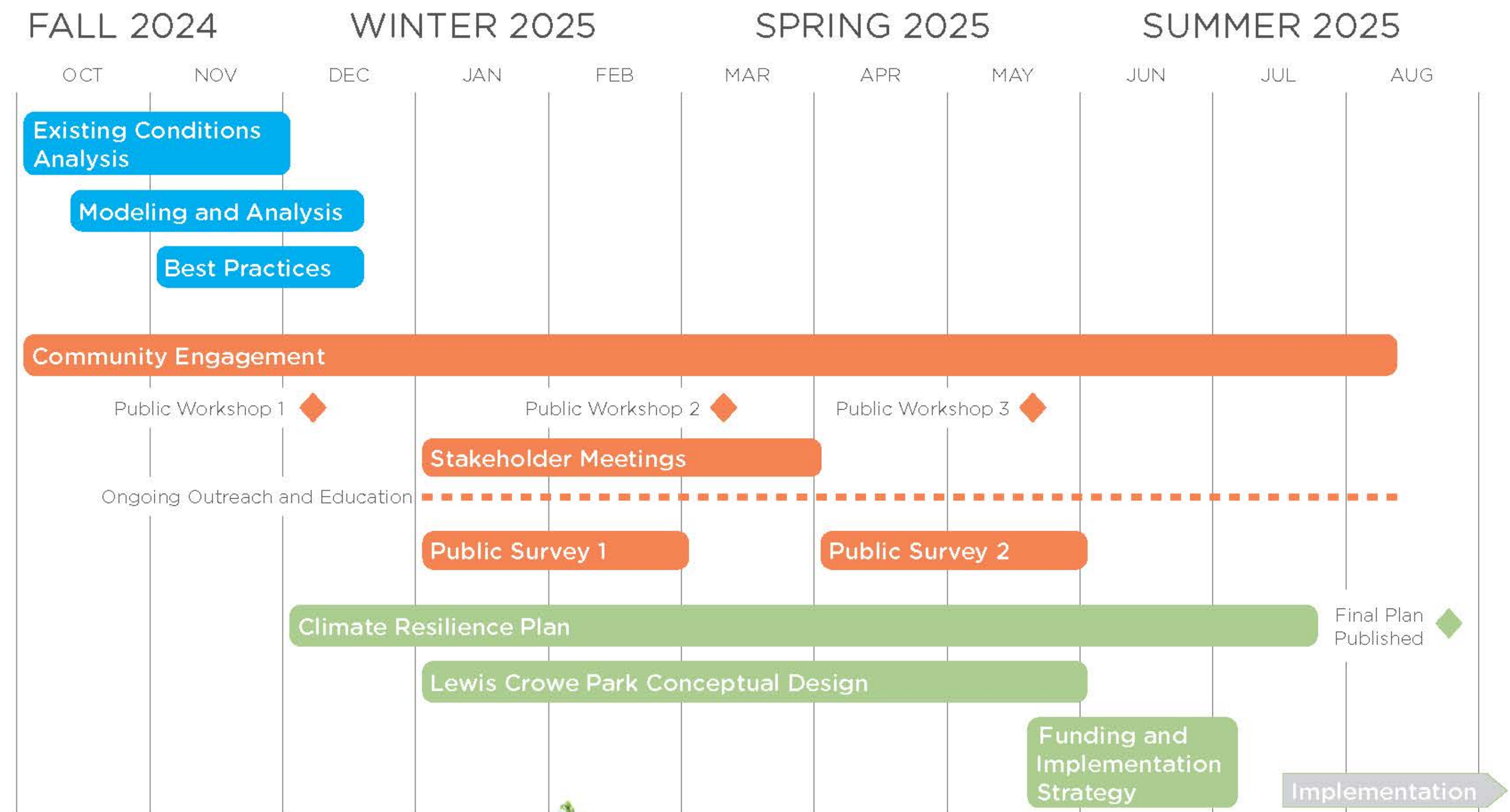
The Ivy City Resilience Strategy is a collaborative process between District agencies and the local community.

The project team includes DOEE and their consultant team: Ramboll, Empower DC, and Moody Graham. The Strategy also depends upon input from community members like you! We need direction, feedback, and guidance from the community to ensure that the Strategy is based on your experiences, responds to challenges that you experience, and achieves your vision for a more resilient Ivy City.

What are the key outcomes?

The key outcomes of the Climate Resilience Strategy will include:

- Defined resilience vision and goals based on community input.
- Assessment of existing flooding, extreme heat, and social vulnerability.
- Flood and heat mitigation network plan, including diagrammatic design for streets, open space, and parking lots.
- Conceptual designs for improvements to Lewis Crowe Park.
- Funding and implementation strategy to facilitate the vision for a more resilient Ivy City.
- Inclusive, accessible, and equitable community engagement throughout the planning process and beyond.



How is the climate changing?

What is climate change?

Changes observed in Earth's climate since the mid-20th century are driven by human activities, particularly fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere, raising Earth's average surface temperature.

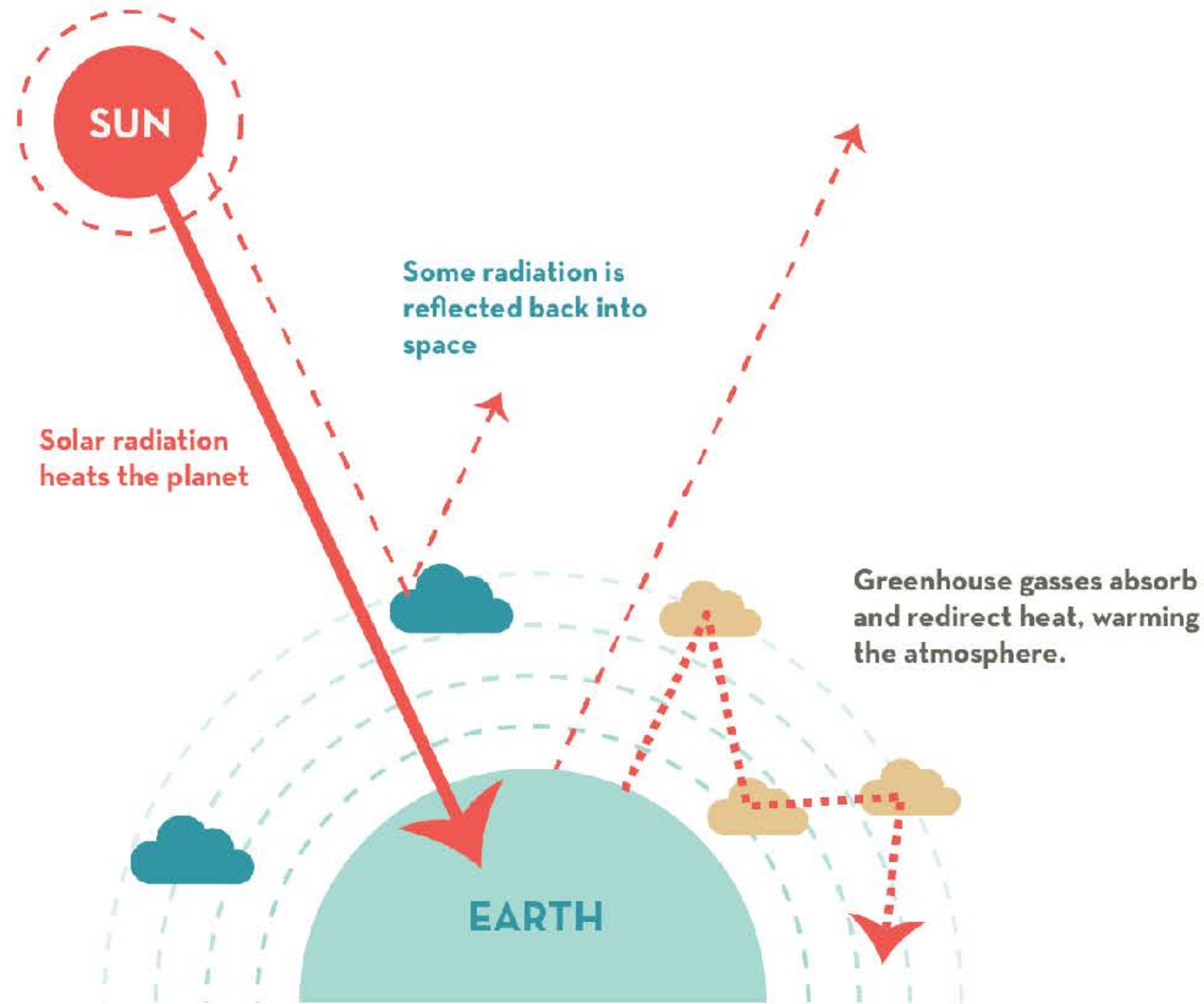
Natural processes, which have been overwhelmed by human activities, can also contribute to climate change, including internal variability (e.g., cyclical ocean patterns like El Niño, La Niña and the Pacific Decadal Oscillation).

"Climate change" and "global warming" are often used interchangeably but have distinct meanings. Similarly, the terms "weather" and "climate" are sometimes confused, though they refer to events with broadly different spatial- and timescales. Global warming is the long-term heating of Earth's surface observed since the pre-industrial period (between 1850 and 1900) due to human activities, primarily fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere. This term is not interchangeable with the term "climate change."

Impacts of a changing climate

The changing climate will have enormous impacts on the District of Columbia. Changes can already be felt, and changes in coming decades will be enormous.

DOEE received updated science to inform the District of Columbia's Climate Change Projections and Scenario Development, which you can read online using the QR code and URL below.



HOTTER



Annual average and summer temperatures will continue to increase. Heat waves will become more intense and will last for longer periods of time.

WETTER



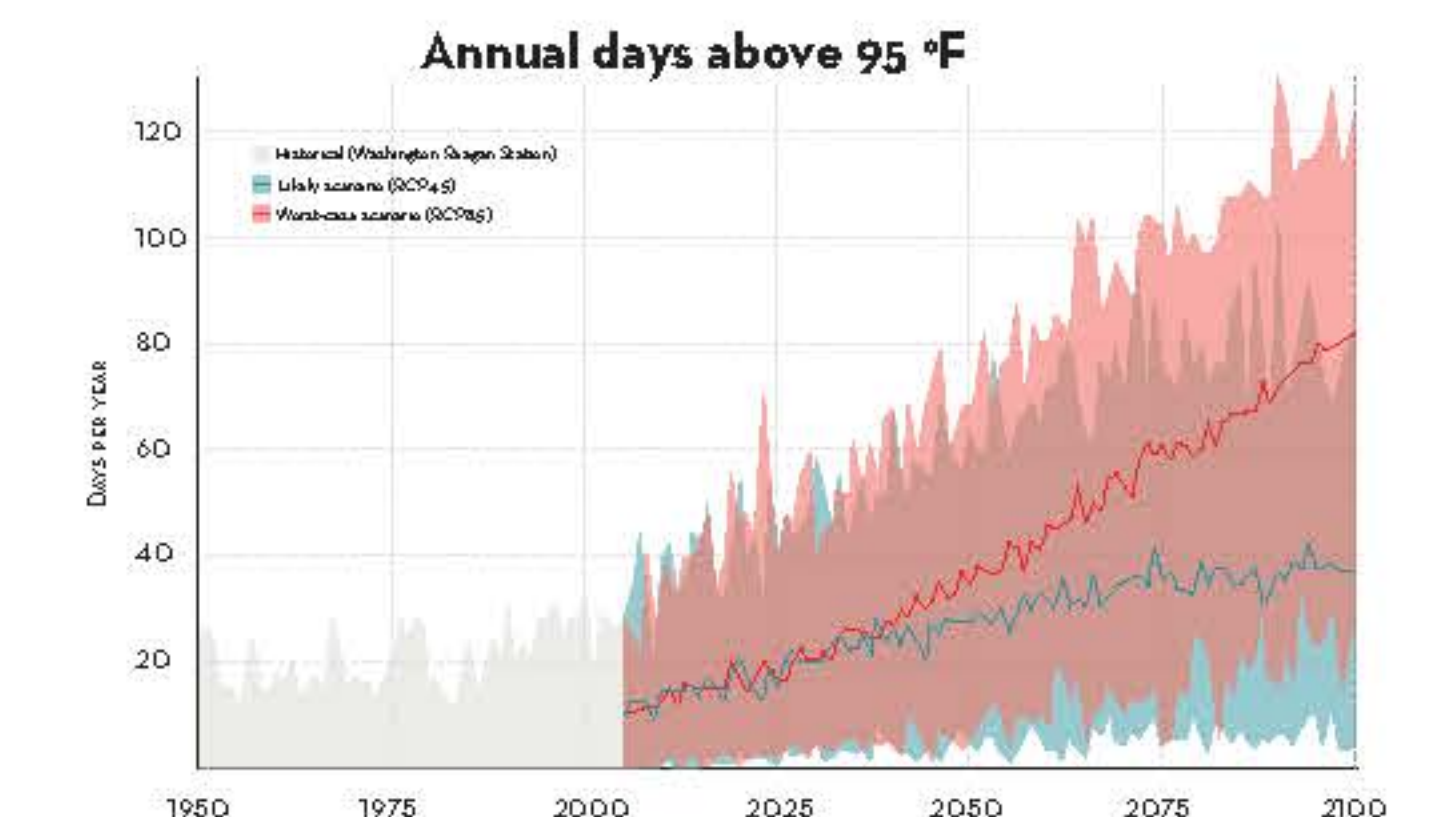
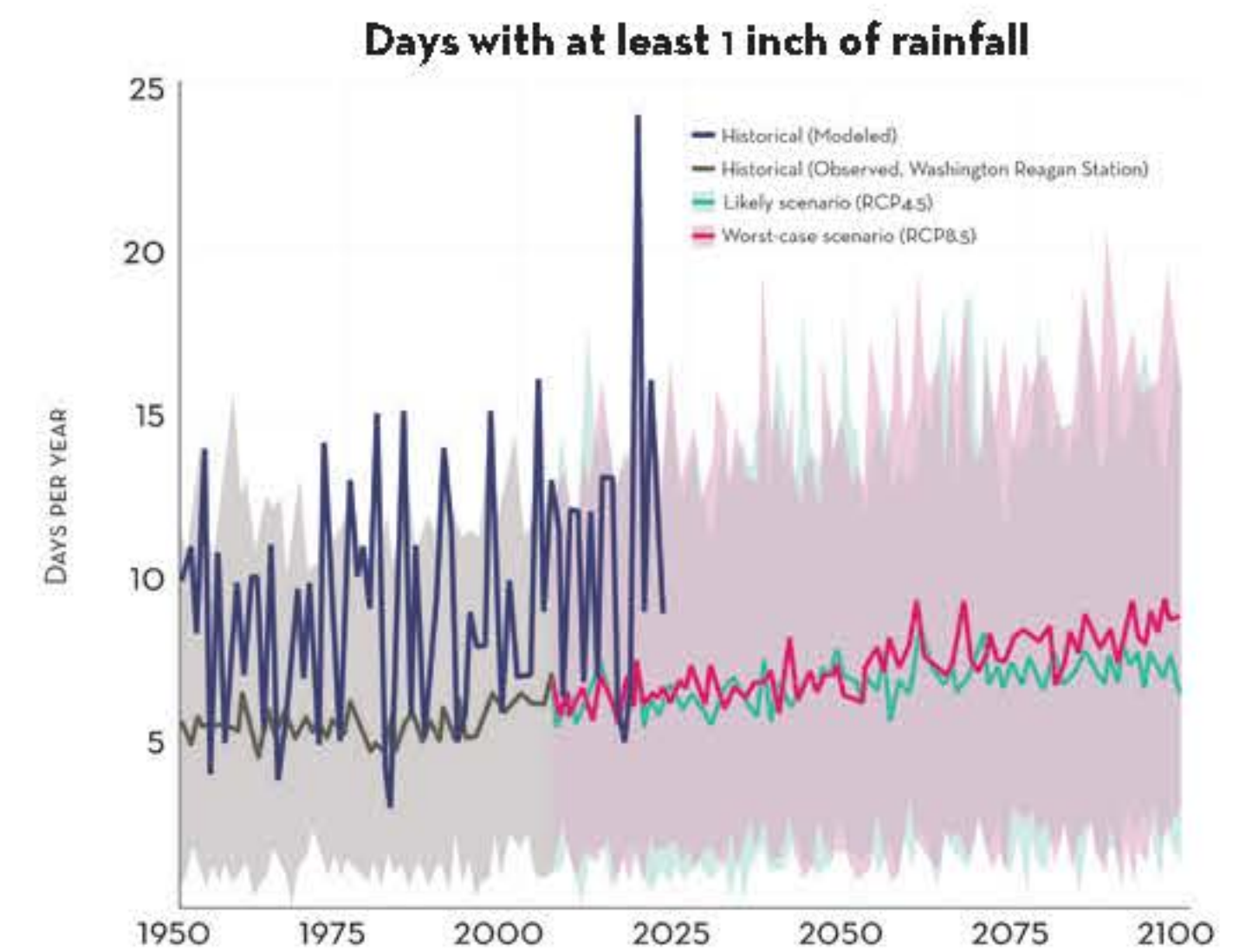
The frequency and intensity of extreme precipitation events are expected to increase.

WILDER

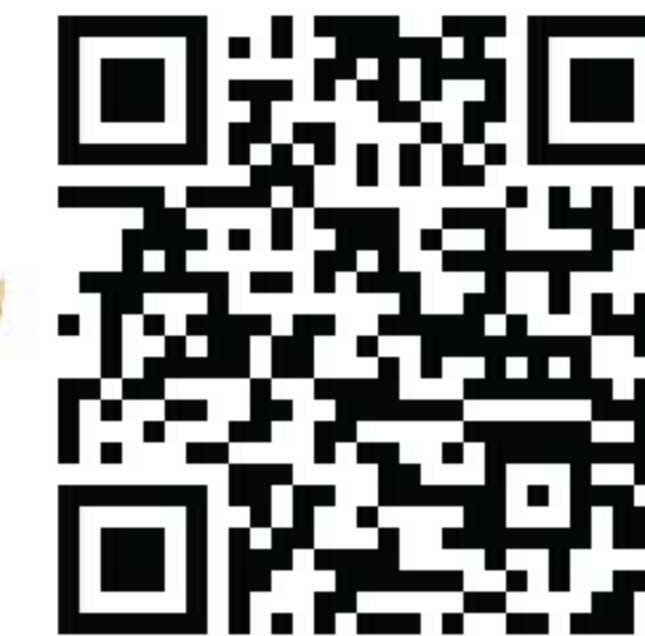


Sea level rise is expected to continue and will accelerate in the future due to global ice sheet melting.

The intensity of extreme storms like derechos and hurricanes is likely to increase. Unseasonably warm or cold days in the shoulder seasons will become more likely.



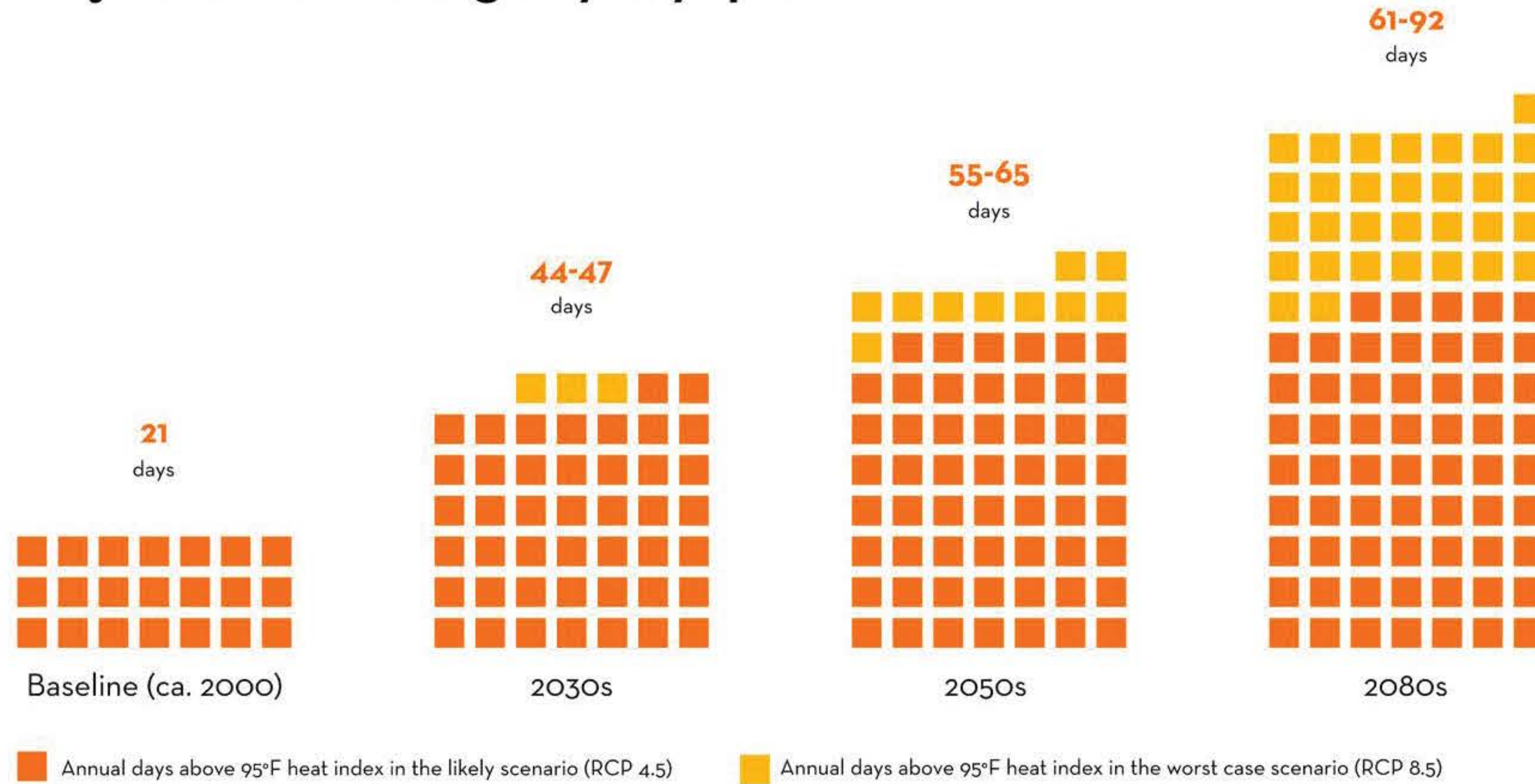
More climate science



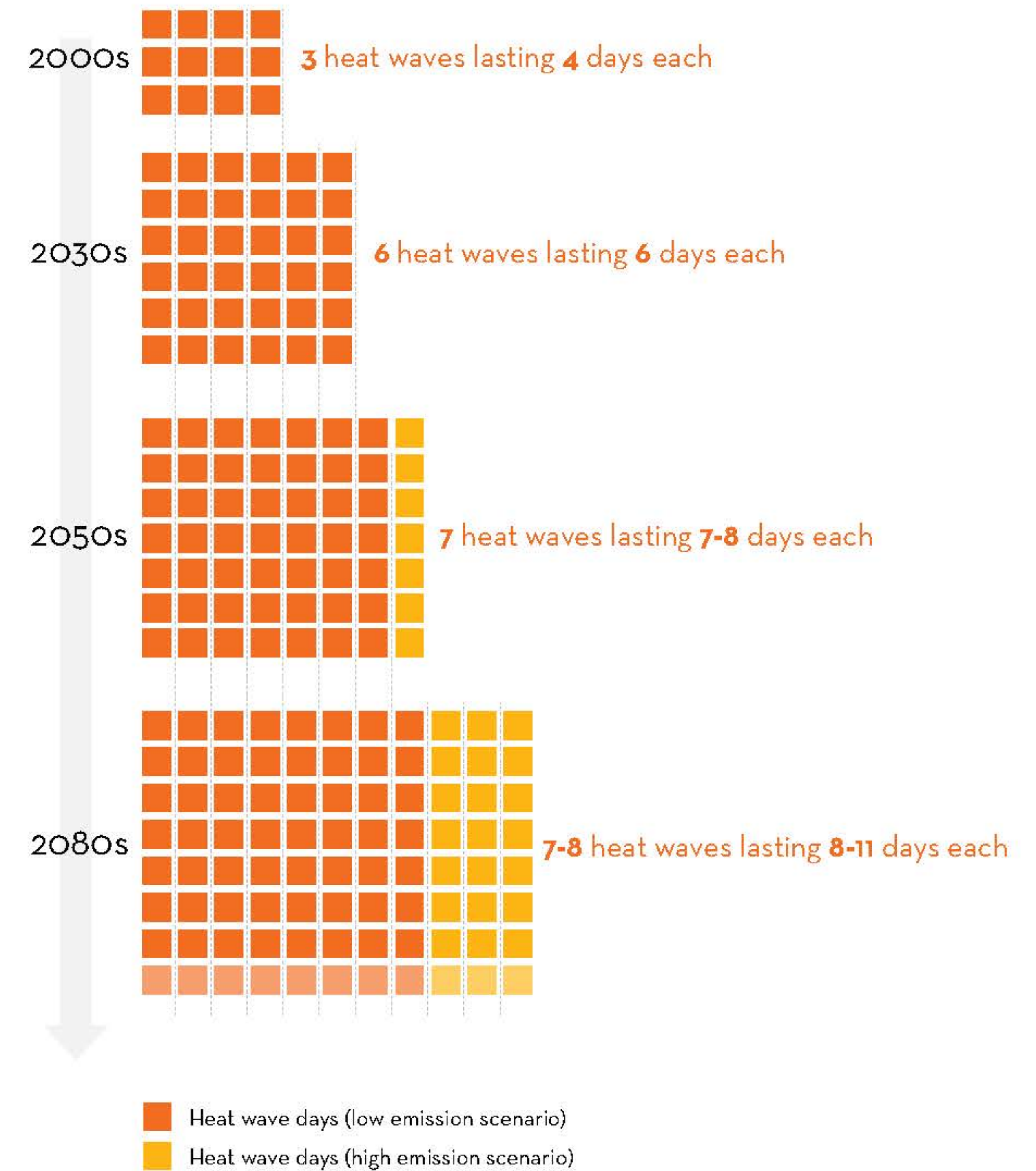
doee.dc.gov/node/110407

How is the climate changing?

Projected Heat Emergency Days per Year



Average Number and Length of Heat Wave



Have you felt heat getting worse?

- Use a sticky note:
- How has the heat changed in recent years for you?
 - How is the heat impacting your life?

How do you cope with the heat?

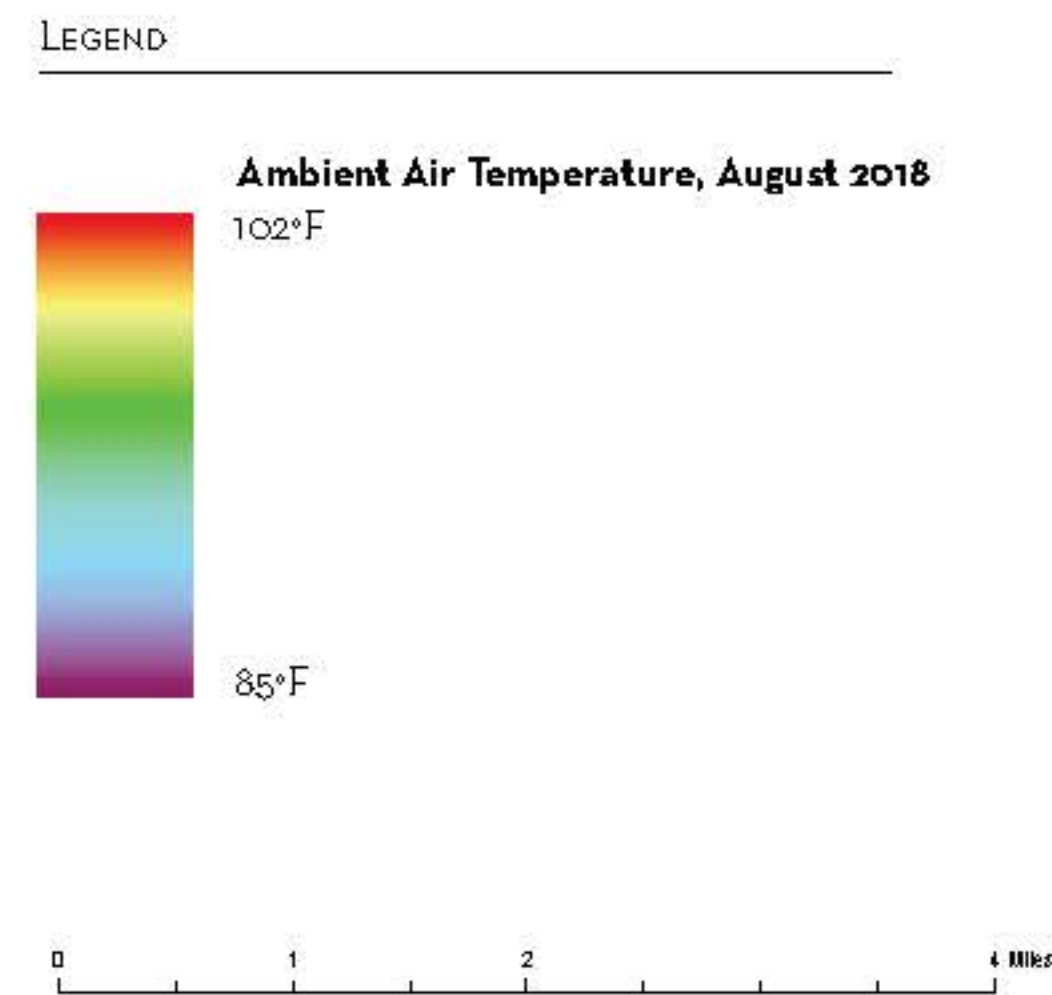
- Use a sticky note:
- How do **you** keep cool in the heat?
 - What can the **DISTRICT** do to help you keep cool? What kind of changes to your neighborhood would help you keep cool?

Extreme Heat

The heat hits differently, depending on where you are.

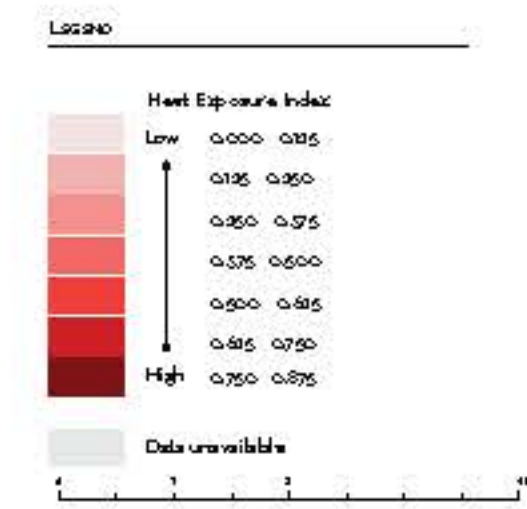
This map shows temperatures measured on a late afternoon in August. You can see a difference of almost 17°F between some neighborhoods!

This urban heat island effect makes areas with more pavement and buildings and fewer trees hotter than places with more trees and natural land cover.



The built environment increases heat risk exposure.

This map shows the Heat Exposure Index, which combines measurements of air temperature, tree canopy cover, and impervious surface area to evaluate which areas of the District are most exposed to heat.



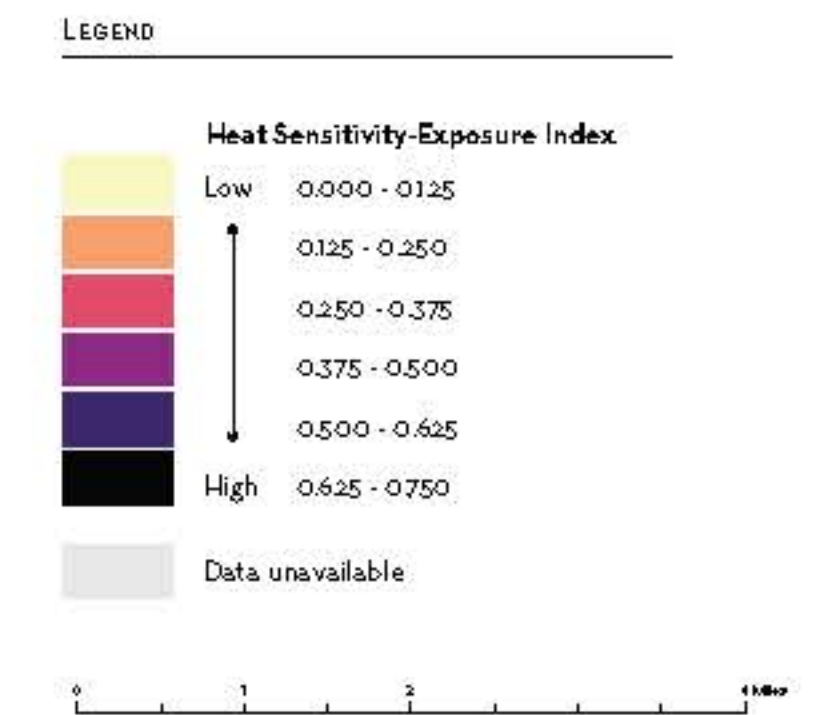
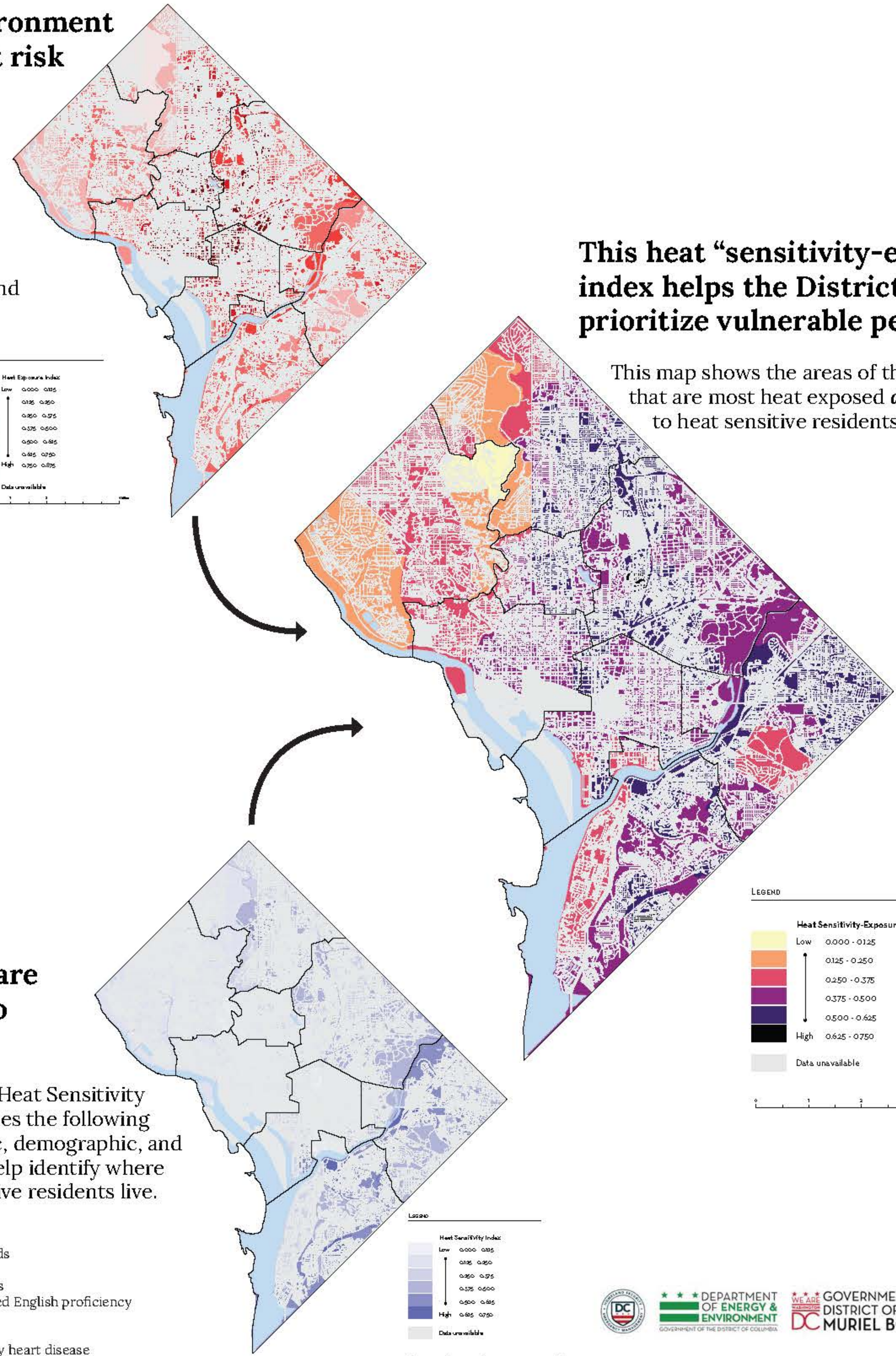
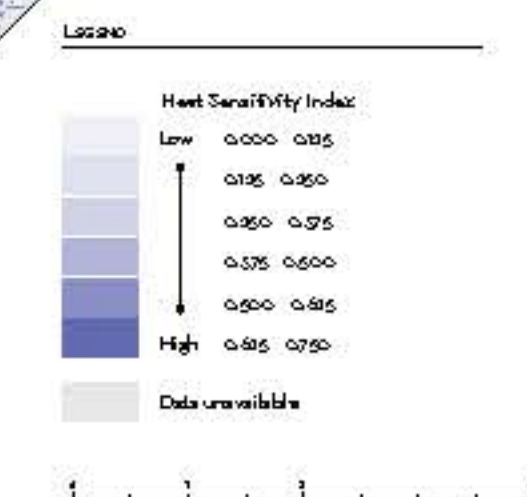
This heat “sensitivity-exposure” index helps the District prioritize vulnerable people.

This map shows the areas of the District that are most heat exposed *and* are home to heat sensitive residents.

Some people are more at risk to extreme heat.

This map shows the Heat Sensitivity Index, which combines the following nine socio-economic, demographic, and health variables to help identify where the most heat sensitive residents live.

1. older adults (65+)
2. young children
3. low-income households
4. people of color
5. people with disabilities
6. households with limited English proficiency
7. prevalence of asthma
8. prevalence of obesity
9. prevalence of coronary heart disease



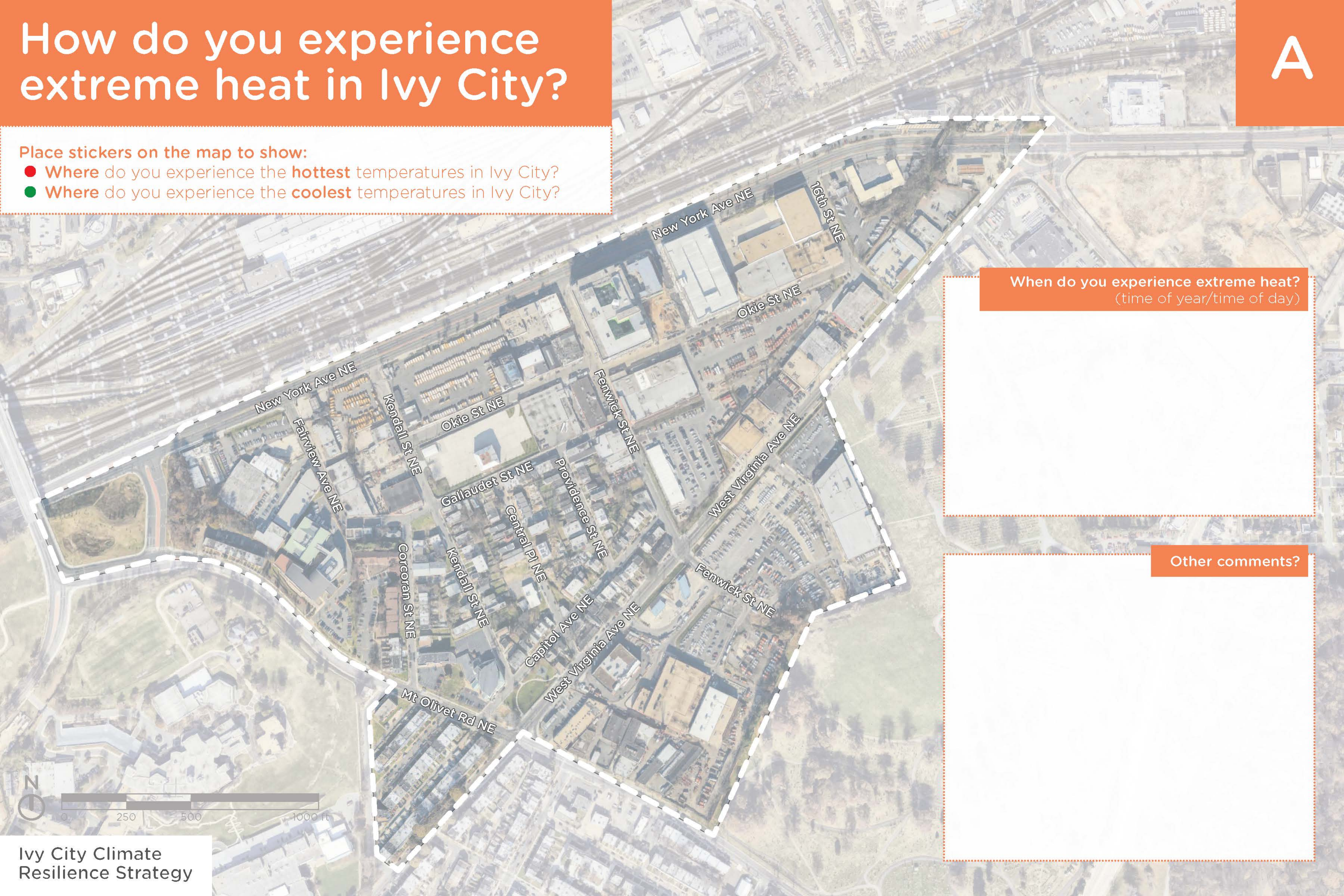
How do you experience extreme heat in Ivy City?

Place stickers on the map to show:

- **Where** do you experience the **hottest** temperatures in Ivy City?
- **Where** do you experience the **coolest** temperatures in Ivy City?

When do you experience extreme heat?
(time of year/time of day)

Other comments?



Know Your Flood Risk

B



Is Your Home Flood-Ready?

FIND OUT FOR FREE

Find out for FREE with FloodSmart Homes

If you indicate interest in this program and qualify, DOEE will send a professional to your home and help identify the best solutions for your flooding concerns. The resilience assessment provides information to help you decide which flood retrofit measures would be best for your particular home. The assessment will include an Elevation Certificate that could potentially reduce your flood insurance premiums, as well as a report detailing the benefits and costs of flood protection retrofits.

Retrofits may include:

- Electrical outlet elevation and/or replacement with Ground Fault Circuit Interrupter (GFCI) outlets
- Installation of anchoring straps on water heaters, A/C units, and other equipment
- Sealing of air ducts to prevent water damage and mold growth.
- Sump pumps
- Removable flood barriers
- Sewer backflow prevention valves
- Elevation of outdoor mechanical and electrical equipment
- Flood vents in crawlspace walls to relieve water pressure and prevent damage



Learn more

- bit.ly/floodsmarthomesdc
- flood.risk@dc.gov
- 202-535-2600, ask for the Flood Team



Sign up!



TYPES OF FLOODING

Rivers

(ex. Watts Branch and Oxon Run)



Water Mains

(Can happen anywhere)



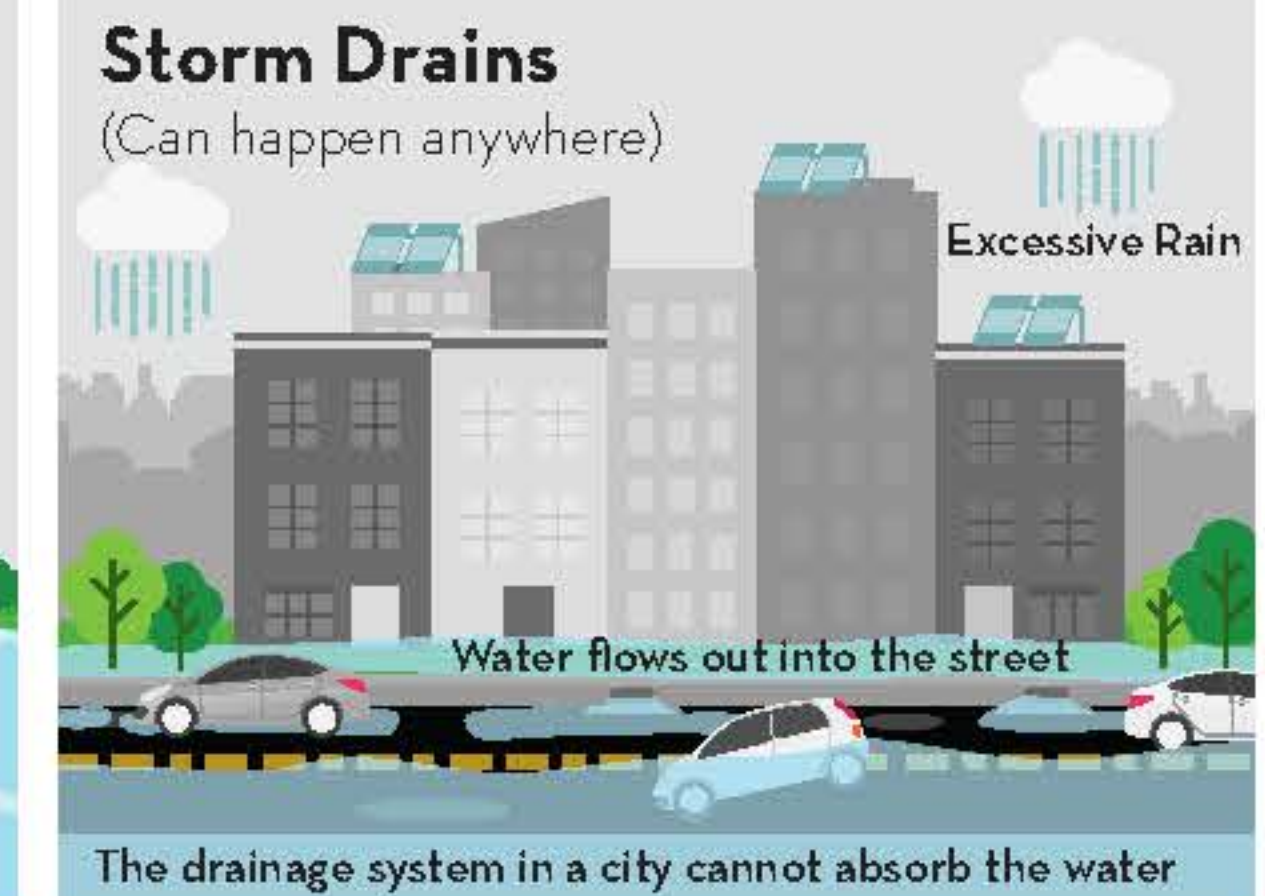
Sea-Level Rise & Storm Surge

(Coastal Areas)



Storm Drains

(Can happen anywhere)



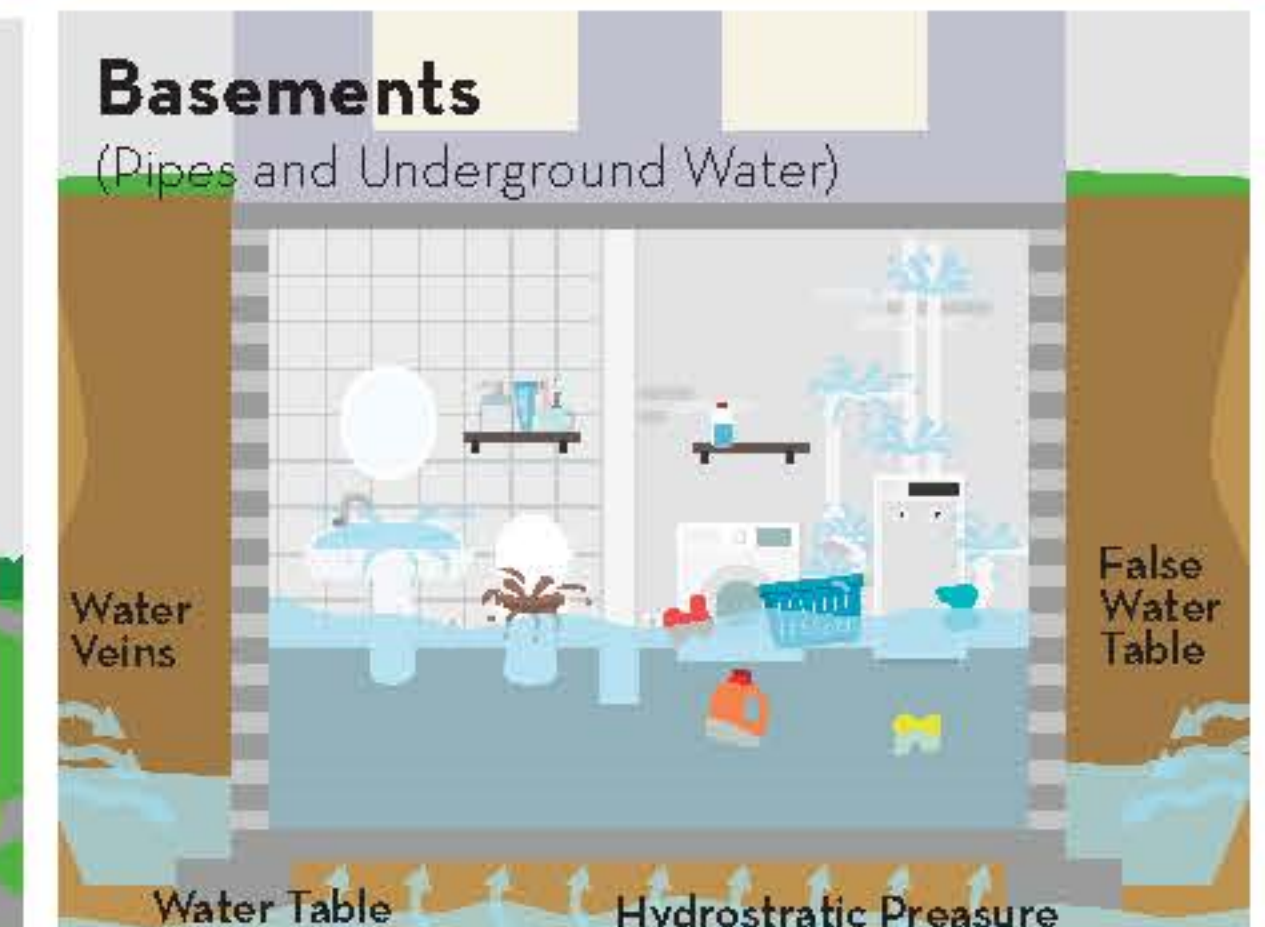
Levee Failures

(Federal Triangle and Coastline Areas)



Basements

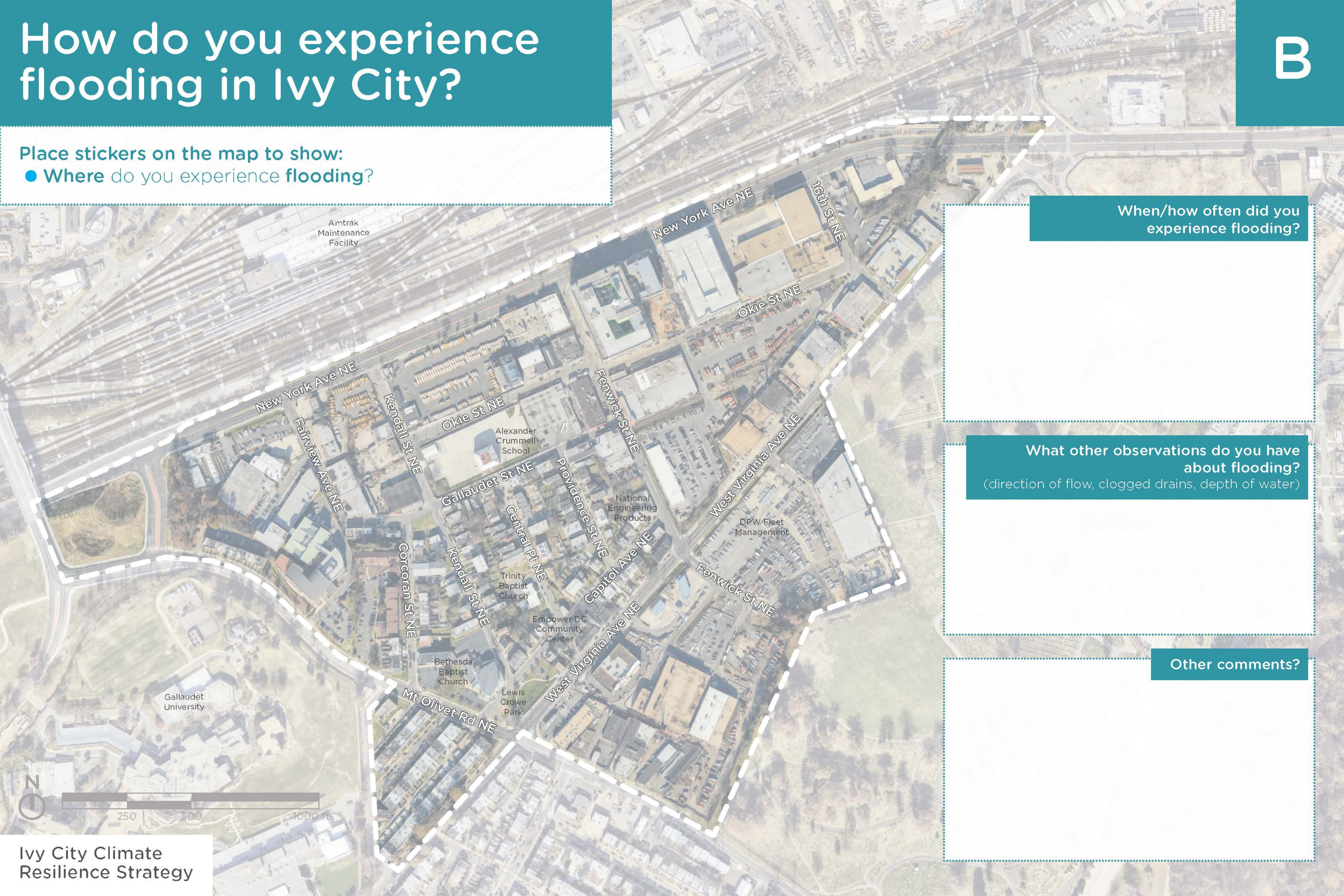
(Pipes and Underground Water)



How do you experience flooding in Ivy City?

Place stickers on the map to show:

- Where do you experience flooding?



When/how often did you experience flooding?

What other observations do you have about flooding?
(direction of flow, clogged drains, depth of water)

Other comments?

Be Prepared for Emergencies!

Be Aware

Learn what to do before, during, and after climate hazard events.



Preparing for emergencies isn't hard. It only takes a little bit of effort to make a big difference if a disaster would impact you and your family. Emergency preparedness is a shared responsibility, so we're asking you to become a preparedness partner.



Make a Plan

Create a plan ahead of time so you and your family know what to do in case of an emergency.



Having a plan is the most important way you can help yourself in the case of a disaster or emergency. ReadyDC shares tips on plans for family, seniors, people with disabilities and/or functional needs, pets, and home.



Build a Kit

Make an emergency kit with supplies to last you and your family for at least 3 days.



FOOD & WATER



EQUIPMENT



FIRST AID KIT



DOCUMENTS



VEHICLE KIT



Stay Informed

Sign up for emergency alerts at alertdc.dc.gov



AlertDC is the official District of Columbia communications system that sends you real-time notifications that you want.



alertdc.dc.gov



Sign up to volunteer



Volunteer!



The Community Emergency Response Team (CERT) Program trains people in basic disaster response skills such as fire safety, light search and rescue, team organization, and disaster medical operations. CERT training is free and open to anyone who lives, works or congregates in the District of Columbia.

Areas of training include:

- Disaster preparedness
- Mass casualty triage
- Damage assessment
- Light search and rescue
- First aid, CPR, and AED
- Team well-being and disaster psychology
- Terrorism awareness
- Hazardous material awareness

What else would help you be prepared?

Use a sticky note:

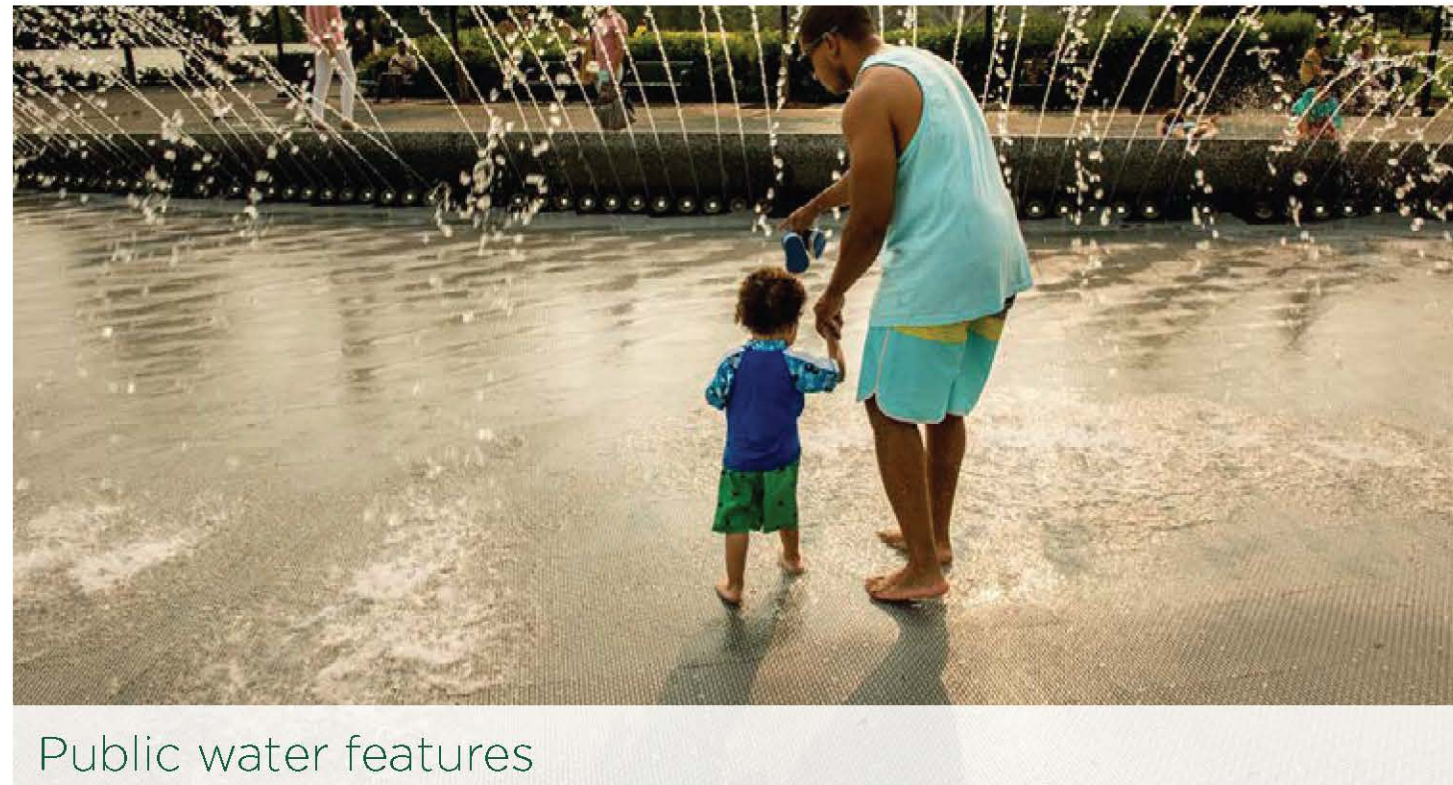
- How can **YOU** best be prepared for emergencies?
- What else can the **DISTRICT** do to support you to be prepared?

Mitigating heat and flooding in the built environment

Place stickers on the solutions you would like to see in Ivy City.



Bioswales



Public water features



Raingardens

Blue-Green Infrastructure (BGI)
BGI is a type of stormwater management that connects the water cycle (blue) with vegetation (green) and community priorities.
BGI offers valuable solutions for urban areas facing the challenges of climate change, including flooding and extreme heat, and reduces the need for traditional gray infrastructure. Community input is critical for designing BGI that provides social, economic, and environmental value.



Green roofs



Green school/community center grounds



Floodable parks/sports fields



Tree-lined streets

“Heat islands” occur when cities replace natural land cover with dense concentrations of pavement, buildings, and other surfaces that absorb and retain heat.
By adding natural surfaces like vegetation back into communities, green infrastructure can mitigate the heat island effect and provide cooling. Space in areas might be limited, but communities can integrate small green infrastructure into grassy or barren areas, vacant lots, and street rights-of-way.



Permeable surfaces



Shade structures



Bioswales

How would you adapt these ideas to fit Ivy City?

Where would you want to see this type of design in Ivy City?

Draft Goals

for

CLIMATE READY DC 2.0

D

Goal 1

Support District residents to become more climate ready.

- 1.1 Develop and launch a sustained interagency District “climate readiness” outreach strategy to raise awareness of climate risks and District resilience initiatives.
- 1.2 Expand the District’s support of community resilience hubs throughout the District.
- 1.3 Expand the Community Emergency Response Team (CERT) program to reach more volunteers/trainees including youth and create an extreme weather volunteer program.
- 1.4 Expand the FloodSmart Homes program to serve additional homeowners as well as small and local businesses, places of worship and community facilities in areas of future flood risk.
- 1.5 Develop “cool corridors” in neighborhoods vulnerable to extreme heat.
- 1.6 Expand the number of bus shelters in heat vulnerable communities and pilot new design strategies for DDOT-managed bus shelters to provide better protection from extreme heat.
- 1.7 Add additional tree shade or shade structures along heavily used pedestrian and bicycle trails.
- 1.8 Develop and implement new public health and/or building regulations or other measures that protect District residents from extreme indoor air temperatures.

Goal 2

Protect buildings & infrastructure from climate impacts.

- 2.1 Conduct climate risk assessments and develop climate adaptation plans for critical facilities in priority climate risk reduction areas.
- 2.2 Develop a climate risk screening tool and a climate resilience cost benefit analysis tool to be used before project costs are estimated and put into the Capital Improvement Plan by 2030.
- 2.3 Develop language related to climate resilience and incorporate it into capital improvement scopes of work (SOWs) and requests for proposals (RFPs) for District of Columbia funded projects by 2030.
- 2.4 Design and implement neighborhood-scale blue-green infrastructure networks in Watts Branch, Southwest/Buzzard Point, Oxon Run and Ivy City.
- 2.5 Incorporate shade analysis and higher shade standards into planning and design for parks, playgrounds and other public spaces.
- 2.6 Coordinate design standards between DC Water, DOEE and DDOT and design all new green infrastructure to accommodate precipitation volumes that are predicted for future climate conditions.

Your thoughts? Anything missing?

Use a sticky note:

- Which actions do you think are priorities? What are your ideas for actions? What do people, buildings or infrastructure in Ivy City need? What else can the DISTRICT do to support you to be prepared?

Goal 3

Institutionalize climate change preparedness in District government.

- 3.1 Launch a technical assistance program to support sister agencies completing a climate vulnerability assessment for their projects and programs.
- 3.2 Incorporate climate risk reduction into each agencies’ internal facing planning documents.
- 3.3 Establish a Climate Champion in each agency and establish a broader Climate Cohort that staff in any agency may join.
- 3.4 Create a chief heat officer position.
- 3.5 Continue to convene the Climate Resilience Interagency Advisory Group (IAG).

Goal 4

Use the best available science & tools to understand climate risks.

- 4.1 Develop data gathering tools to track climate-related illness and death in the District and publish climate and health data on a dashboard.
- 4.2 Conduct research to develop a better understanding of how many District residents have access to affordable air conditioning.
- 4.3 Create a dashboard that helps residents understand their climate risk and take steps to prepare for extreme weather.
- 4.4 Include climate change in the curriculum for third and sixth graders.
- 4.5 Conduct a cost-of-inaction study to better understand the District’s climate risk in financial terms.



Take the Survey!

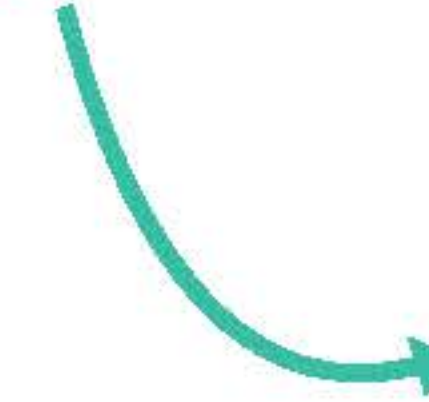
Share your voice!

Survey takes less than 5 min. Scan the QR code
or go to

engage.dc.gov/climateready

Hard copies are available.

Take the survey



engage.dc.gov/climateready

How else should we be engaging residents?

Use a sticky note:
• What are the best ways for us to get input on this plan?