

# RESILIENT TOGETHER

Charlottesville & Albemarle



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# Agenda

- Project Introduction
- Hazards and Risks
- Impacts and Interventions
- Resilience Together Project
- Q & A



# Project Summary

**Resilient Together** is a joint planning and community engagement process to help our community prepare for the more intense and frequent severe weather events that we face.

**Albemarle County**, the **City of Charlottesville**, and the **University of Virginia** have partnered in this work. The project will engage staff, partner institutions, community-based organizations, and the public.

## Goals:

- Enhanced quality of life
- Reliable systems
- Economic vitality
- Healthy ecosystem

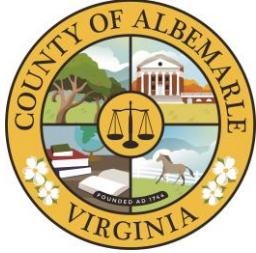
## Outcomes:

- Climate adaptation and resilience plans
- Framework for community investments
- Increased resilience through community engagement

**a strong, safe, and healthy future for all**



# Project Team



## County



Greg Harper



Gabe Dayley



Jamie Powers



Serena Gruia



## City



Kristel Riddervold



Emily Irvine



Tray Biasioli



## UVA

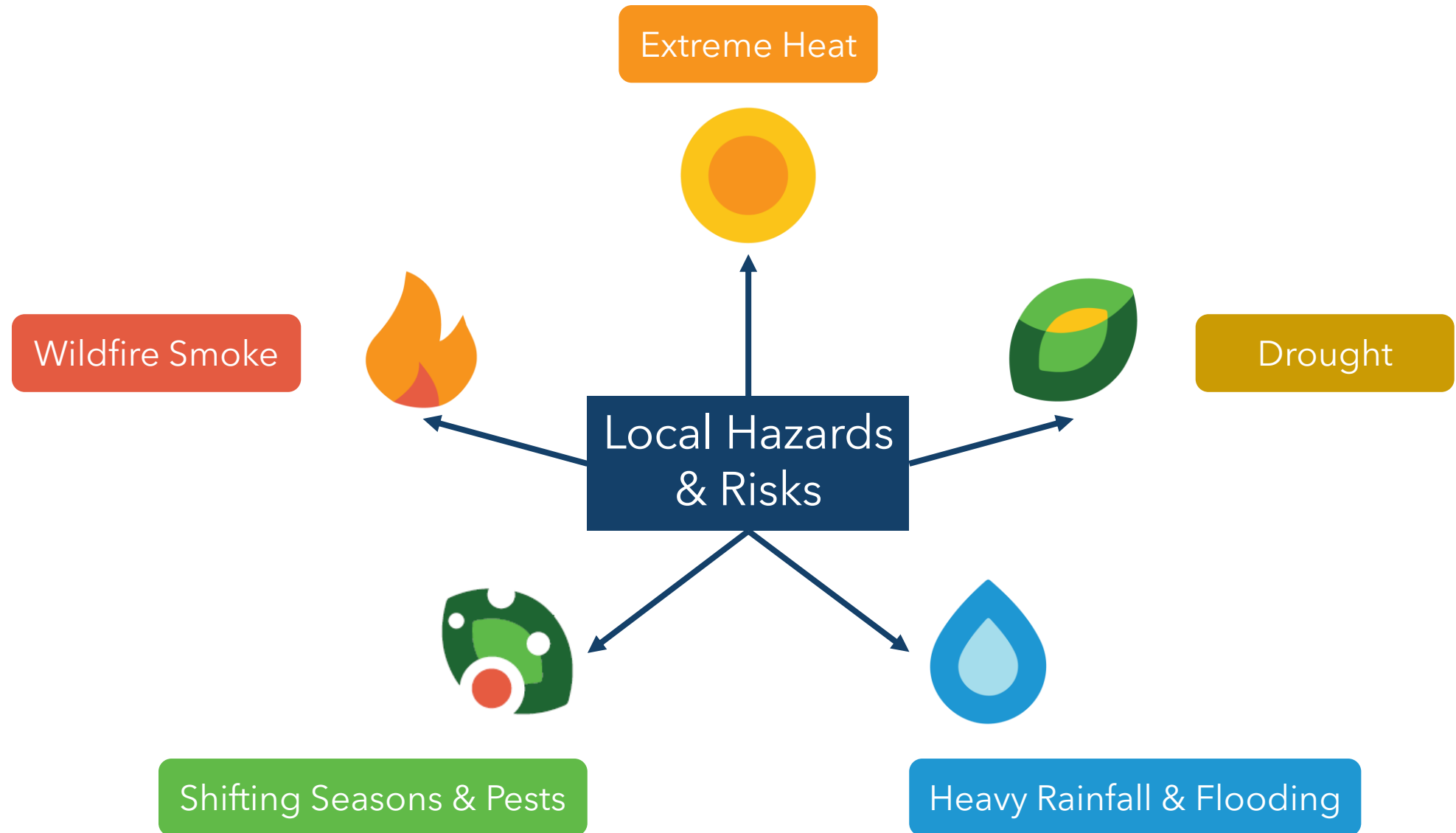


Andrea Trimble



Julia Monteith

# Hazards & Risks: Overview



# Hazards & Risks: Here and Now



Home / News & Features

Search NOAA sites



## Topping the charts: September 2023 was Earth's warmest September in 174-year record

2023 shaping up to be warmest year in NOAA's global climate record

## Several roads in Albemarle County damaged by heavy rain, flooding

by Elizabeth Tyree | Thu, May 31st 2018, 12:19 PM EDT

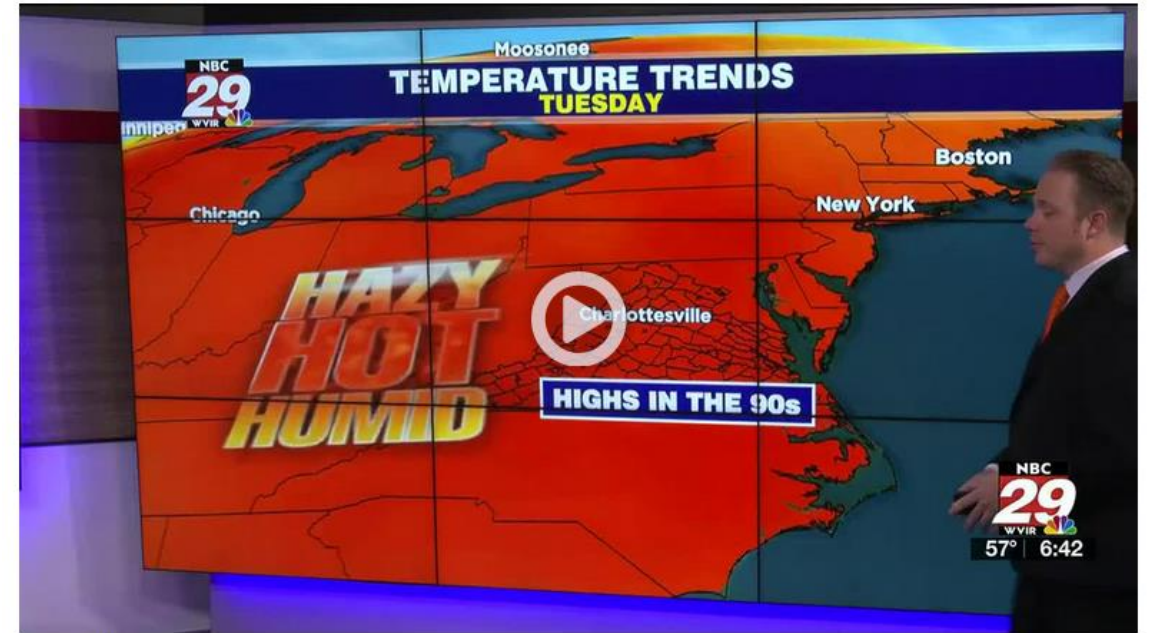


ABC13 News 05/31/18

NBC29 News, Charlottesville 09/02/23

## Building September heat wave

Nearing 100 degrees



Nearing 100 degrees

## Smoke from another wildfire impacting Central Virginia region

Thursday, November 16th 2023, 11:57 AM EST

CBS19 News 11/16/23

# Hazards & Risks: Extreme Heat

## Number of Days per Year above 95°F

Current Climate

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

5 Days

2050


1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

25-35 Days


2075

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

32-56 Days

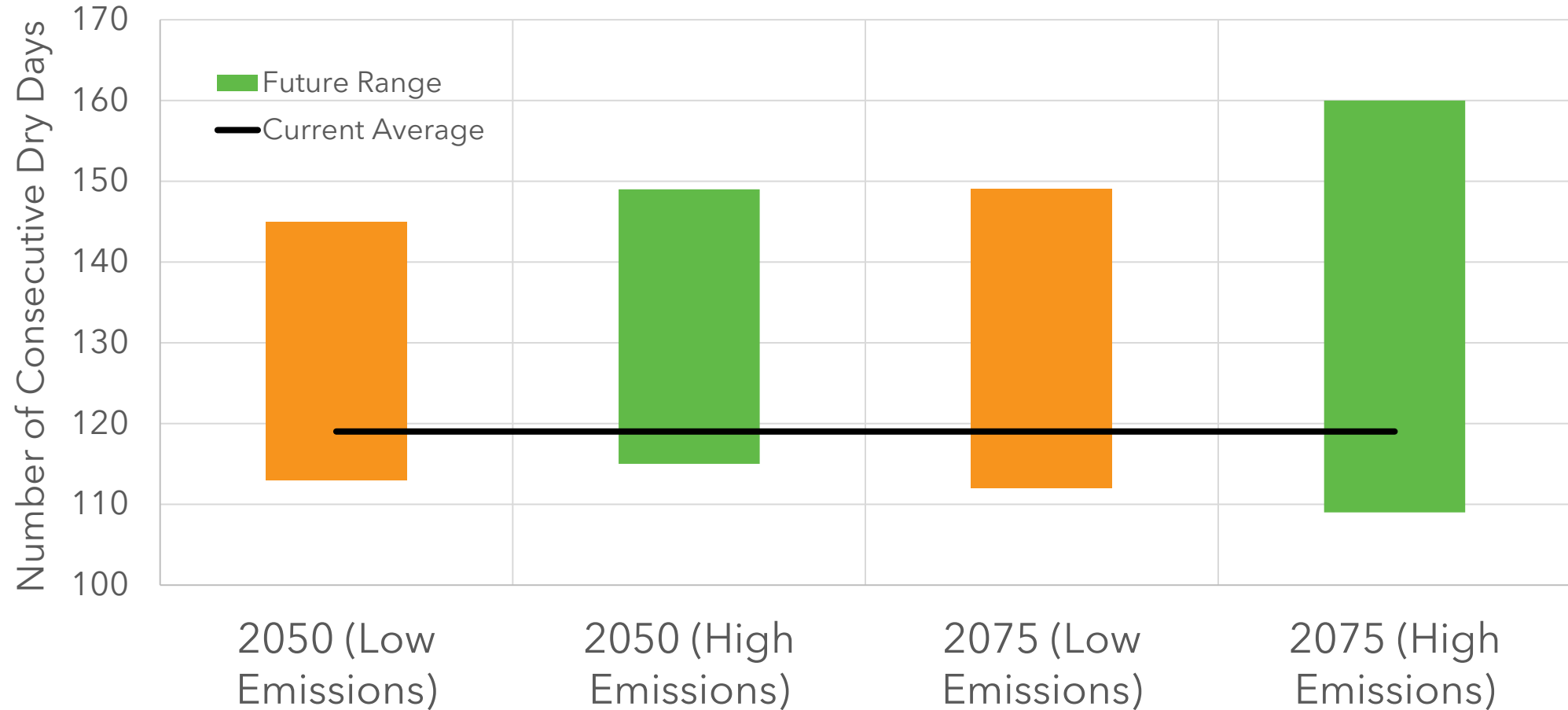
 Observed 30 Year Average (1990-2020), Monticello Station

 Lower Emission Scenario (steep emission reductions)

 Higher Emission Scenario (business as usual)

# Hazards & Risks: Drought

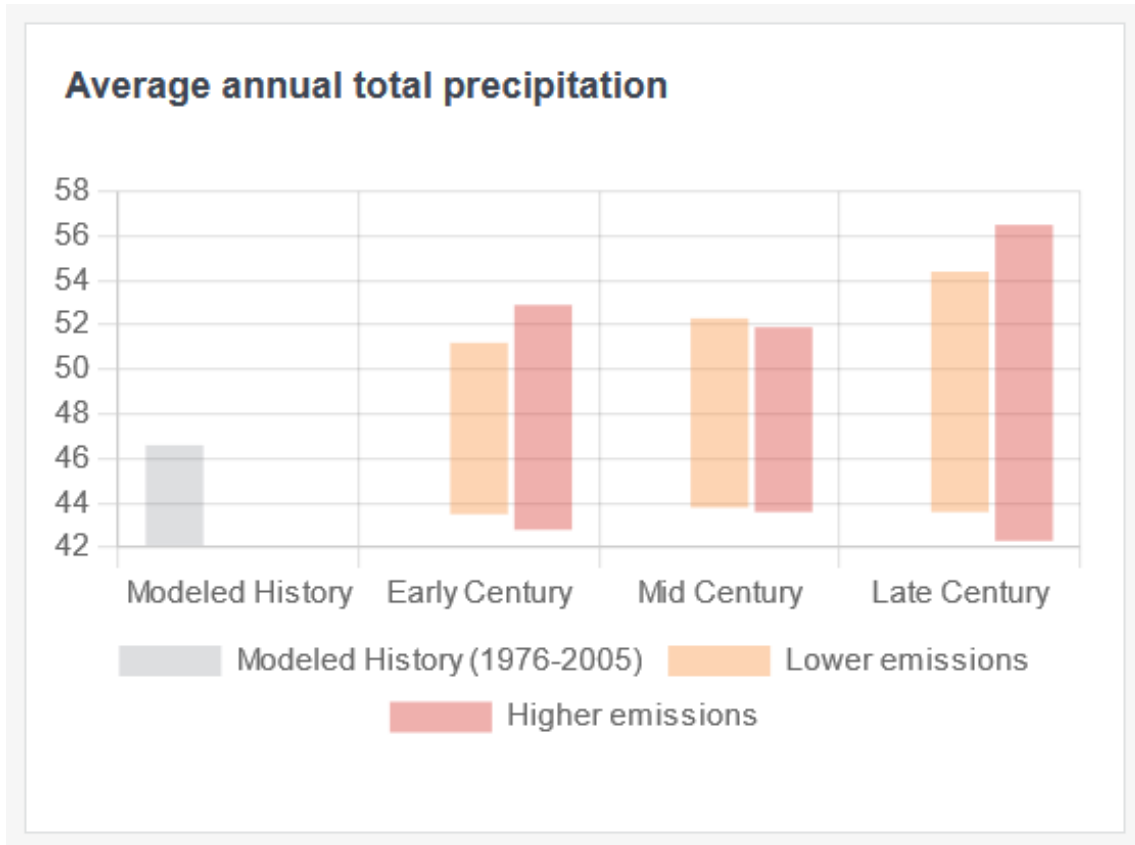
## Dry periods are predicted to increase





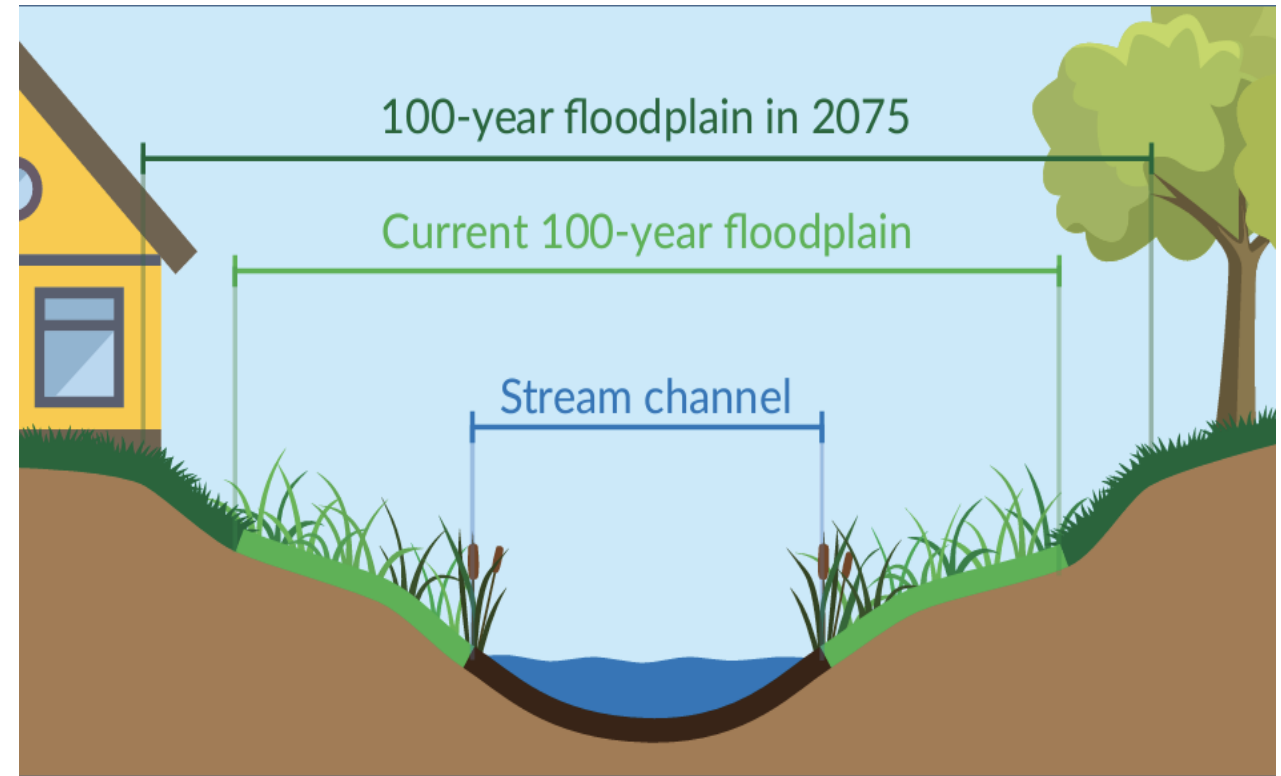
# Hazards & Risks: Increased Flooding

**Precipitation is increasing...**



Data for Albemarle County, Climate Mapping for Resilience and Adaptation Tool (CMRA)

**...and our floodplains are growing.**



Note: Illustrative graphic; not an actual local stream channel

# Hazards & Risks: Changing Seasons

## Frost Days: Number of Days per Year with Minimum Temperature below 32°F

Current Climate

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	3

63 Days

2050


1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		


49 Days

2100

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
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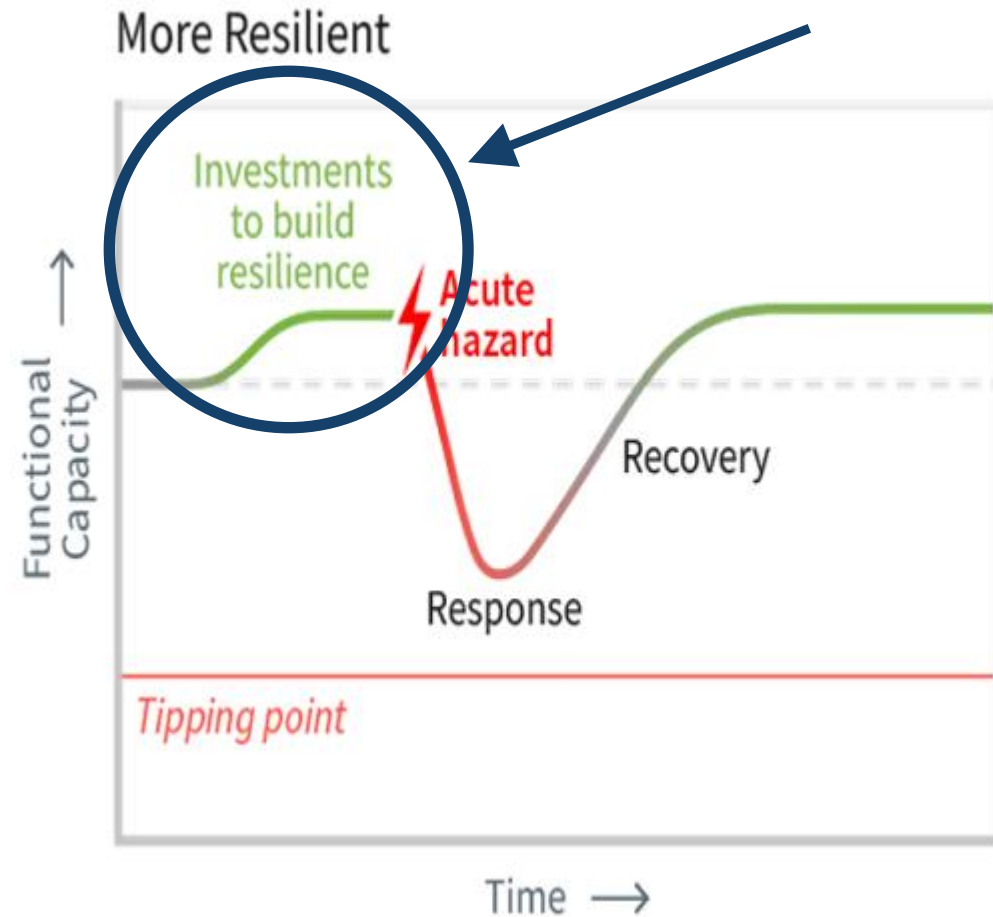
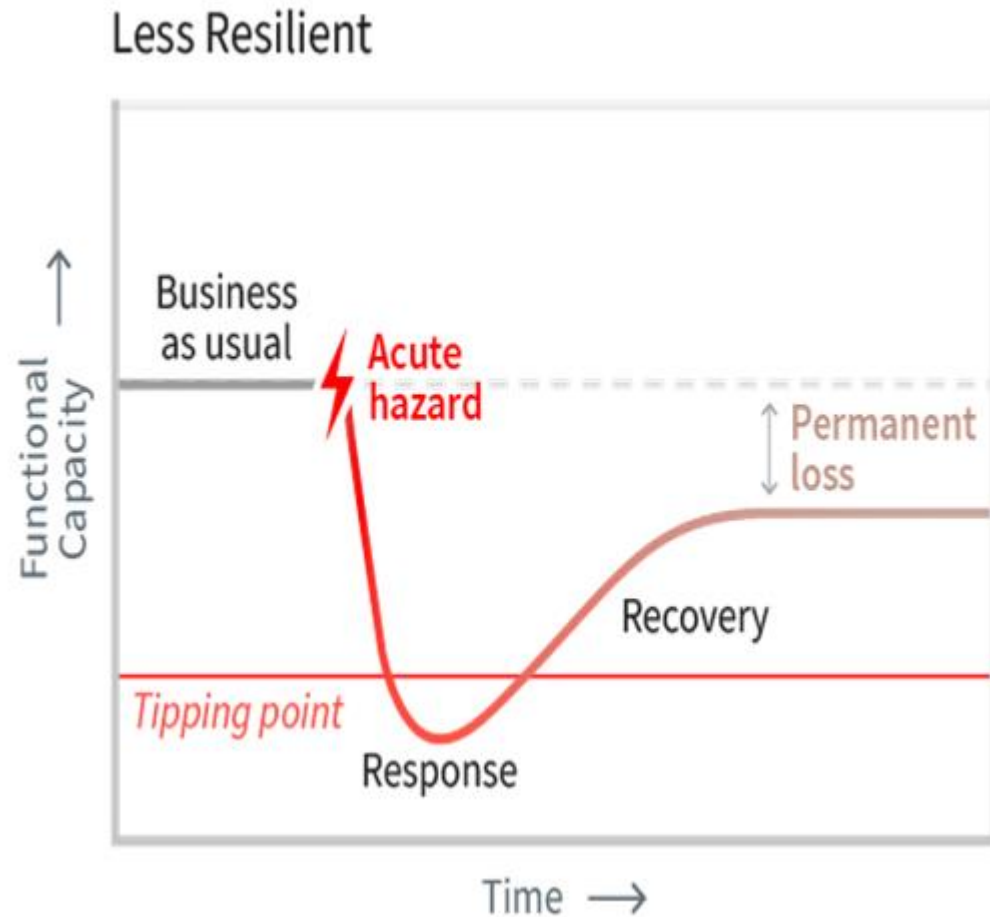
29 Days

 Observed 30 Year Average (1990-2020), Charlottesville

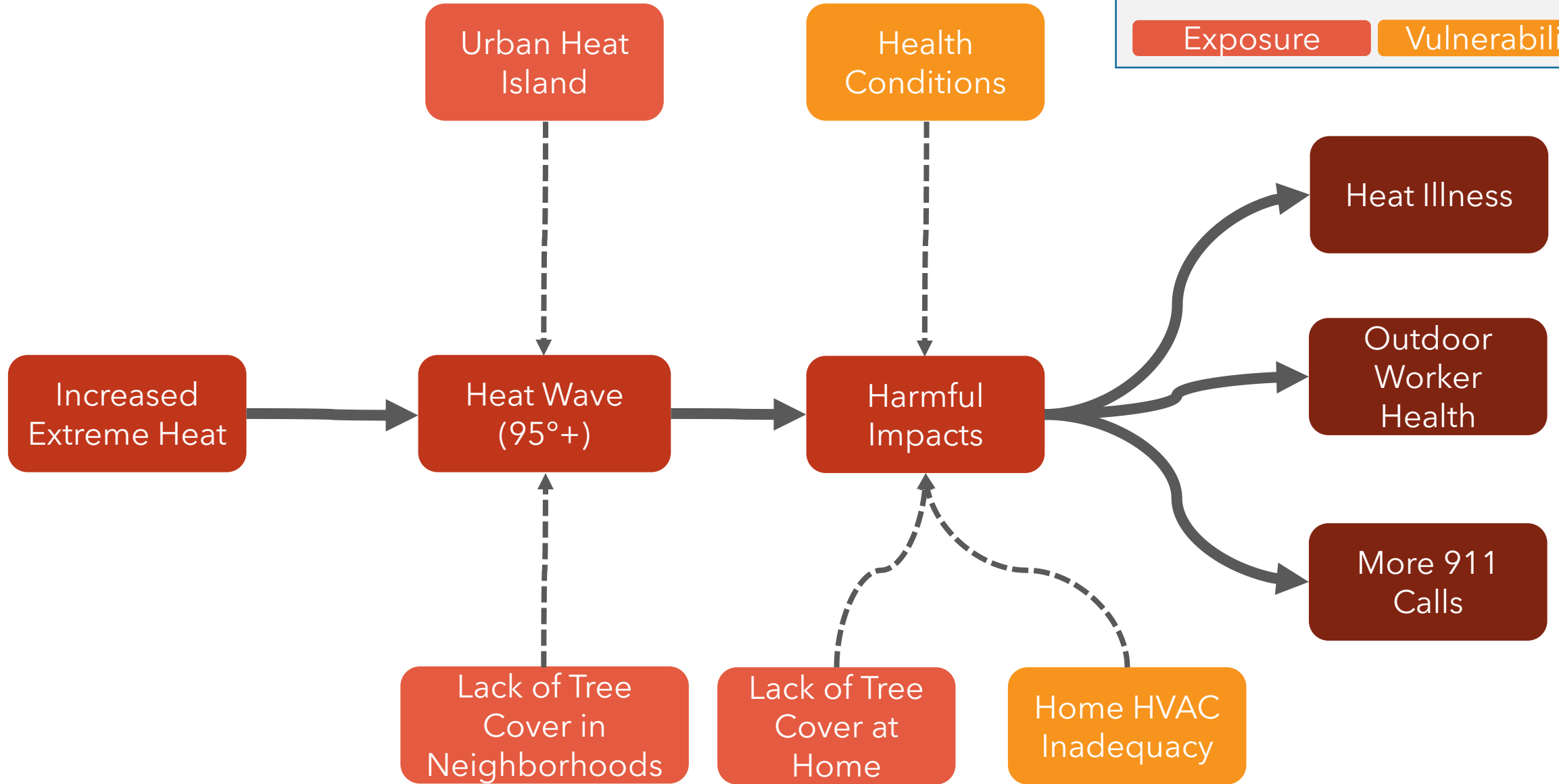
 Higher Emission Scenario (business as usual)

# What we mean by "Resilience"

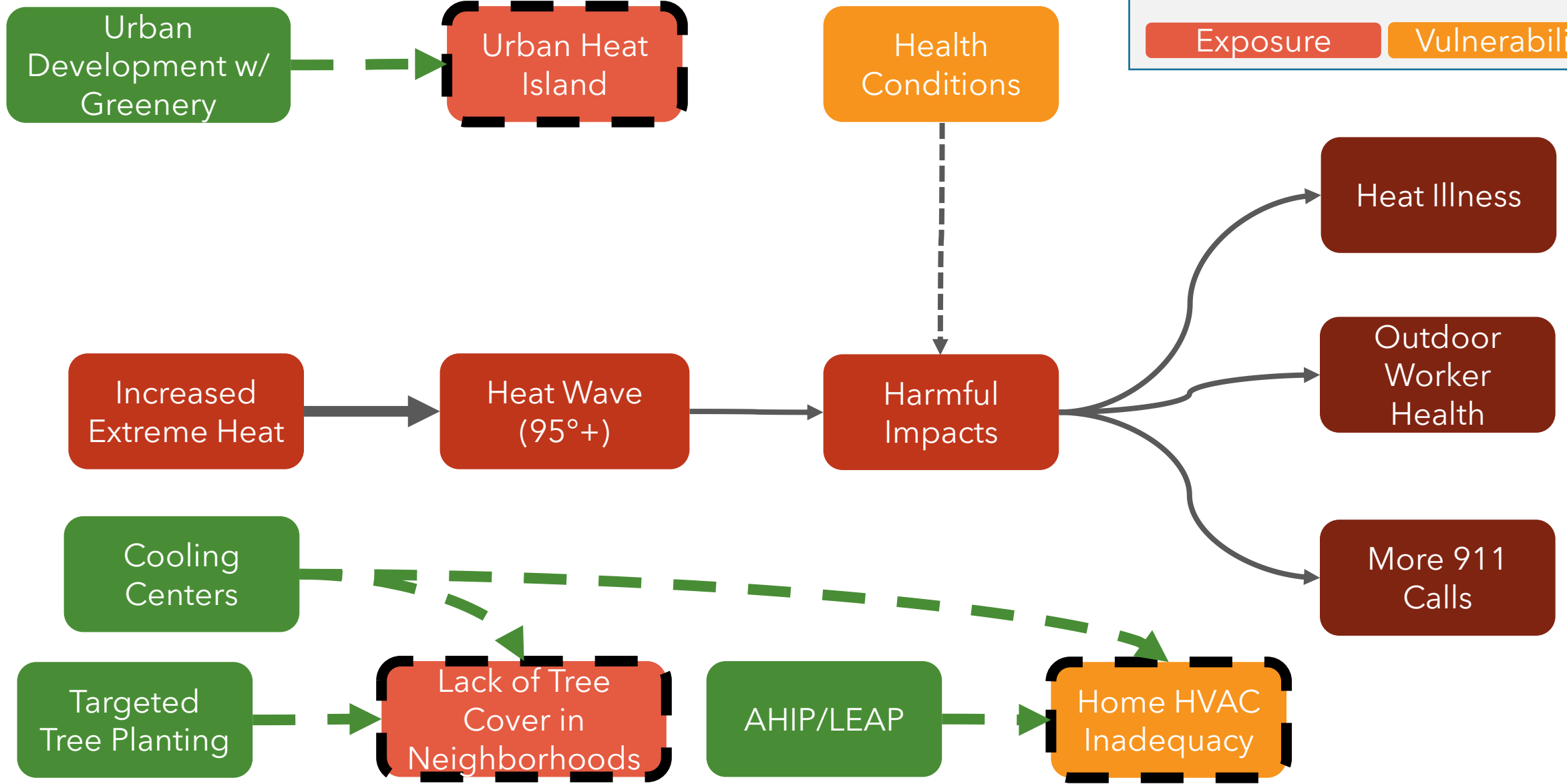
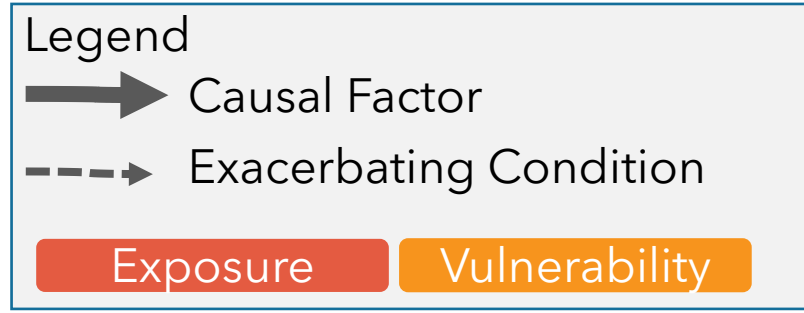
How is building resilience different from emergency response?



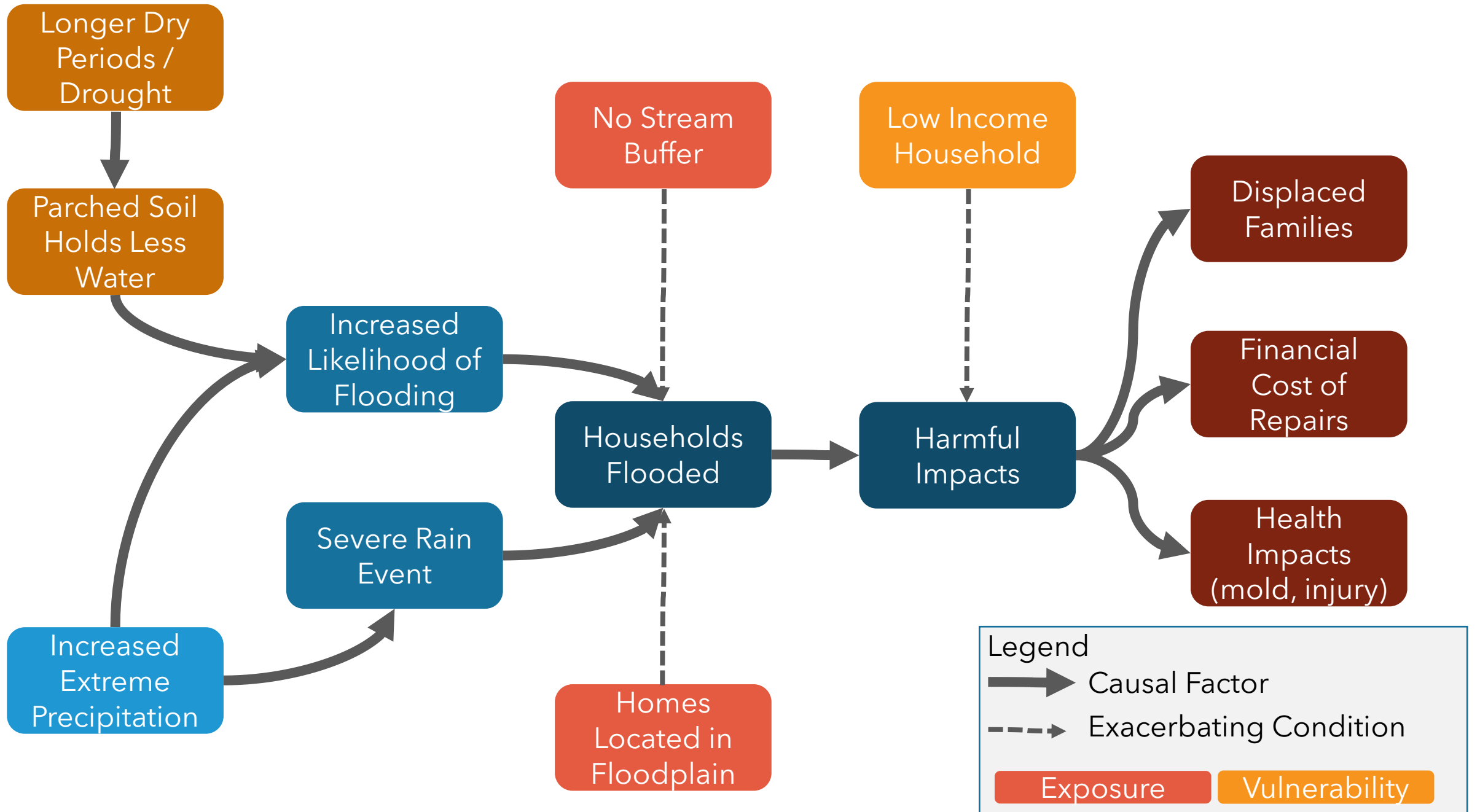
# Example Pathway from Climate Hazards to Impacts



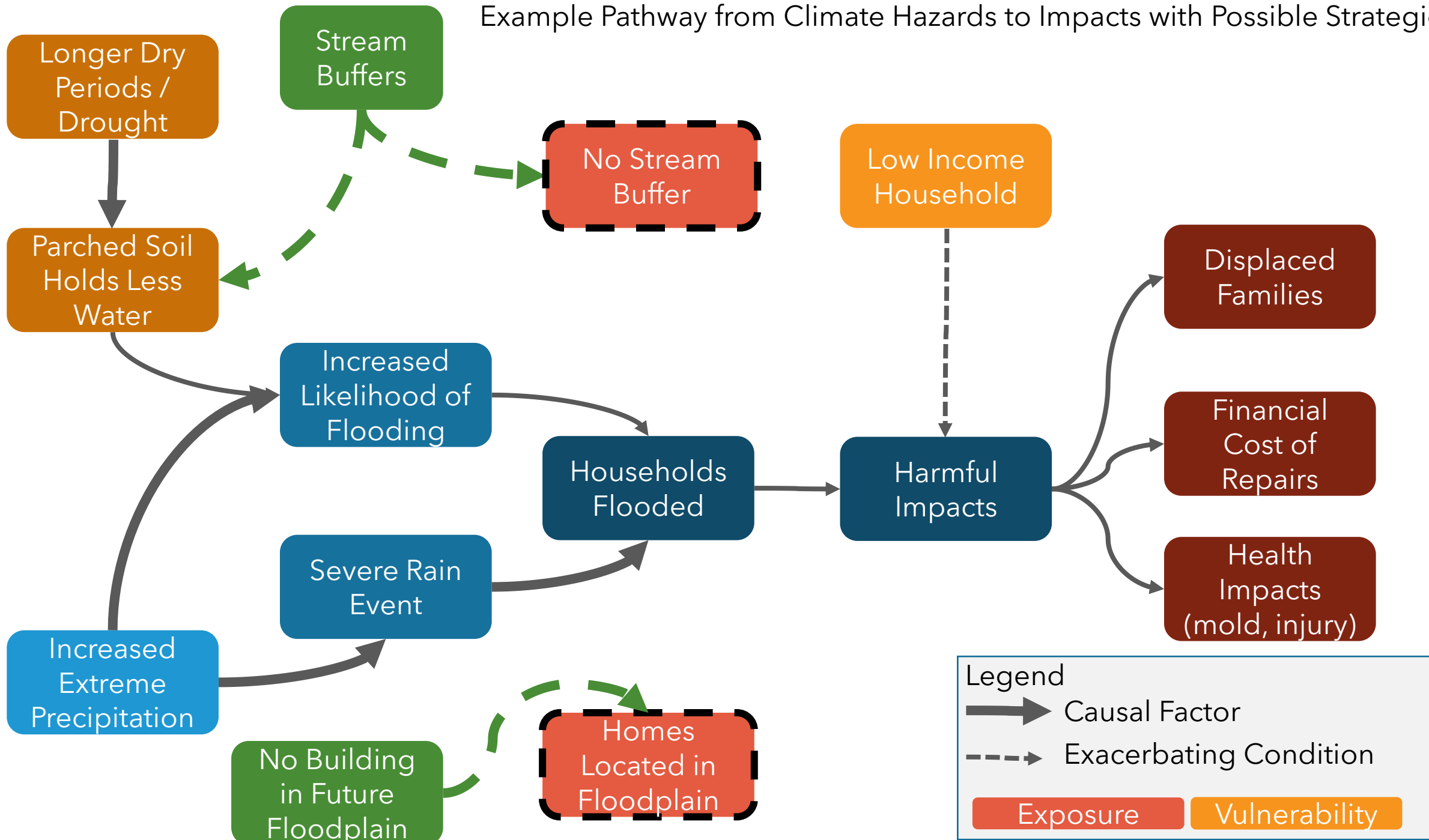
# Example Pathway from Climate Hazards to Impacts



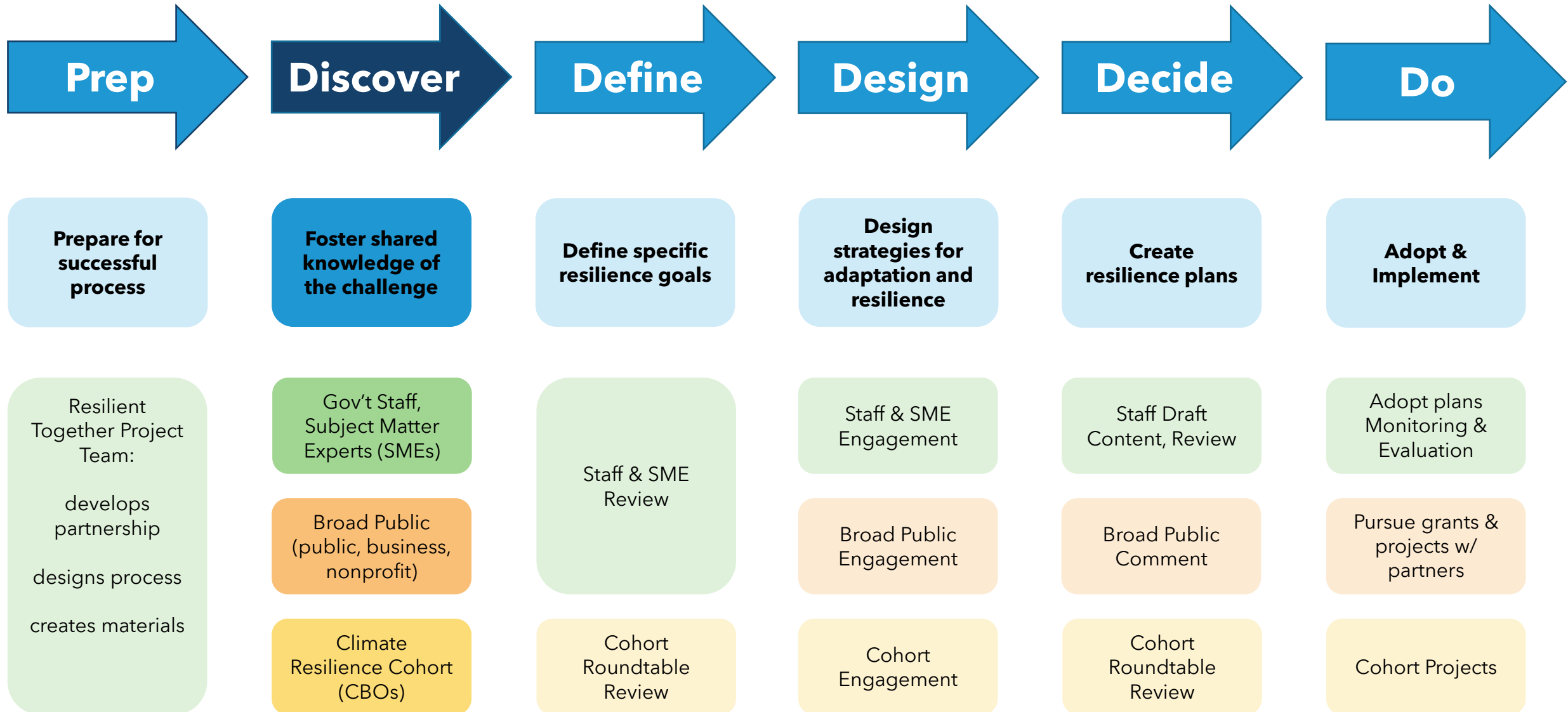
# Example Pathway from Climate Hazards to Impacts



# Example Pathway from Climate Hazards to Impacts with Possible Strategies

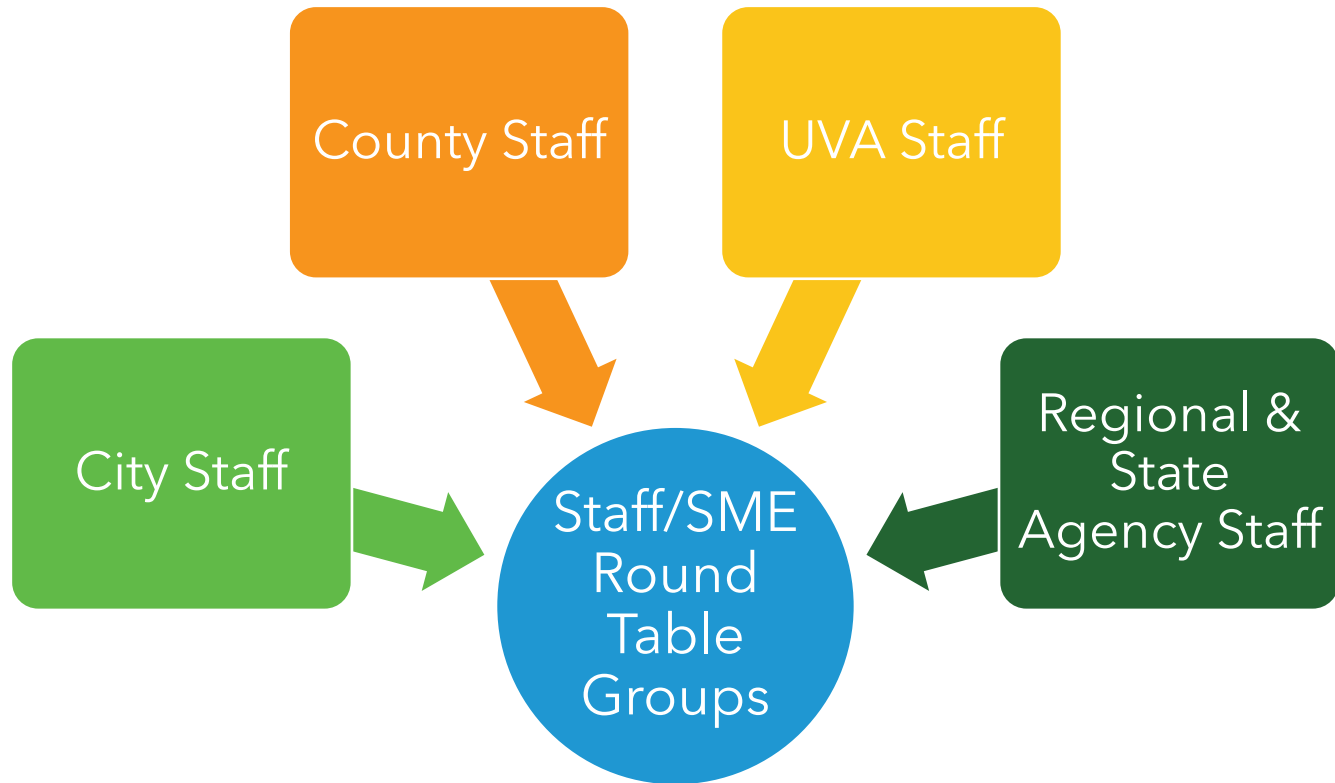


# Resilient Together: Project Outline





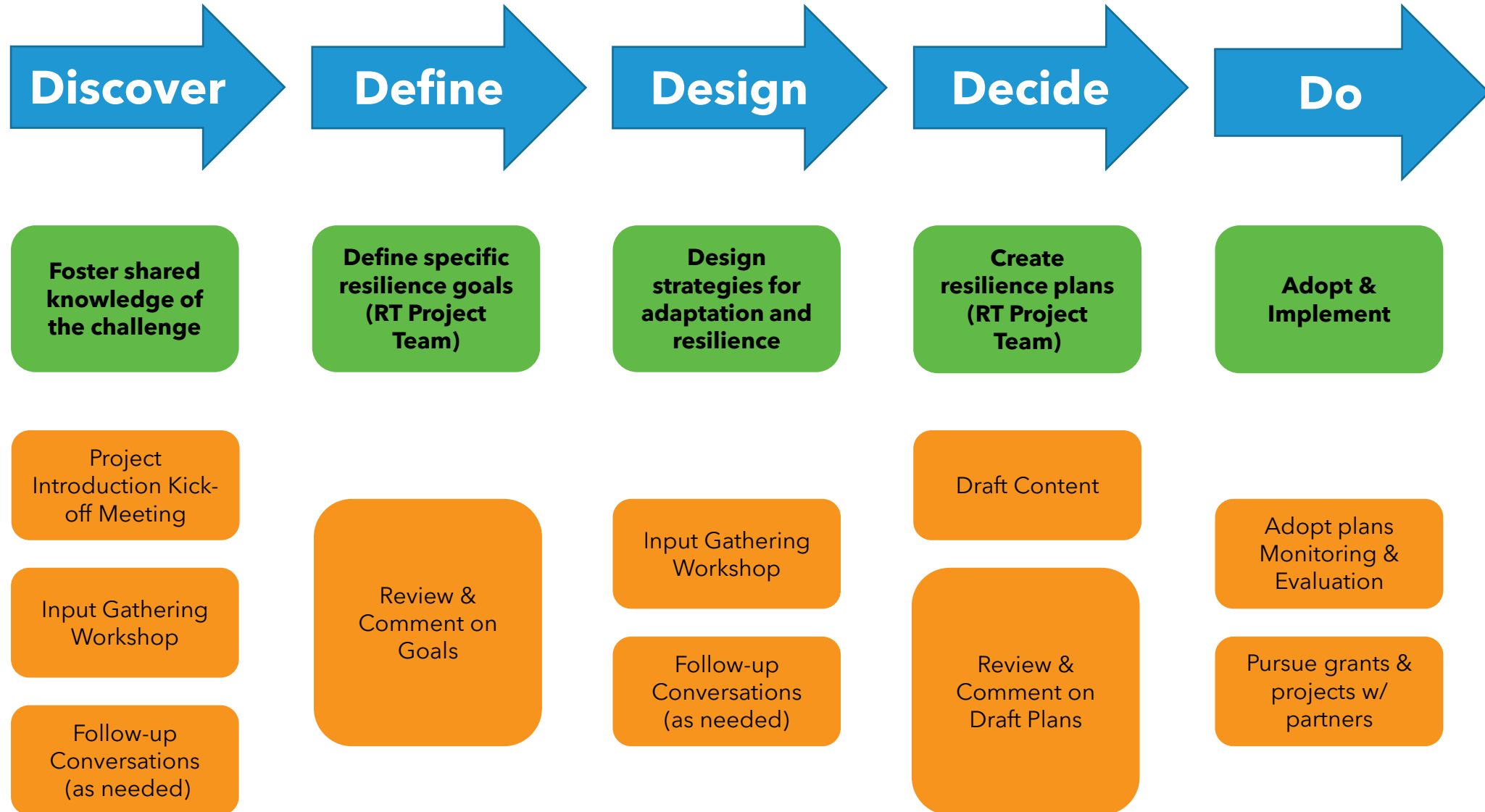
# Staff & SME Engagement



## Round Table Focus Areas

- Equity and Justice
- Emergency Management
- Social & Human Services
- Facilities & Infrastructure
- Land Use & Planning
- Transportation Operations
- Economy & Livelihoods
- Healthy Ecosystems
- Schools

# Staff & SME Engagement



# Climate Resilience Cohort

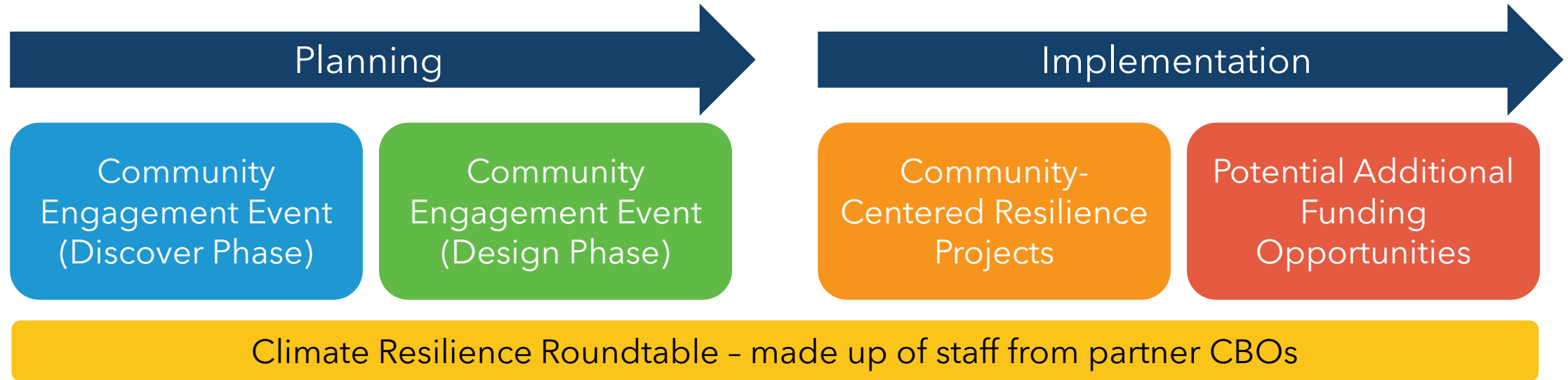
## What is it?

- Project within the Resilient Together Project
- Initiative to partner with CBOs that serve disadvantaged parts of our community in order to center equity and inclusion in resilience building
- EPA Environmental Justice Government to Government Grant - \$460,000
- Subgrants of \$40k to up to 10 organizations



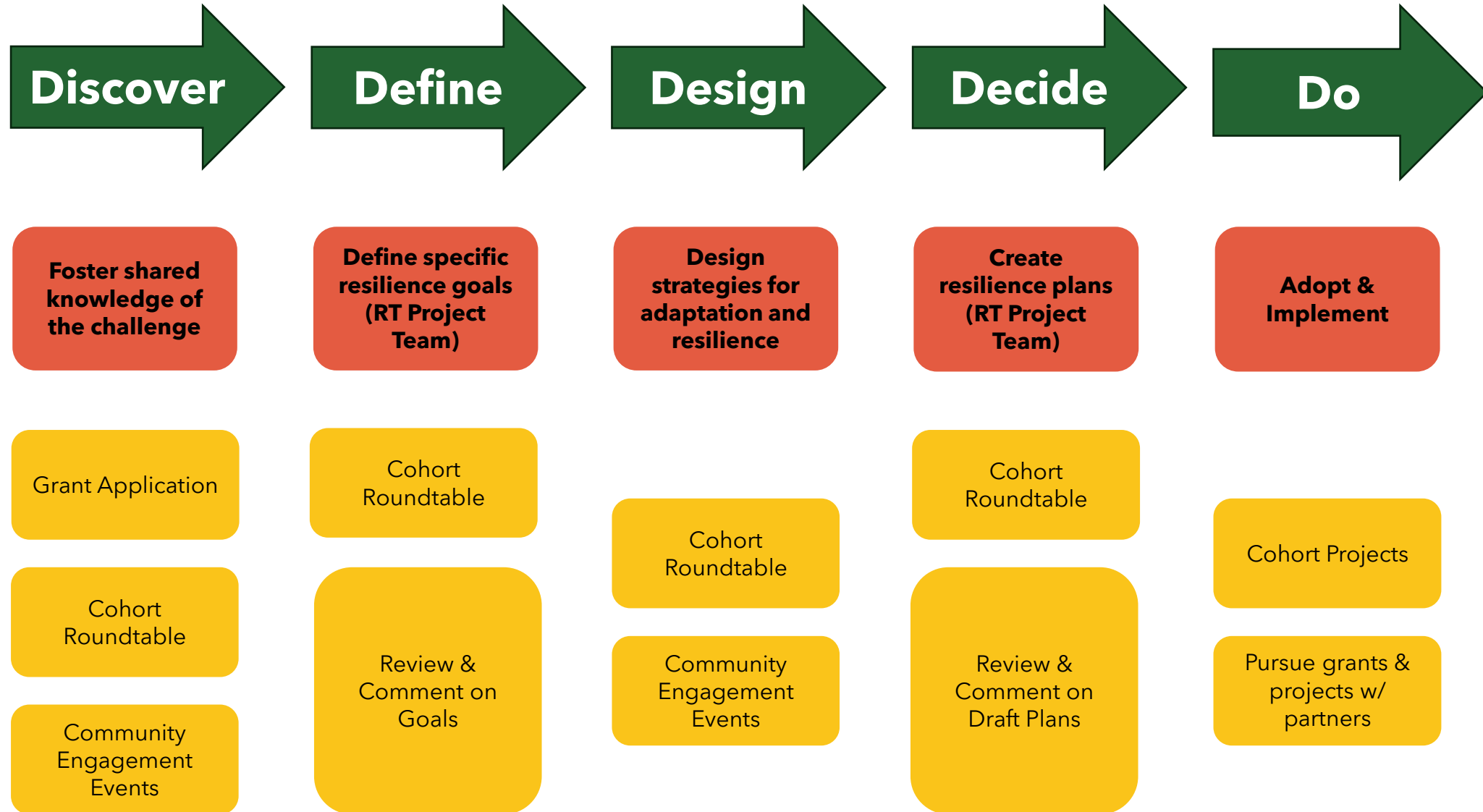
# Climate Resilience Cohort

## What does it look like?



**Goal:** deep collaboration that fosters community ownership of resilience projects

# Climate Resilience Cohort



# Climate Resilience Work Is Happening

## Current Projects that Contribute to Resilience

- Rivanna Authorities Central Pipeline Project
- Albemarle County Dam Safety work
- Cultivate Charlottesville Power to Grow Project
- Schenk's Branch Tributary Stream Restoration Project
- Biscuit Run Stream Restoration Project
- ReLeaf Neighborhood Reforestation Projects



# 1. January 2022 Winter Storm

- Preceded by 70°F weather
  - Heavy, wet snow downed trees and power lines
  - Extended power outages
- 

# 2. June 2023 Wildfire Smoke

- Wildfires in Canada
  - Smoke across much of eastern US
  - Poor air quality for days
- 

# 3. Fall 2023 Drought (& Fires)

- Extended period with little to no rain
- Anecdotes of wells being impacted
- Wildfires near Albemarle County (burn ban)

**What do these examples make you think about from a long-term planning perspective?**



**Comments or  
Questions?**



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TOGETHER**

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# RESILIENT TOGETHER WEBSITE

