LISTENING SESSION

TOWN OF HOLLAND

Municipal Vulnerability Preparedness (MVP) program & Hazard Mitigation Plan (HMP)

Tuesday, February 21, 2023
Town Hall
Board of Selectmen Meeting
6:00 – 7:00 PM

Saturday, February 25, 3023
Holland Community Center
Friends of Hamilton Reservoir Association
10:00 – 11:00 AM

WHY IS HOLLAND GOING THROUGH THIS PROCESS?

- Holland's last Hazard Mitigation Plan adopted in 2016, needs updating
  - The Federal Disaster Mitigation Act of 2000 requires that cities and towns adopt and **update** a Hazard Mitigation Plan to be eligible for FEMA mitigation grants
  - Current plan expired in May 2021
- MVP planning process
  - State grant program to support cities and towns to begin the process of planning for climate resiliency.
  - MVP Designation = eligible for MVP Action Grants

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WHAT IS HAZARD MITIGATION?

- To permanently reduce or prevent losses of life, injuries and property damage by using long-term strategies
- What preventive actions are being taken NOW to reduce future risks and damages?
- What additional actions can be taken in the FUTURE?
- According to a 2019 report by the National Institute of Building Sciences, every $1 spent on federal mitigation grants saves society $6 in response costs

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PLAN FOR MITIGATING DAMAGES FROM NATURAL HAZARDS

- Flooding
- High winds, hurricanes, tornadoes
- Winter storms, snow and ice
- Earthquakes, landslides
- Extreme temperatures
- Brush fires
- Drought

+ Impact of climate change on Holland

Wikipedia.com: Hurricane Irene

Not an Emergency Response Plan

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Municipal Vulnerability Preparedness Program (MVP)

Community Resilience Building (CRB) Workshop

Focus on impacts of climate change and opportunities for adaptation

Emphasis on environmental justice, nature-based solutions, and public engagement

Municipal Leadership

+

Regional Collaboration

+

Community Engagement

+

Understand Current Data

+

Analyze Hazard Impacts and Vulnerability

+

Review Existing Policies/Programs

+

Identify Potential Mitigation Actions

+

Develop Report

+

Achieve Eligibility for Competitive Grants

Hazard Mitigation Planning (HMP)

Must include changes to community since prior plan

Documents NFIP participation & compliance

Requires definition of future update and evaluation process

Formal plan review and adoption process

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HOLLAND MVP/HMP PLANNING PROCESS

Community Resilience Building Workshop

0. Background Research

1. Identify CC Impacts & Hazards

2. Complete Assessment of Vulnerabilities & Strengths

3. Develop & Prioritize Actions

4. Finalize Report

5. Take Action

Public Survey

Public Listening Sessions

Board of Selectmen Adoption

Community Engagement

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COMMUNITY RESILIENCE BUILDING (CRB)

- Community-driven process led by the project coordinators (Stacy Stout and Bryan Haughey) with a core team of Town officials and volunteers
- **Holland's Core Team has met 9 times**
  - June 29, August 11, September 7, November 3, November 17, December 1, December 15, December 29, and January 12
  - Organized the CRB Workshop, Reviewed Natural Hazards, Identified Critical Infrastructure/Vulnerable Populations, Developed a 5-Year Action Plan
- **8-Hour Workshop held on Saturday, September 10th**
  - 22 attendees, including local officials, board and committee members, and regional groups
- **Listening Session on February 21st and 25th**

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CRB WORKSHOP OBJECTIVES

- Define extreme weather and climate-related hazards
- Identify current and future vulnerabilities and strengths
- Develop and prioritize actions for the community and broader stakeholder networks, and
- Identify opportunities for the community to advance actions to reduce risks and build resilience

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NATURAL HAZARDS AND CLIMATE PROJECTIONS

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OUR CLIMATE IS ALREADY CHANGING

Temperature:	↑	**2° F Since 1895**
Growing Season:	↑	**11 Days Since 1895**
Sea Level Rise:	↑	**8 inches Since 1900**
Strong Storms:	↑	**55% Since 1958**

Fourth National Climate Assessment, NOAA-2017

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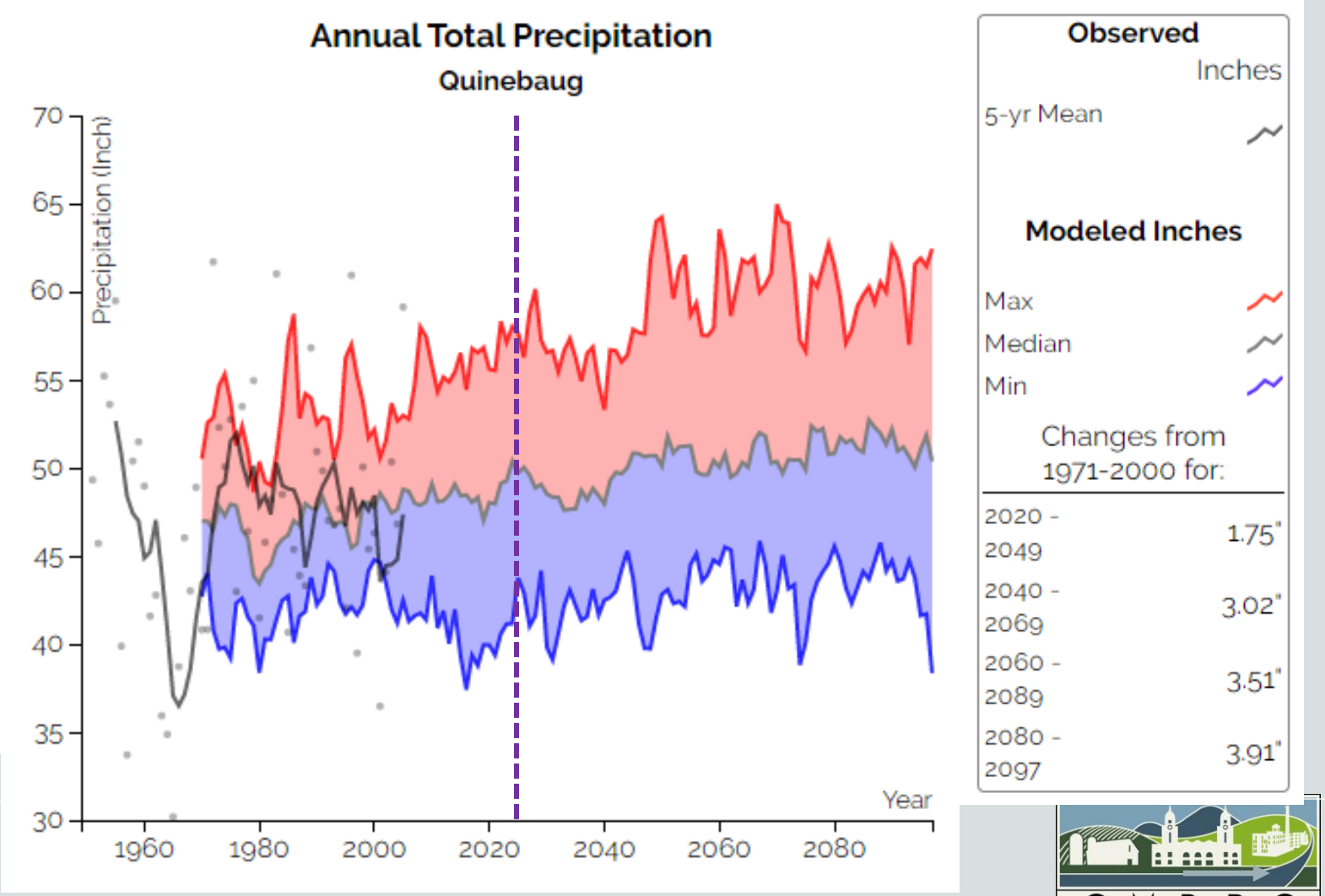
CHANGES IN PRECIPITATION

What to expect

1. More annual precipitation
2. More rainfall
3. Less snowfall



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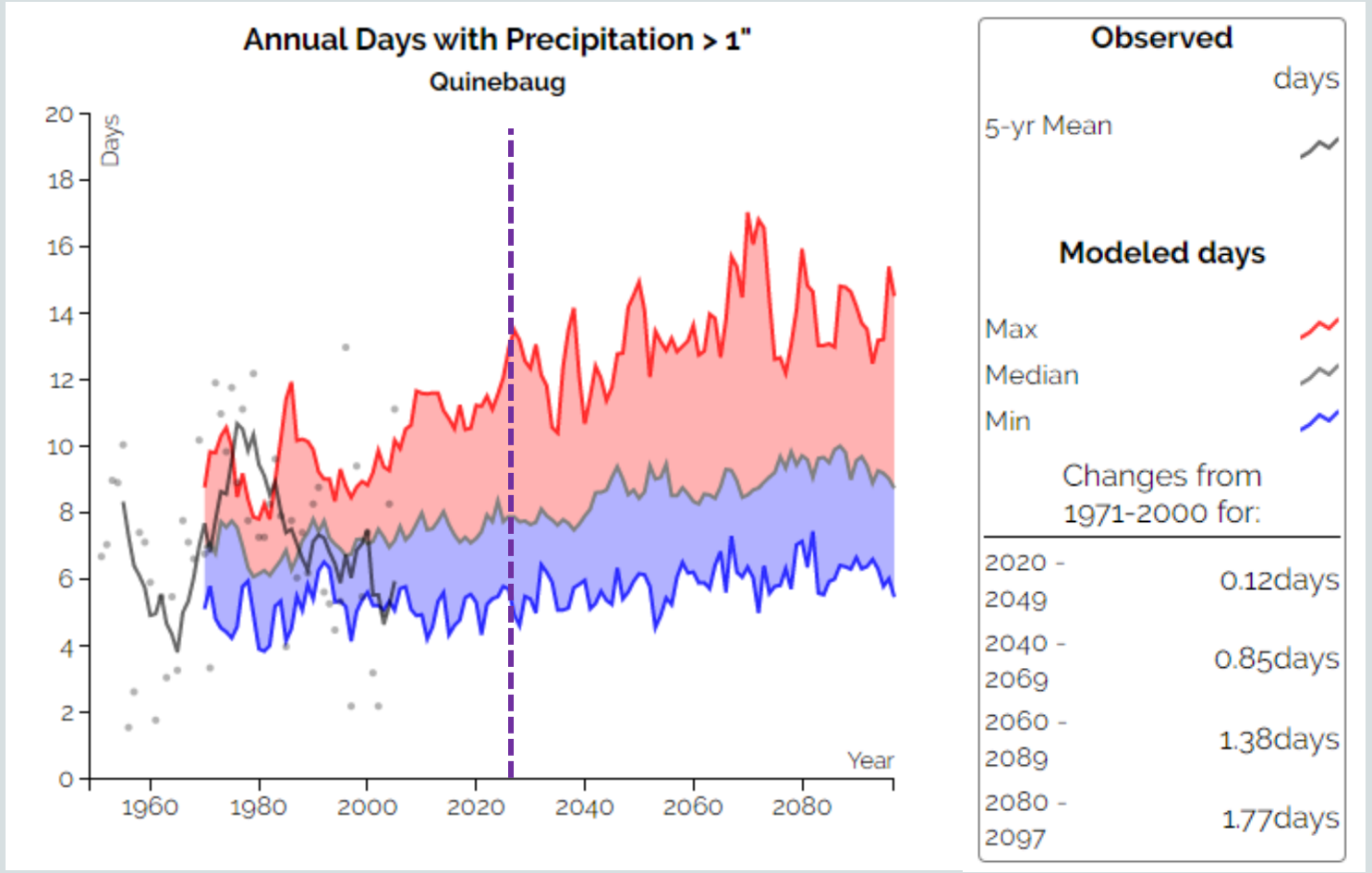
CHANGES IN PRECIPITATION

What to expect

1. More annual precipitation
2. More rainfall
3. Less snowfall
4. **More frequent heavy downpours**



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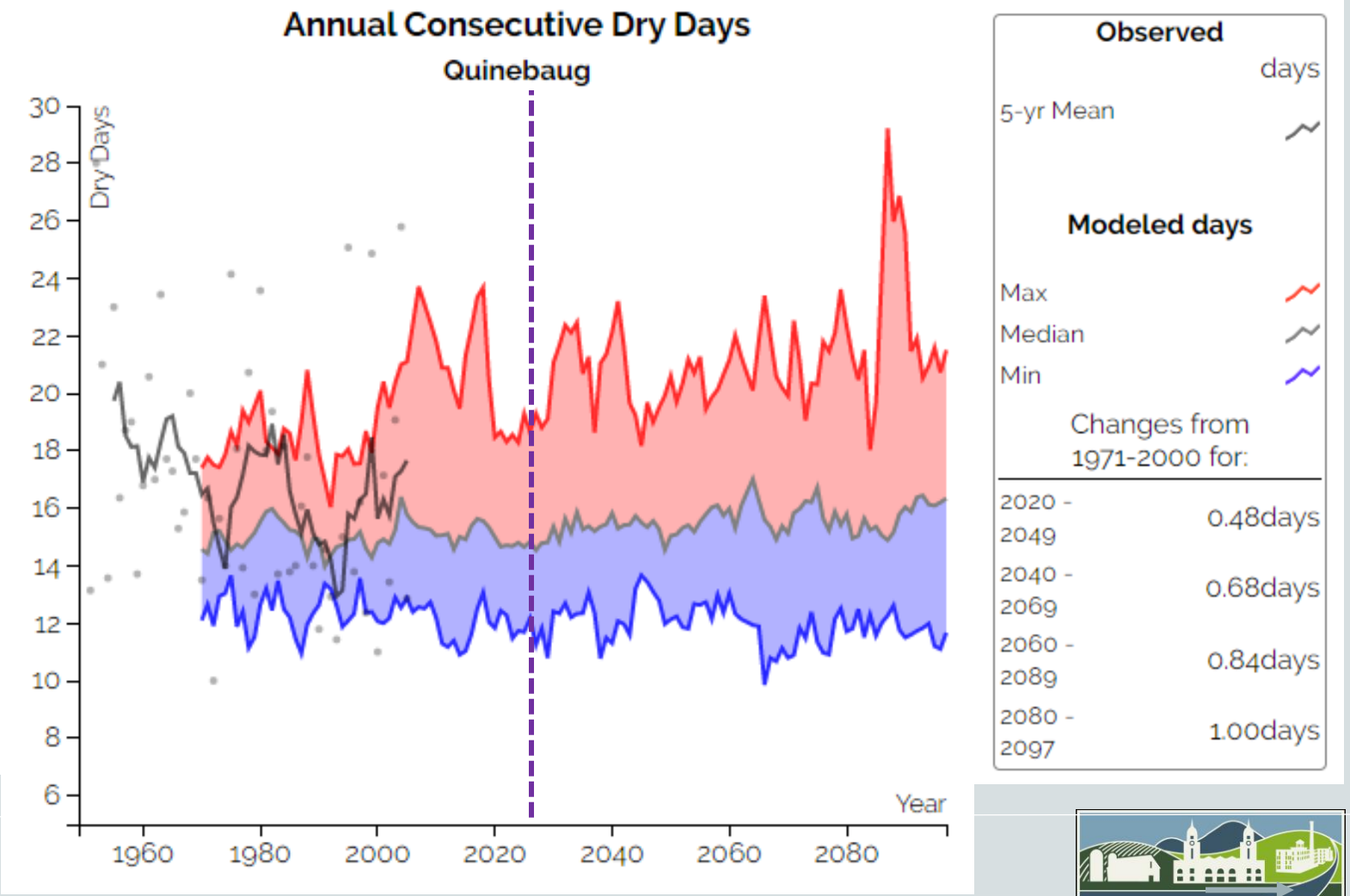
CHANGES IN PRECIPITATION

What to expect

1. More annual precipitation
2. More rainfall
3. Less snowfall
4. More frequent heavy downpours
5. **Episodic drought**



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IMPACTS OF INCREASED PRECIPITATION

More disruptive flooding events, especially with undersize stormwater infrastructure

- Increased inland flooding
- Soils become saturated
- River flows rise
- Capacity of stormwater infrastructure is exceeded
- Impacts to property and critical infrastructure

Increased non-point source pollution

- Ecological damage to nearby waterbodies

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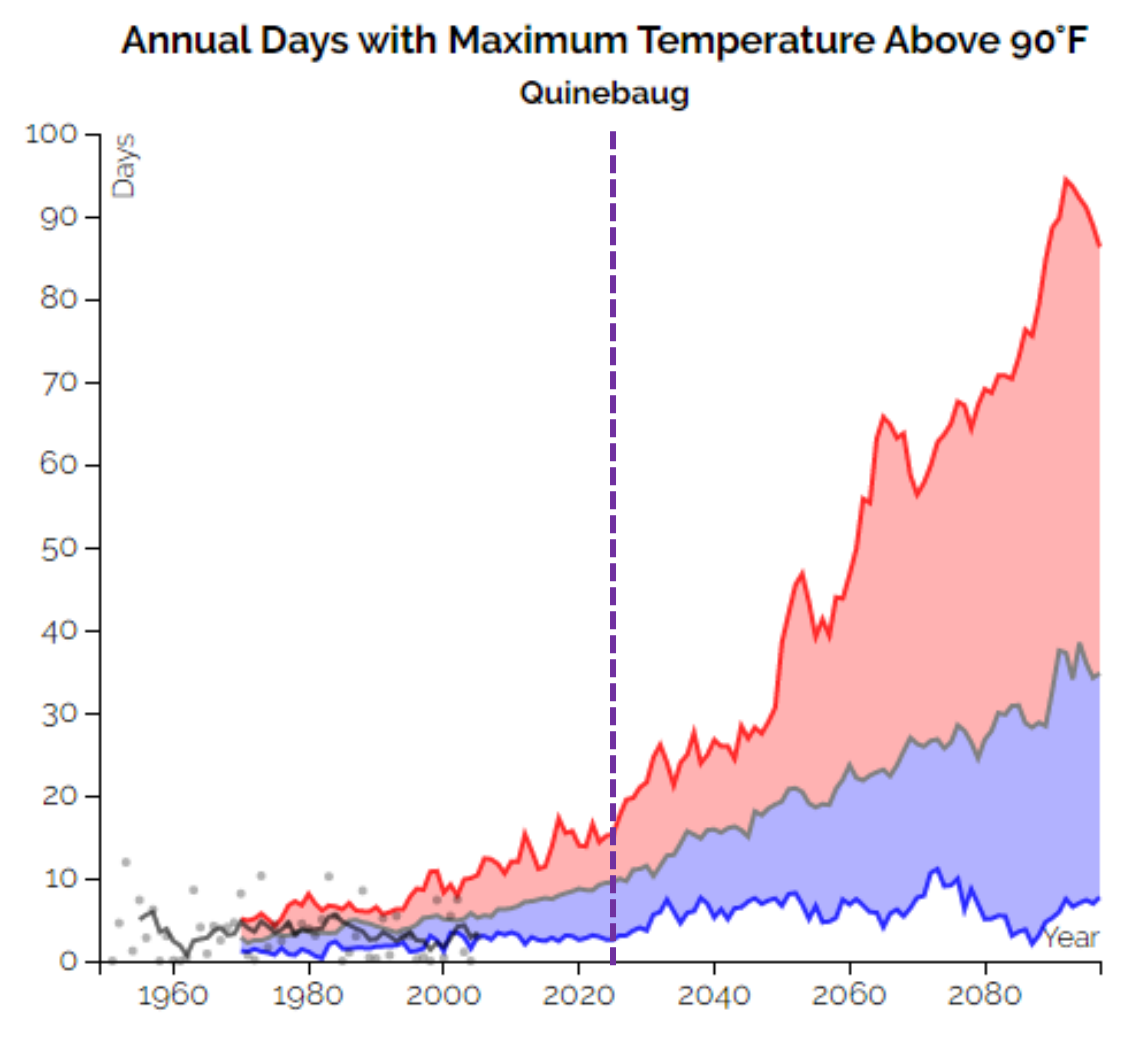
RISING TEMPERATURES

What to expect

1. More days above 90 degrees F



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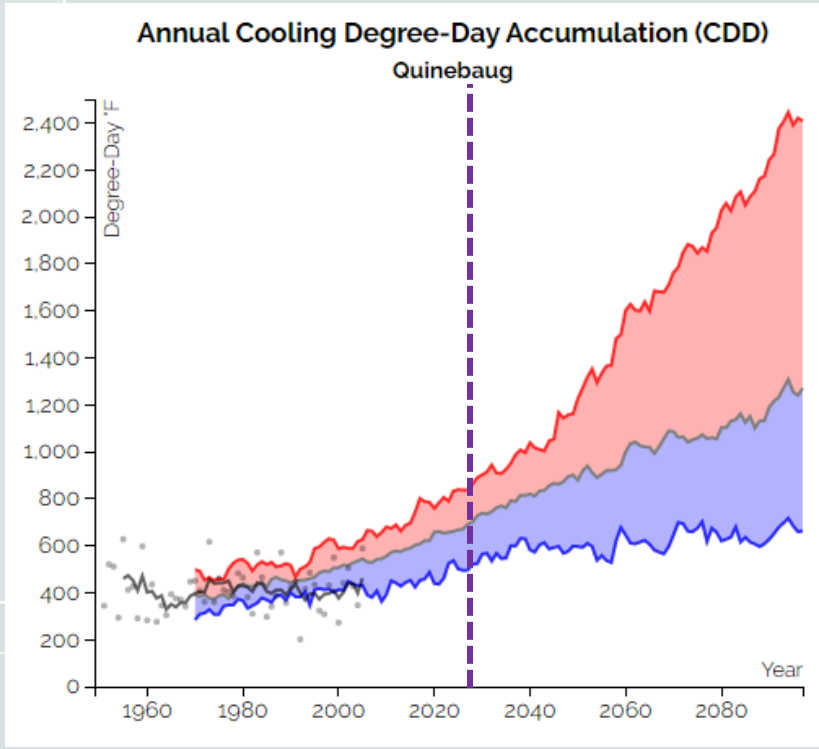
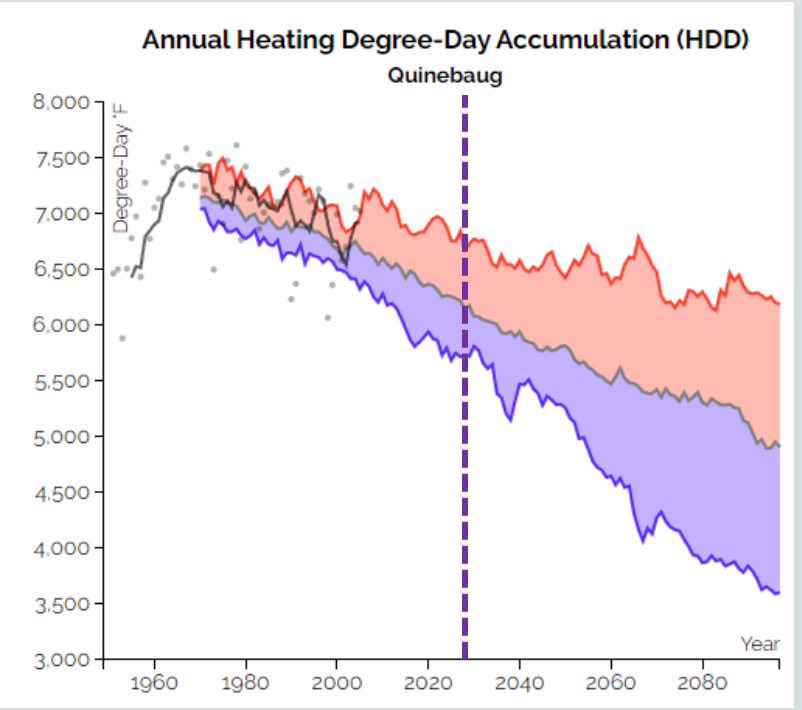
RISING TEMPERATURES

What to expect

1. More days above 90 degrees F
2. **More warm days and fewer cool days**





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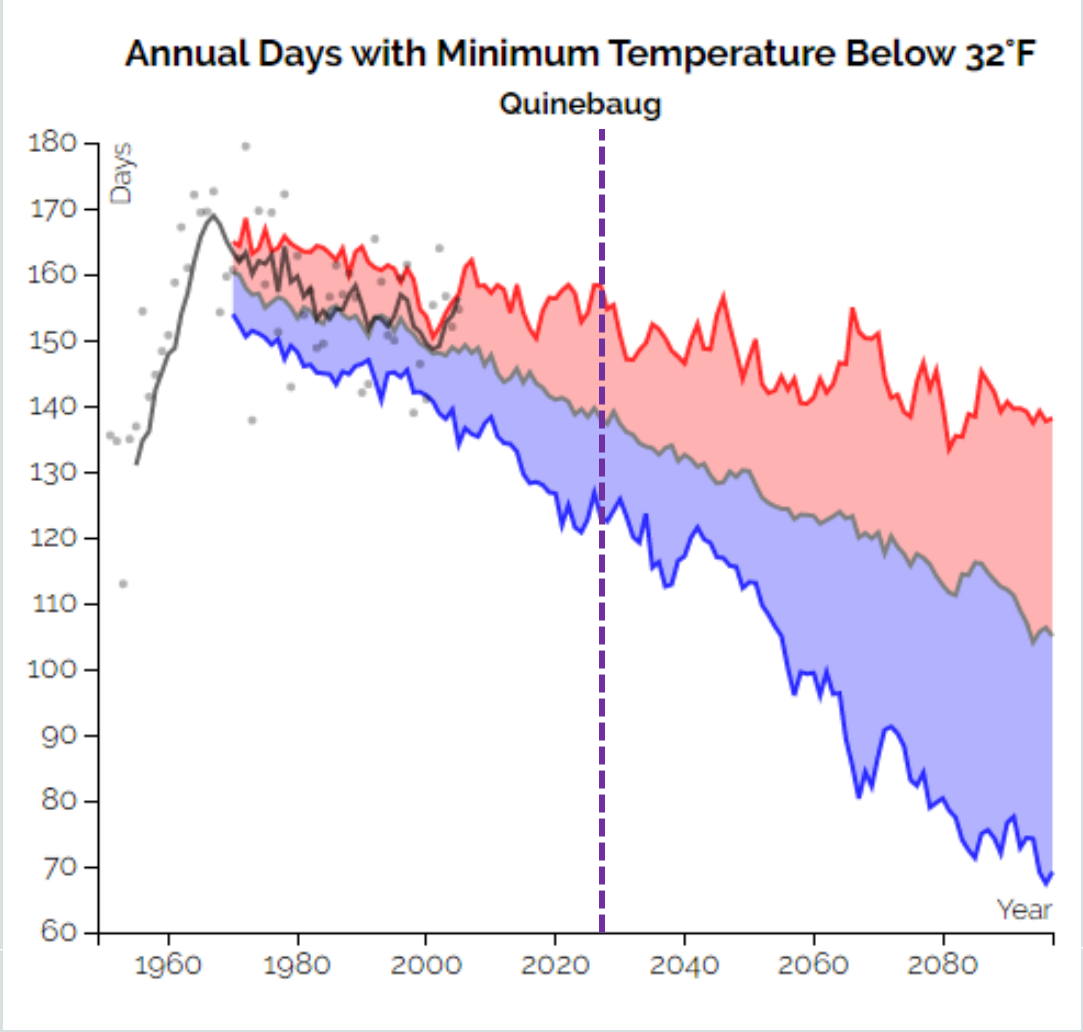
RISING TEMPERATURES

What to expect

1. More days above 90 degrees F
2. More warm days and fewer cool days
3. **Less distinct seasons**



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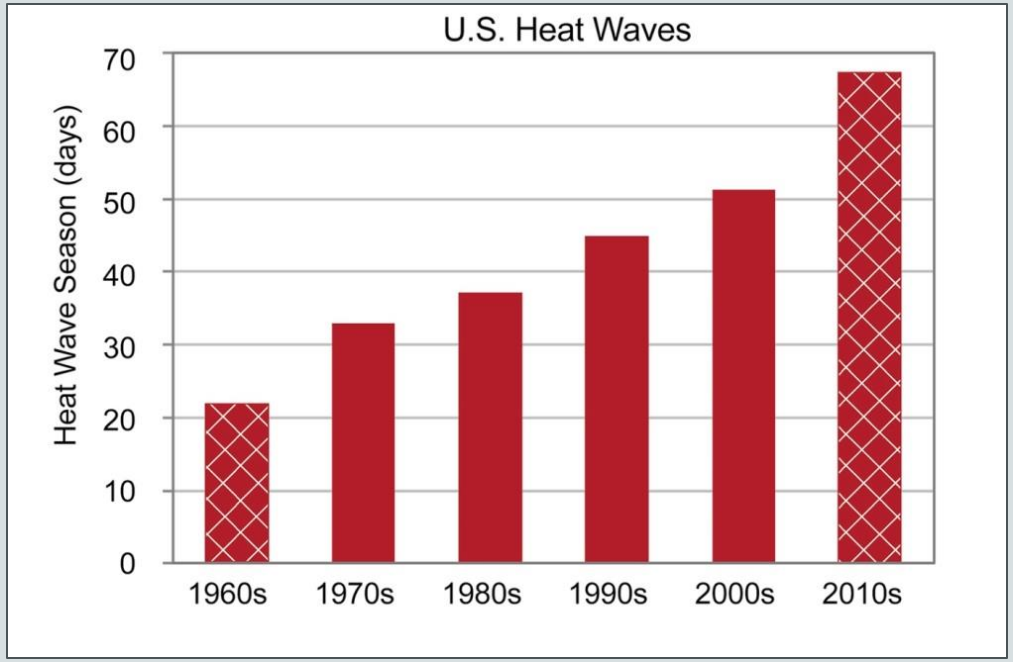
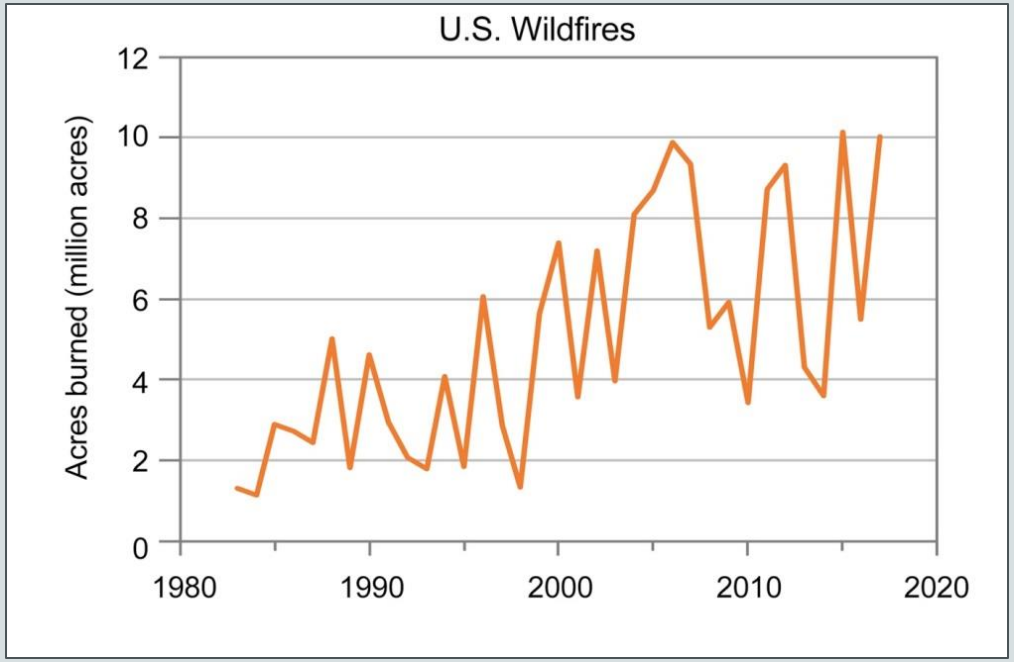
IMPACTS OF RISING TEMPERATURES

Nationwide Data

As the number and length of heat waves increase, so will the incidence of wildfires.





FOURTH NATIONAL CLIMATE ASSESSMENT, 2018

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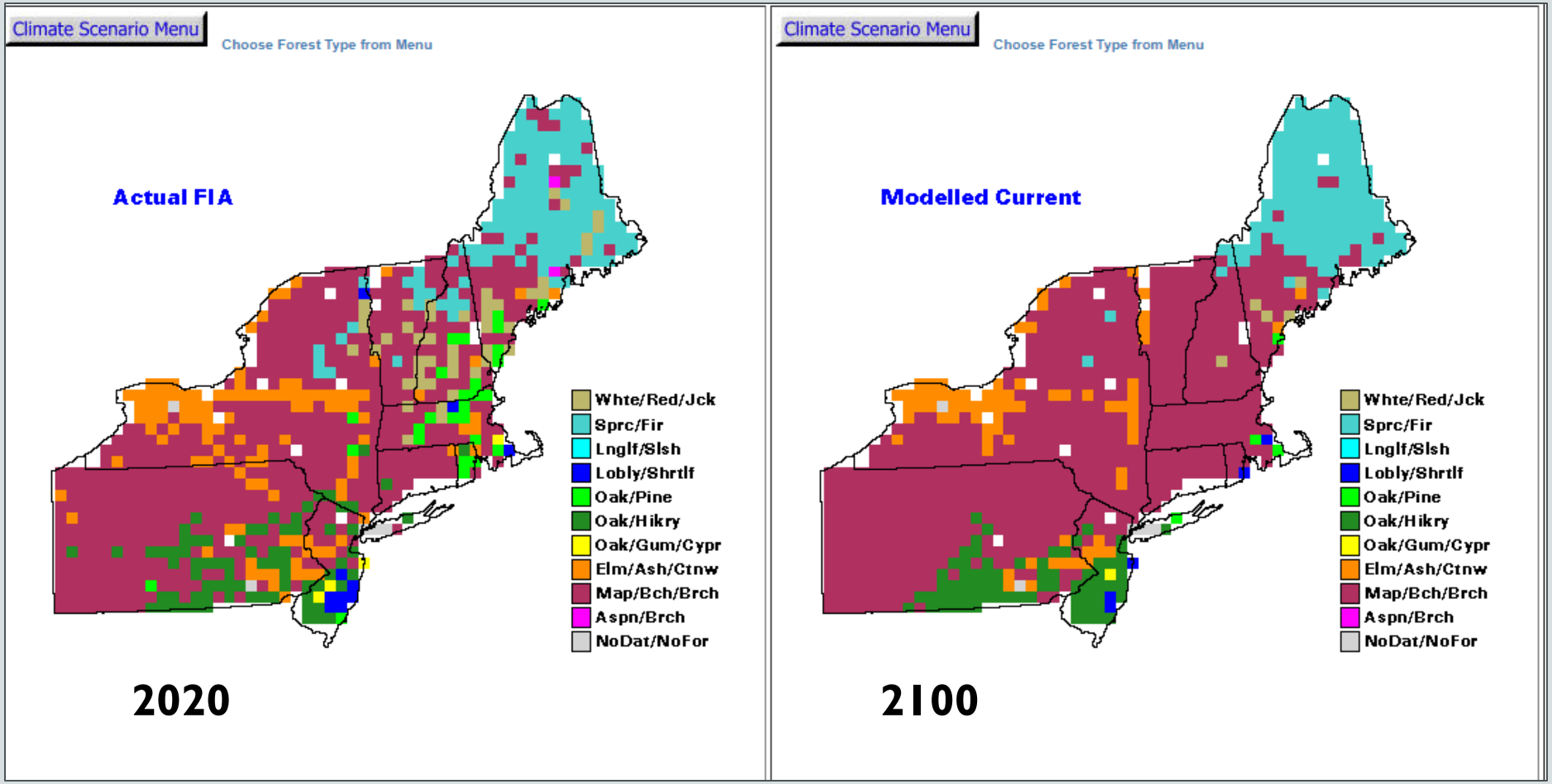
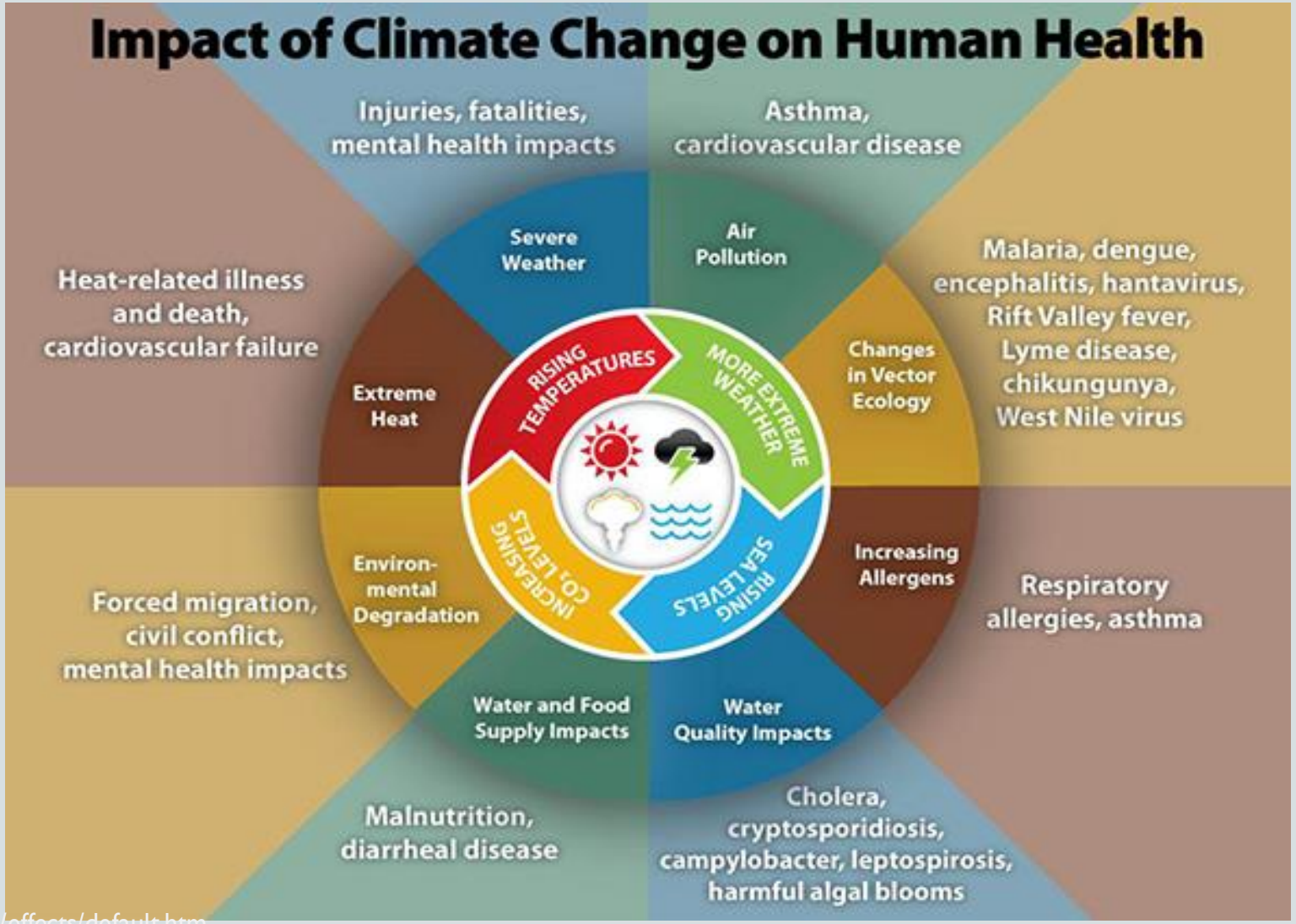
IMPACTS OF RISING TEMPERATURES

- Ranges of tree species are expected to move north
- Diversity of species will decrease
- Increases of invasive species are likely



https://www.nrs.fs.fed.us/atlas/tree/Iverson_etal_final_6-10-07_Appndx.pdf

IMPACTS OF RISING TEMPERATURES



https://www.cdc.gov/climateandhealth/effects/default.htm

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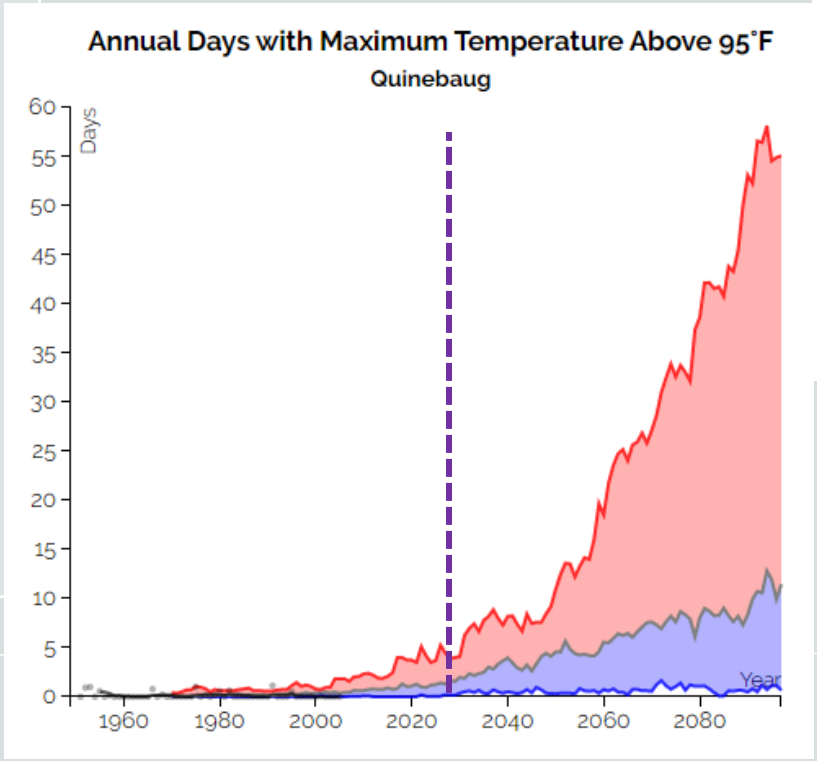
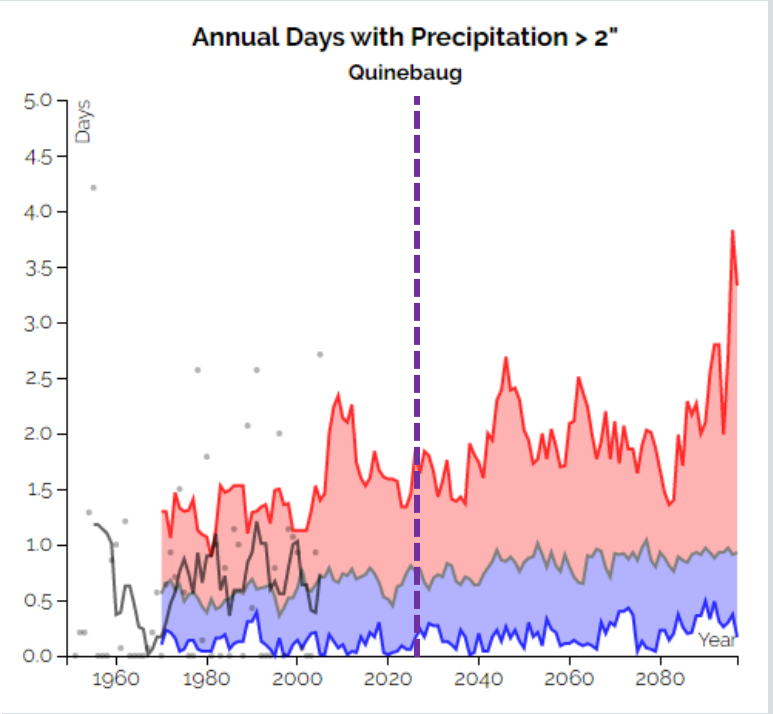
EXTREME WEATHER & HAZARDS

What to expect

1. More frequent extreme weather events
2. More intense extreme weather events





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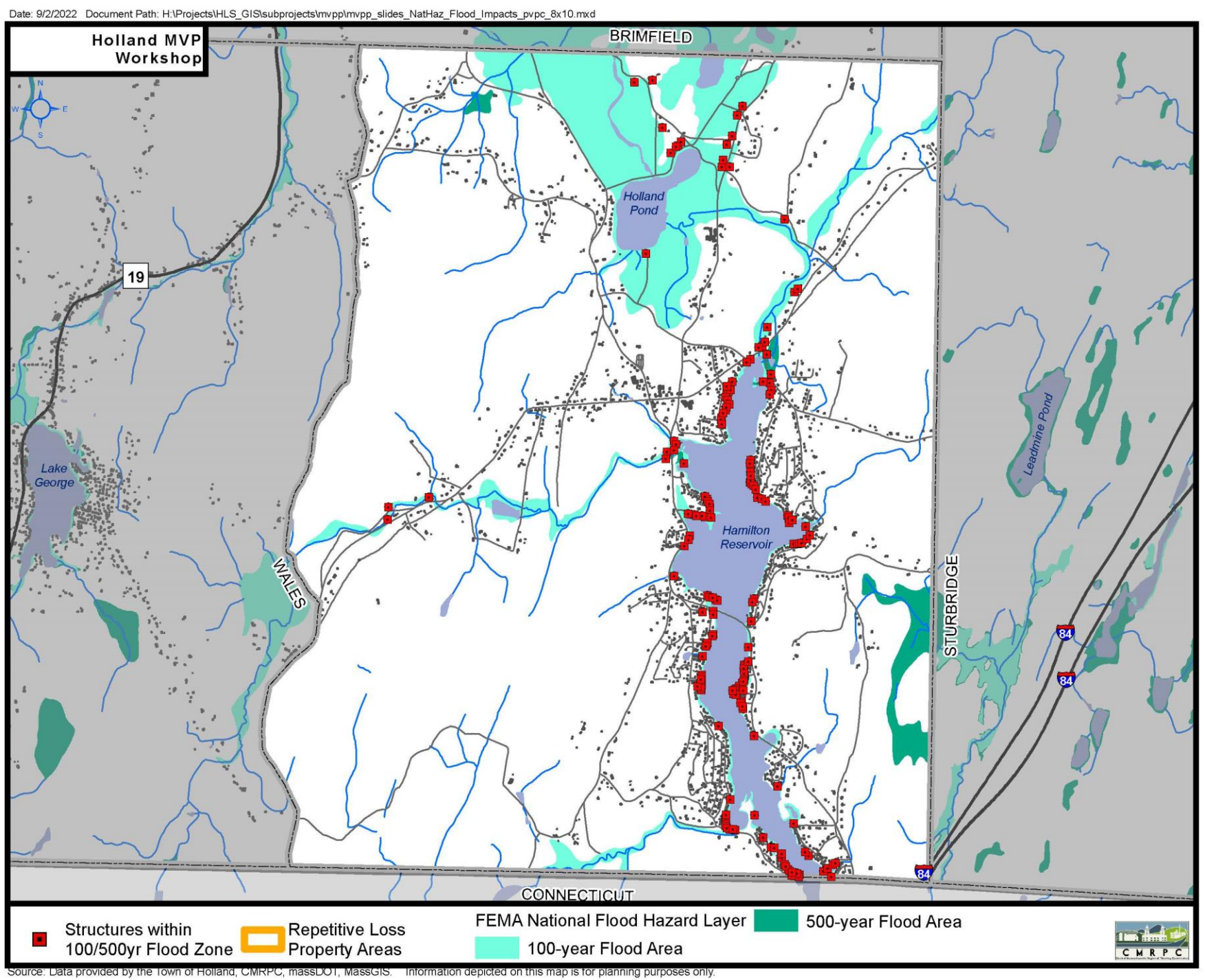
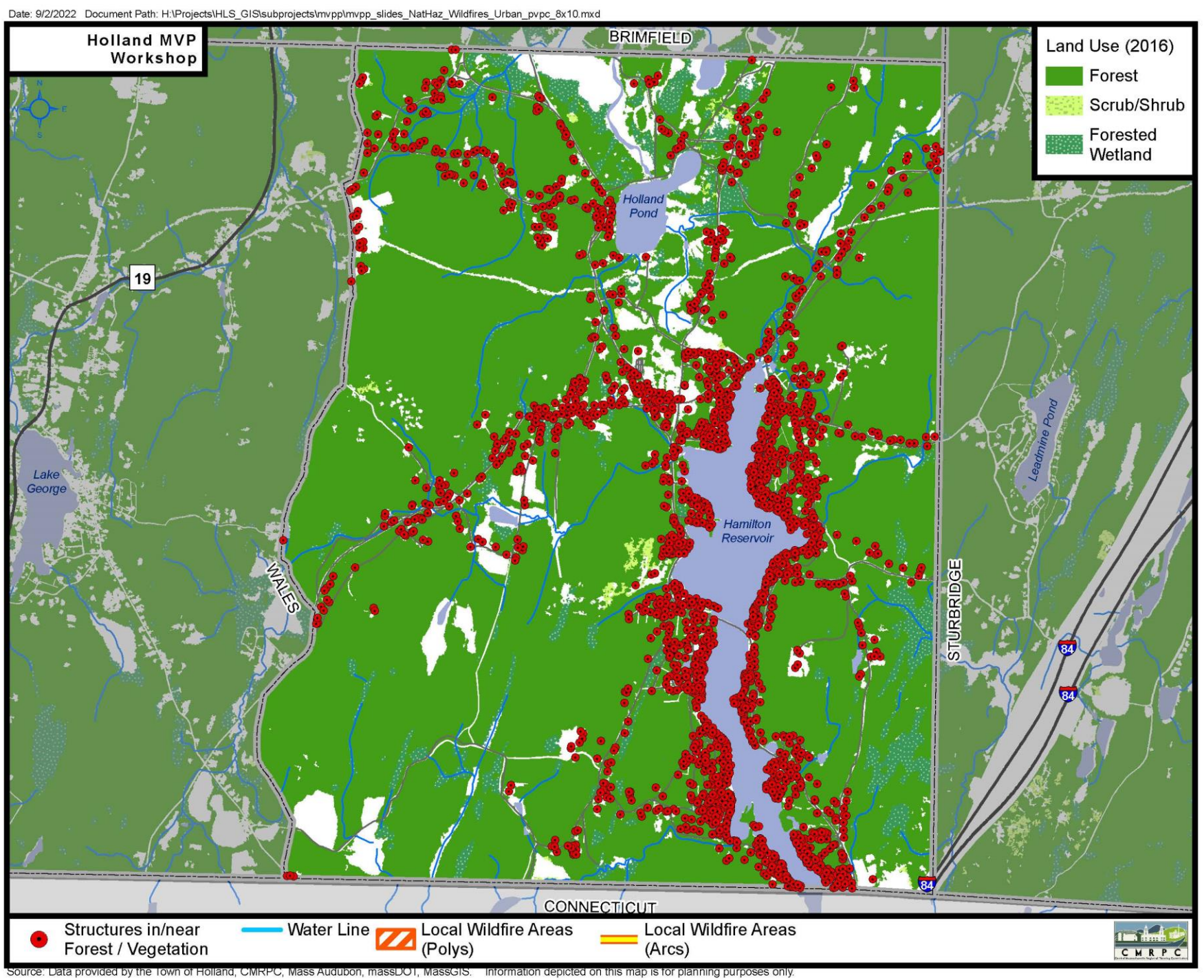
FLOODING RISKS



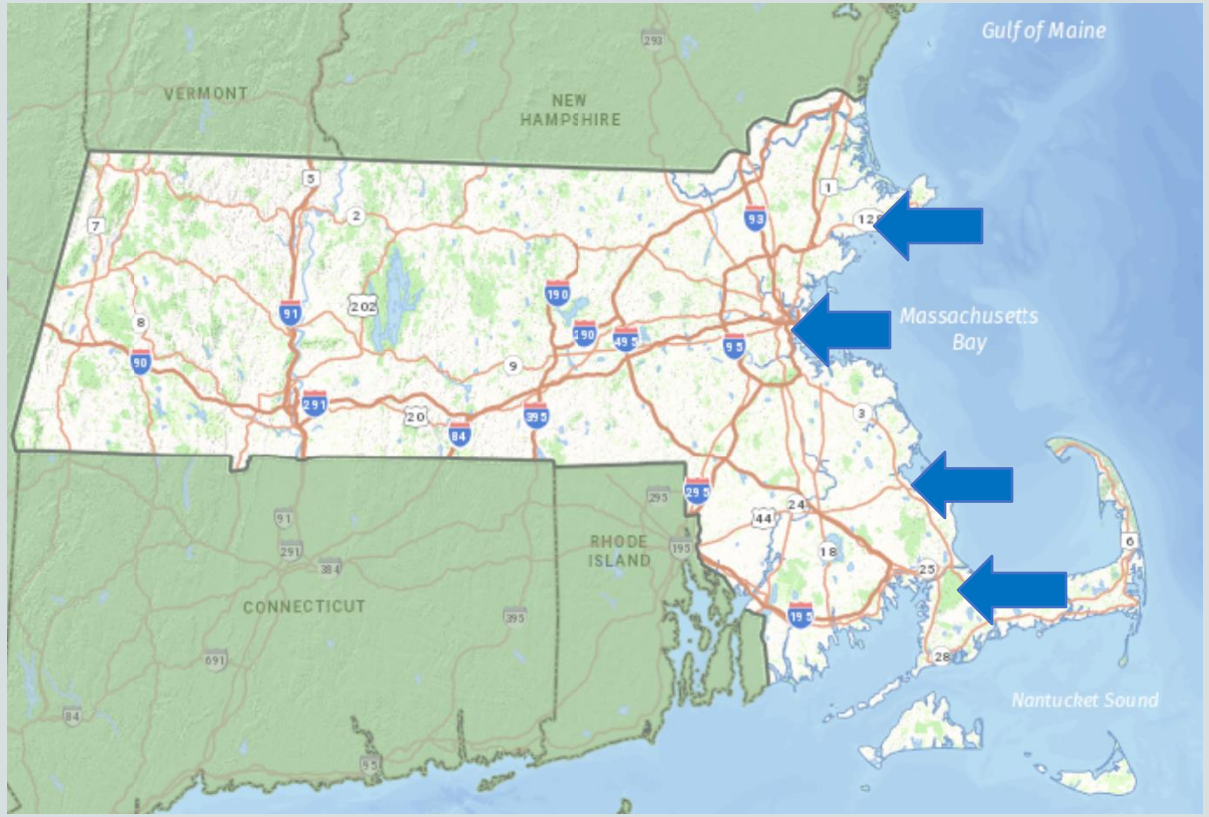
WILDFIRE RISKS



SEA LEVEL RISE

What to expect

1. Sea level rise, storm surge, and coastal flooding for 78 coastal communities in MA
2. Indirect impacts for inland communities



Sea level rise in coastal communities could indirectly impact Holland.

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CRB WORKSHOP STEPS AND FINDINGS

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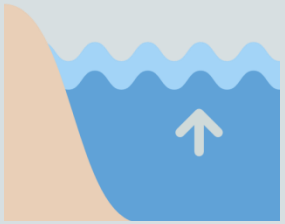
STEP ONE: HAZARD IDENTIFICATION



- **Flooding**
  - Riverine
  - Street

- **Landslides**
- **Mudslides**

- **Tornadoes**

- **Drought**
- **Dust Storms**

- **Tsunami**

- **Hurricanes/ Nor'easters**

- **Wild Fires**

- **Winter Storms**
  - **Snow**
  - **Ice**

- **Extreme Temperatures**
  - **Heat**
  - **Cold**

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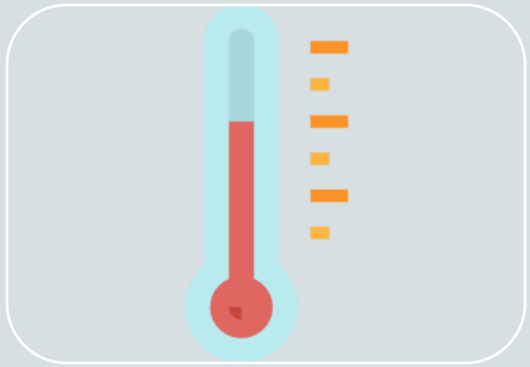
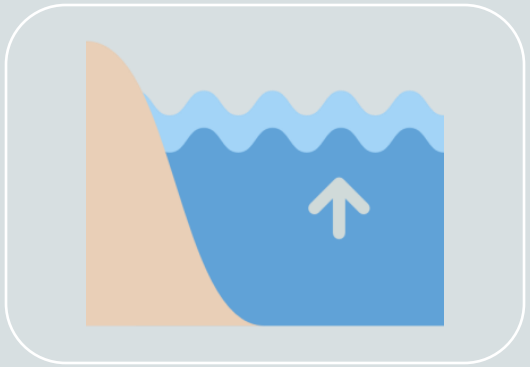
TOP HAZARDS FOR HOLLAND



Extreme Temperatures

Drought & Invasive Species

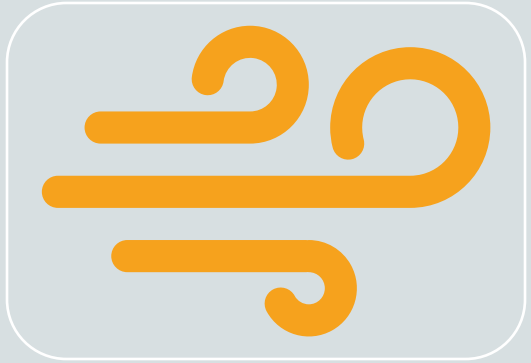


Flooding

Inland & Coastal

Winter Storms

Snow & Ice



Severe Storms

Wind

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PRIMARY TOPIC AREAS

- Infrastructure
- Society
- Environment

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STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

Community Resilience Building Risk Matrix www.CommunityResilienceBuilding.com

H-M-L priority for action over the Short or Long term (and Ongoing)
V = Vulnerability S = Strength

Top Priority Hazards (tornado, floods, wildfire, hurricanes, earthquake, drought, sea level rise, heat wave, etc.)

Top 4 Hazards

Features	Location	Ownership	V or S					Priority H-M-L	Time Short Long Ongoing
Infrastructural									
Societal									
Environmental									

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STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES

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Top 4 Hazards

Features	Location	Ownership	V or S					Priority H-M-L	Time Short Long Ongoing
Infrastructural									
Dam									
Societal									
Senior Housing									
Environmental									
Wetlands									

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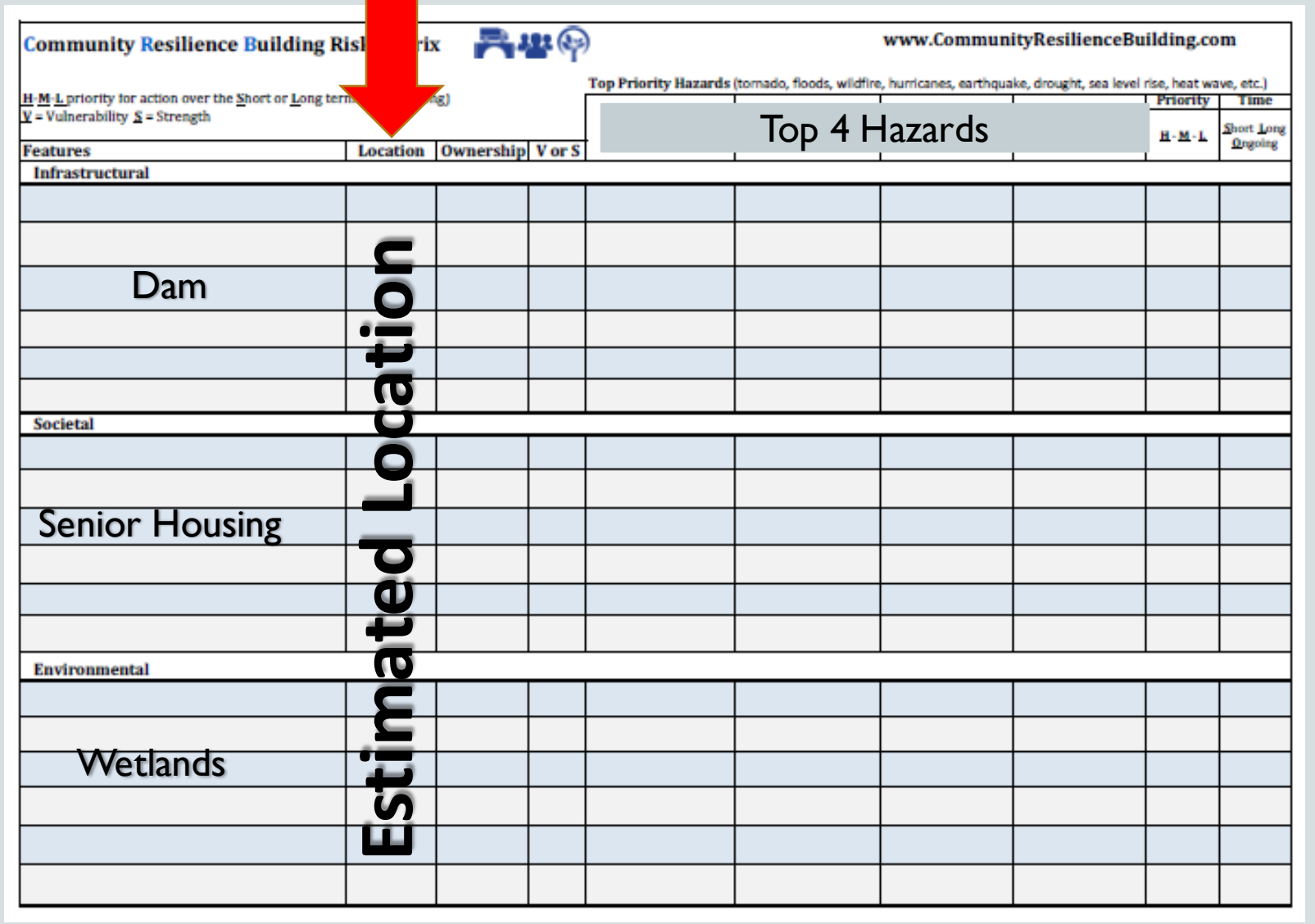
STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES



Community Resilience Building Risk rix

www.CommunityResilienceBuilding.com

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Infrastructural									
Dam									
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Environmental									
Wetlands									

Estimated Location

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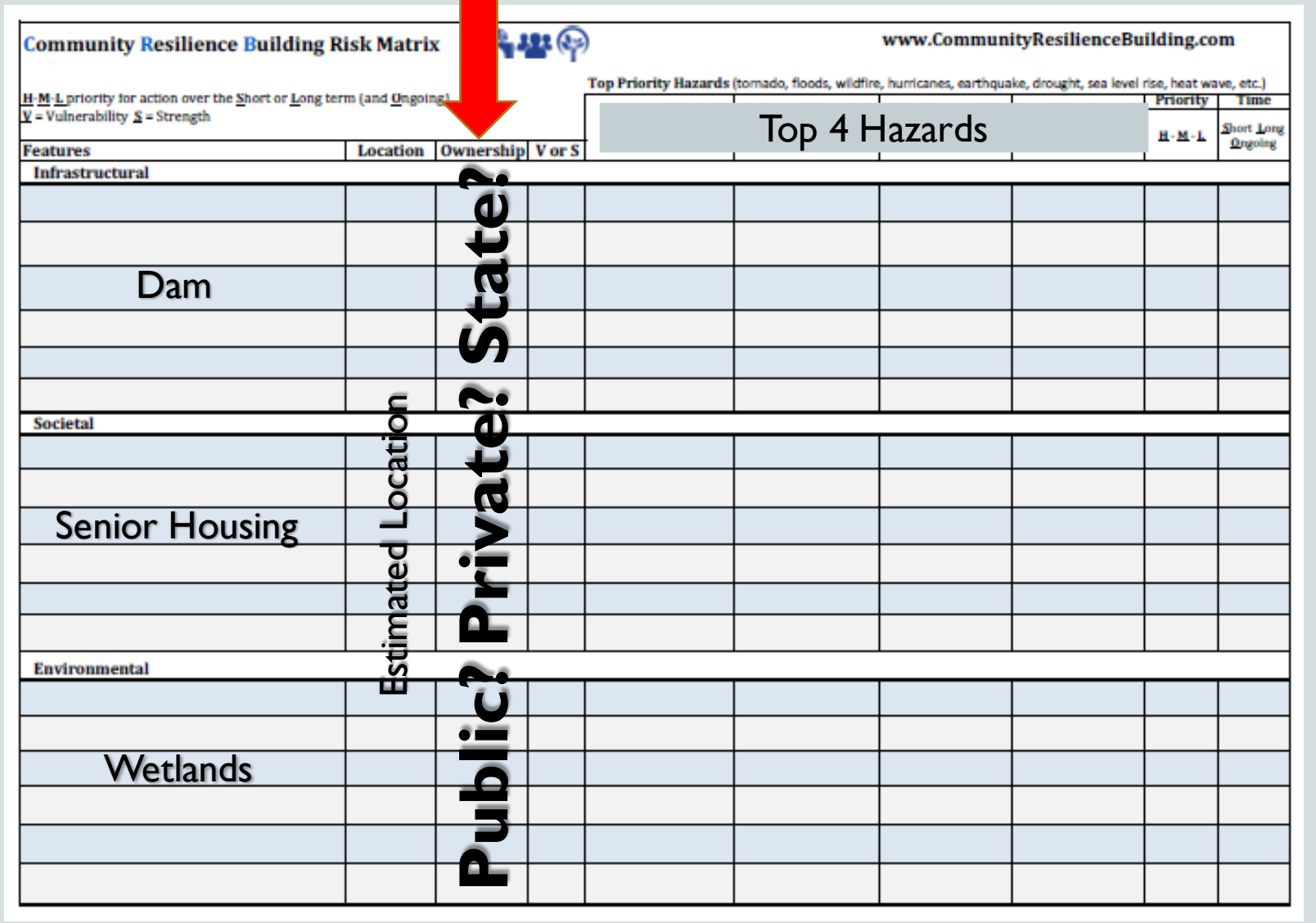
STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES



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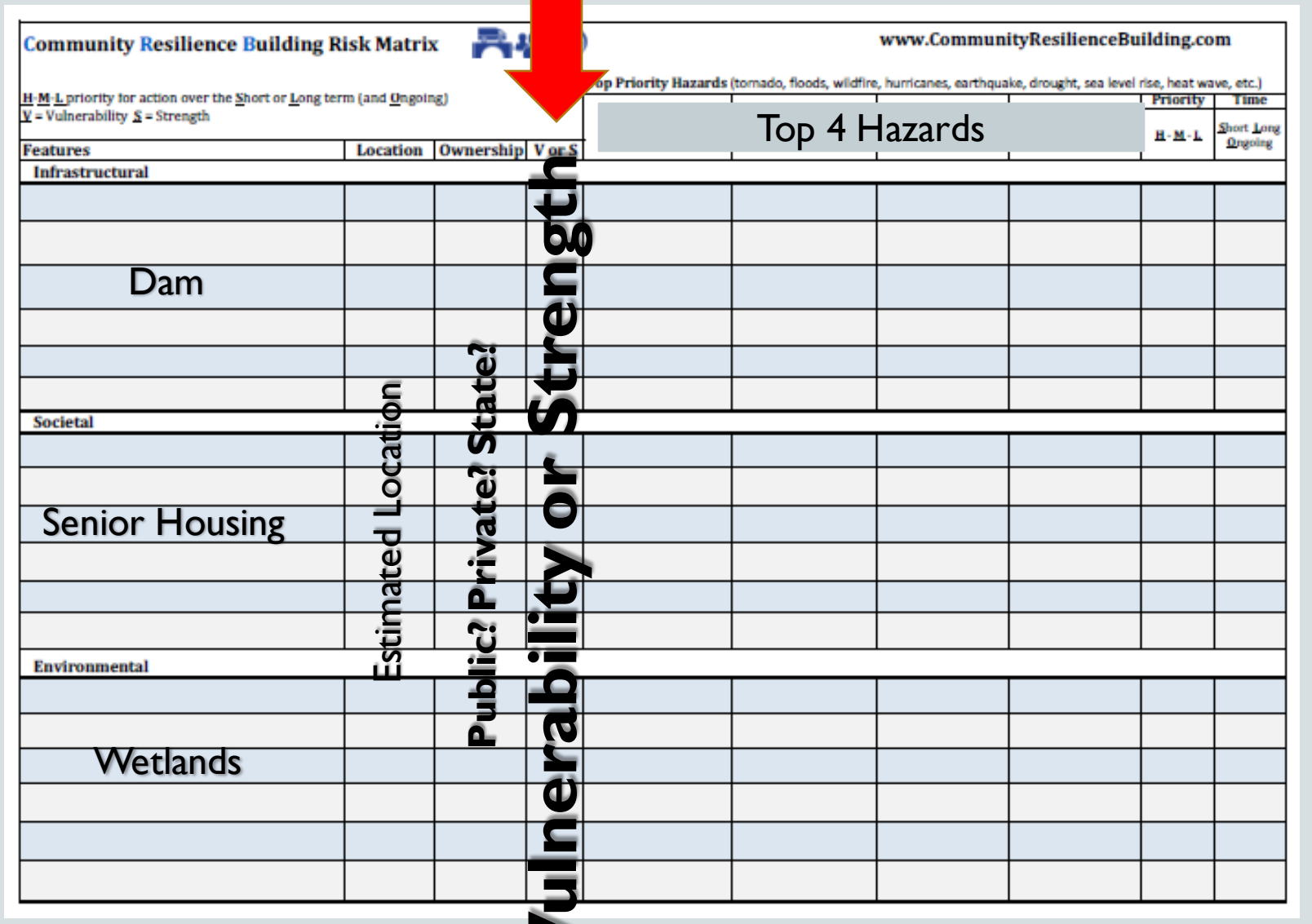
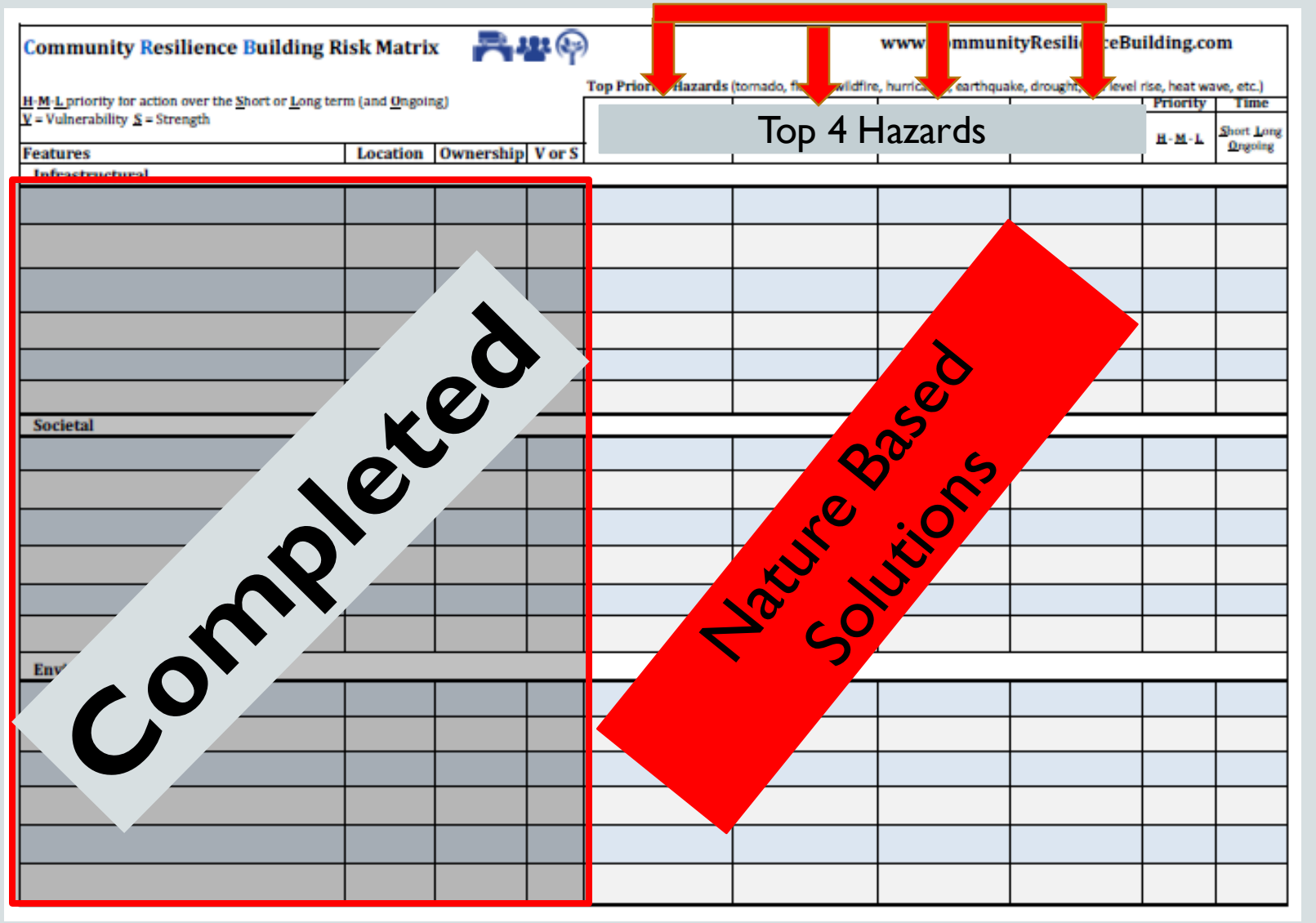
STEP TWO: WHAT, WHERE, WHO AND VULNERABILITIES



STEP THREE: ACTIONS, PRIORITY AND TIMELINE



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INFRASTRUCTURE FINDINGS

Concerns

- Causeway
- Hamilton Reservoir Dam
- Road damage (caused by stormwater, temperature changes, and aging infrastructure)
- Aging and undersized culverts, stormwater drainage challenges
- Tree damage and power outages
- Electrical and Broadband Cable Networks
- Water supply for fire fighting
- Alternative Power Supplies

Strengths

- Community Center
- Regional Shelters at Tantasqua Regional High School and Brimfield Elementary School
- Municipal Buildings in Town
- Capped Landfill near Town Hall

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SOCIETAL FINDINGS

Concerns

- Flooding of Private Homes Around the Reservoir
- Lack of Senior Housing
- Crumbling Housing Foundations
- Enforcement of Regulations and Policies
- Privately-owned Roadways
- Engagement of Youth Population

Strengths

- Holland Rod and Gun Club
- Friends of Hamilton Reservoir Association
- CodeRED Alert System
- Emergency Shelters
- Mutual Aid (Ambulance Service with Brimfield and Wales)
- Residents and Community Resilience
- Emergency Personnel

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ENVIRONMENTAL FINDINGS

Concerns

- Water quality of waterways and surface waters in Town
- Wells around the lake going dry
- Invasive pests damaging trees, creating outages and fuel for wildfires
- Invasive species on conservation lands and in surface waters
- Ecological effects of dying trees (ex. erosion)
- Flooding caused by beavers (& potential property damage)
- Tick- and mosquito-borne illness

Strengths

- Hamilton Reservoir
- Walking and hiking trails
- Conservation land
- Wetlands
- Wildlife
- Water resources in Town

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TOP PRIORITY ACTIONS

1. Develop a Town-wide Stormwater Management Plan.
2. Upgrade/repair existing culverts.
3. Update the Town's Master Plan using a robust community engagement process.
4. Develop and distribute education materials regarding runoff, fertilizer usage, and erosion. Create a comprehensive non-point source pollutant plan.
5. Continue working with the Friends of Hamilton Reservoir to provide education regarding invasive species and to aid in invasive species management.
6. Install backup power generators/emergency power supplies at the Town Hall/Police Department, Elementary School, and Highway Department.
7. Continue the Town-wide street tree inventory assessment and continue identifying trees for removal. Identify additional financial resources to fund a tree removal/replacement program to protect power lines.

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COMMUNITY SURVEY

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SURVEY OVERVIEW

- The survey officially launched on December 1, 2022, and closed on December 28, 2022.
- A total of 44 responses were collected.
- The estimated completion rate was 64%.
- On average, the survey took approximately 6 minutes to complete.

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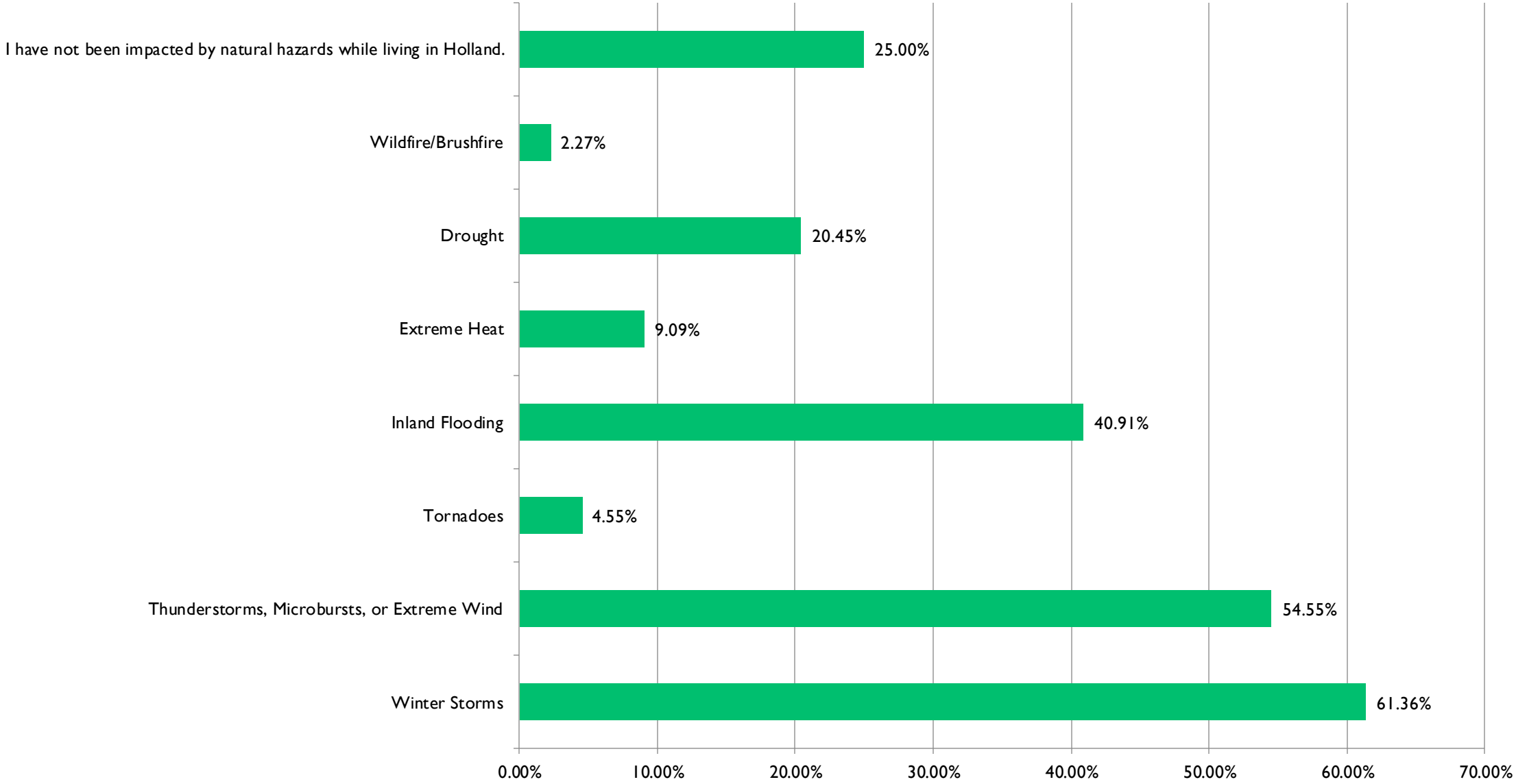
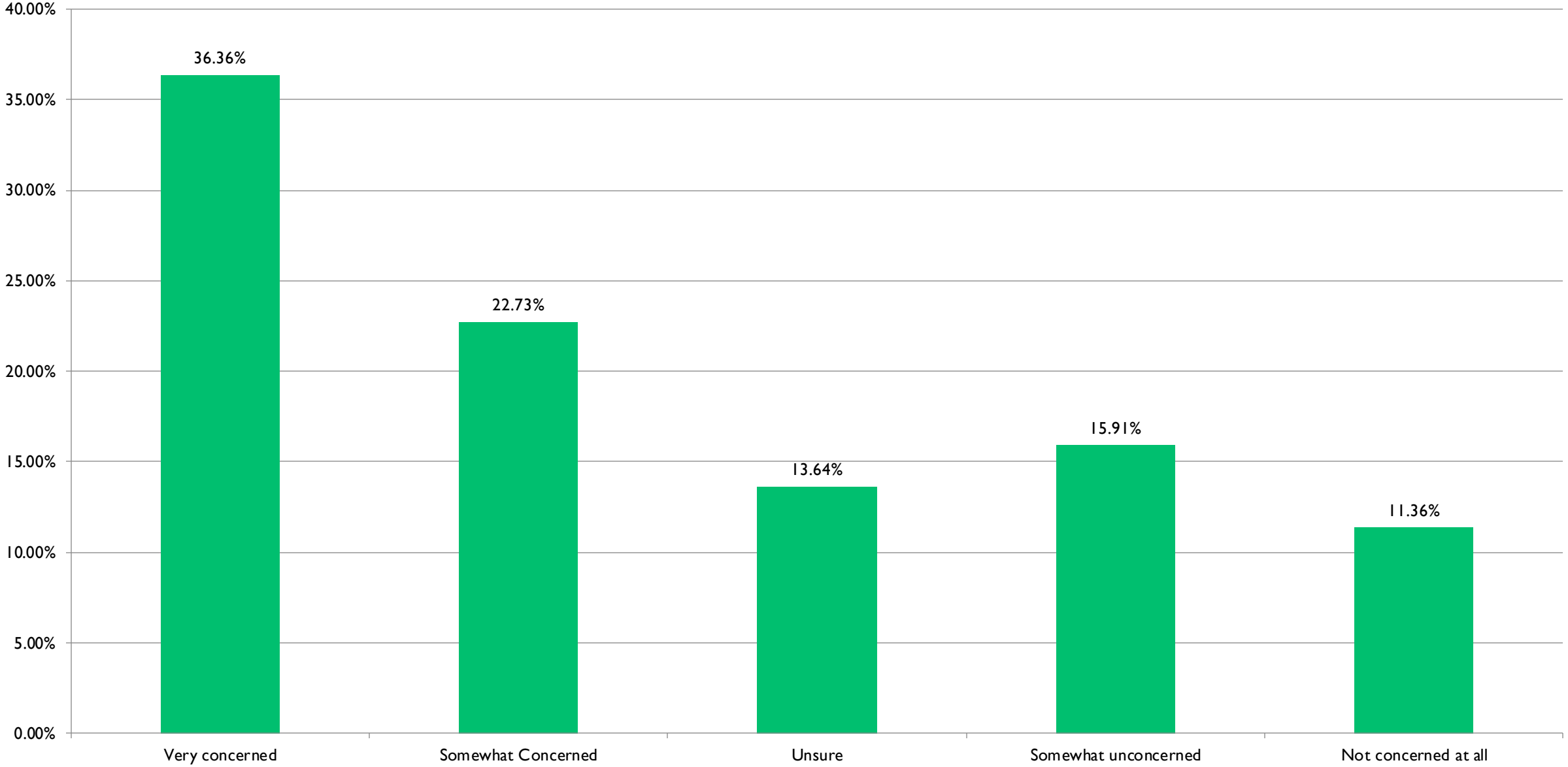
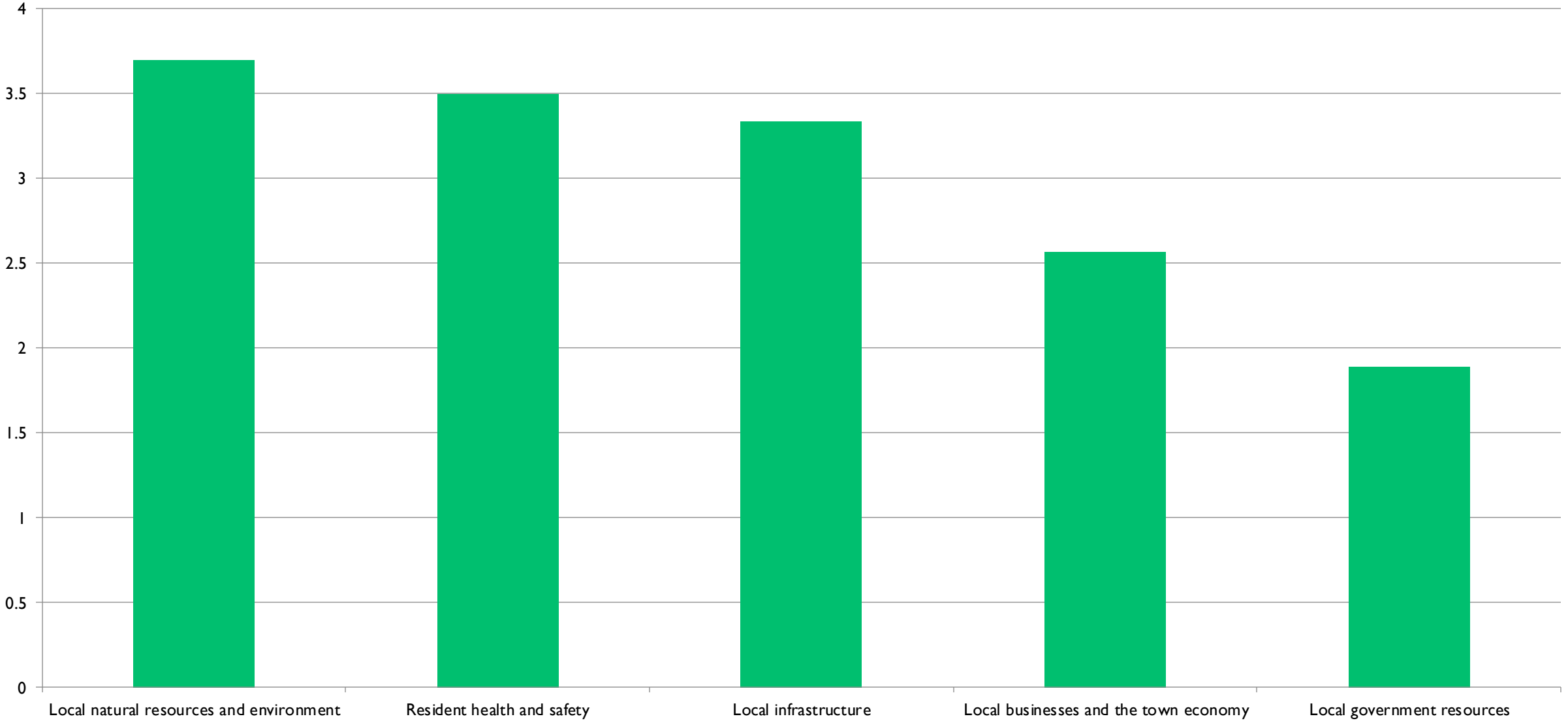
Has your family or property been impacted by any of the following natural hazards while living in Holland? Select all that apply.



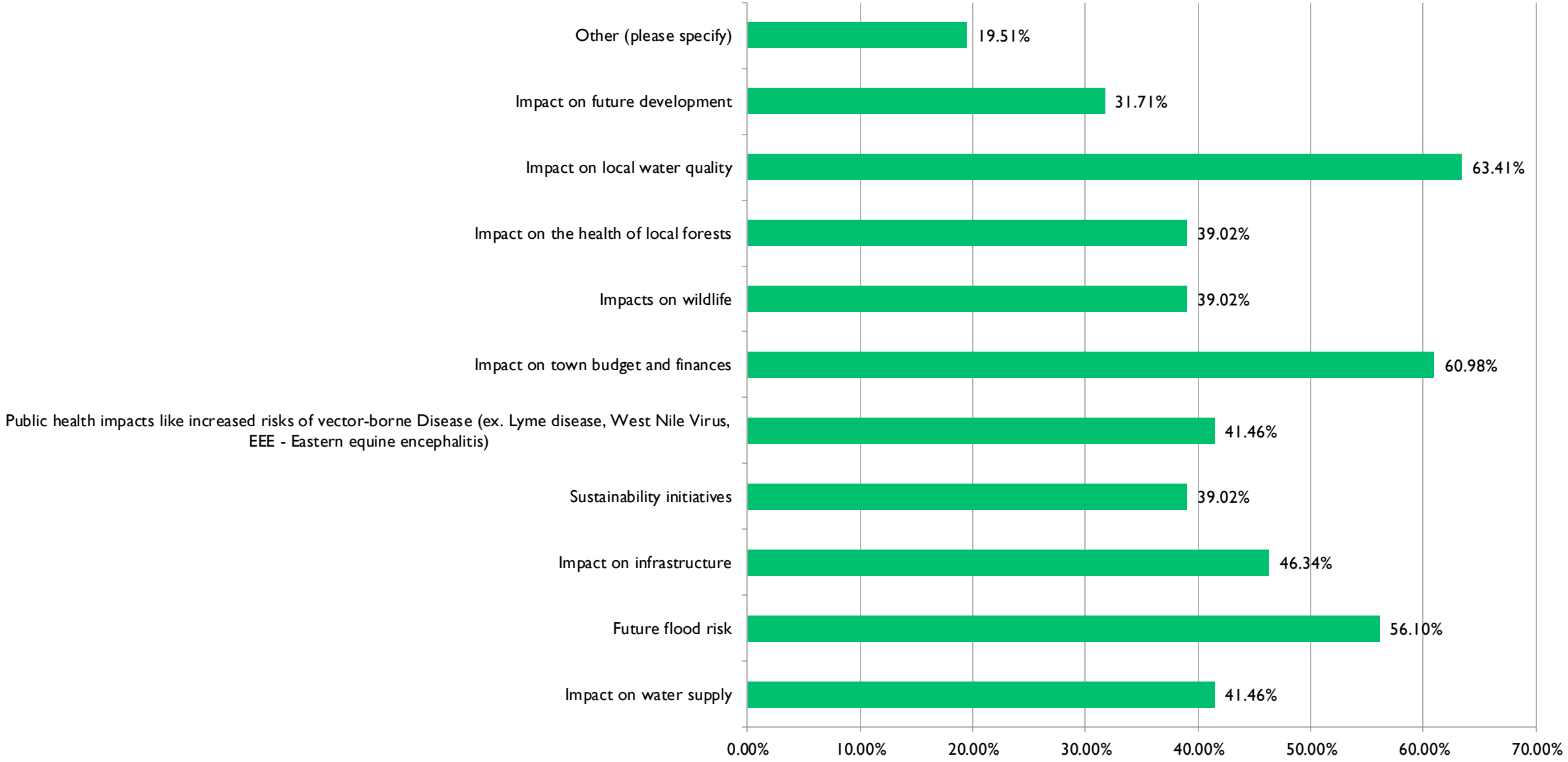
How concerned are you about the impacts that climate change will have on the Town of Holland (the local infrastructure, economy, environment, or other town residents)?



What community assets are you most concerned about when you consider the potential impact of climate change on the Town of Holland? Rank the responses below in order from most concerned (1) to least concerned (5).



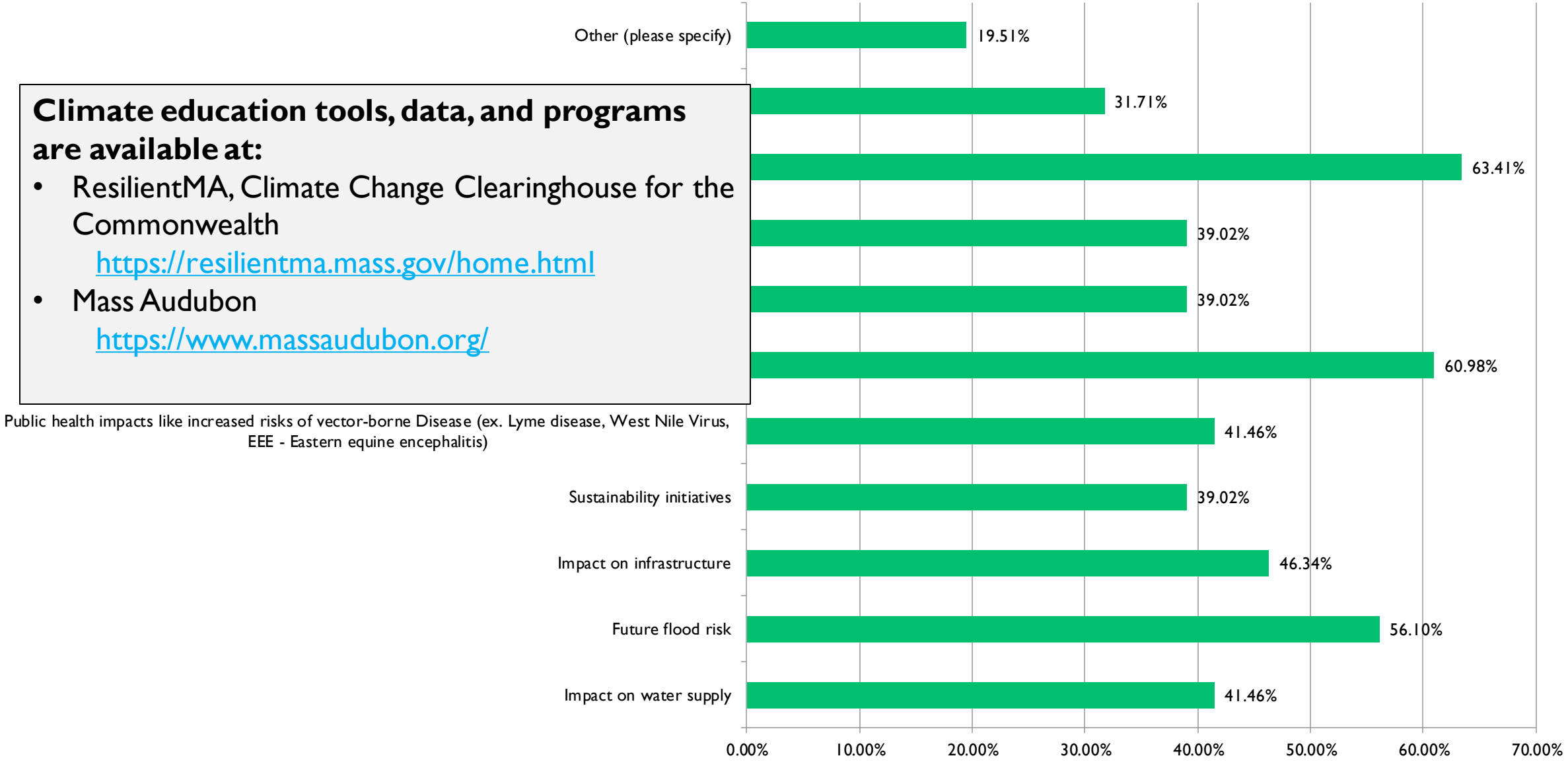
Would you be interested in learning more about any of the following climate change topics in the future? Select all that you are interested in.



Would you be interested in learning more about any of the following climate change topics in the future? Select all that you are interested in.

Climate education tools, data, and programs are available at:

- ResilientMA, Climate Change Clearinghouse for the Commonwealth
  https://resilientma.mass.gov/home.html
- Mass Audubon
  https://www.massaudubon.org/



NEXT STEPS

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NEXT STEPS FOR MVP PROCESS

- Final report submitted to EEA by June 30, 2023
  - Projected submission in late March
- Holland receives "MVP Community" certification
- Annual reporting by Core Team
- Develop and apply for MVP Action Grants

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NEXT STEPS FOR HMP UPDATE

- Draft plan reviewed by MEMA
- FEMA reviews the plan and issues conditional approval
- BOS resolution vote to adopt the plan
- FEMA issues plan approval
- Plan is in effect for 5 years

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MVP ACTION GRANT

Next round will likely open March 2023

up to $2 million for an individual community *

up to $5 million for regional projects*

one year grant cycle (typically) July 1st- June 30th

25% Match - Cash or In-kind (Non-State Funds)

Discuss grant ideas with MVP coordinator to develop competitive application

* According to FY23 BID

https://resilientma.org/mvp/

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CONTACT US

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CMRPC Project Leaders

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Wenzheng Wang, Associate Planner, wwang@cmrpc.org

Executive Office of Energy and Environmental Affairs

Andrew Smith, MVP Coordinator for the Greater Connecticut River Valley, Andrew.b.smith@state.ma.us

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QUESTIONS OR ADDITIONAL FEEDBACK?

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