CITY OF ROCHESTER

Climate Change Resilience Plan

Preparing Rochester for the impacts of climate change is critical to the city's continued economic prosperity, and will ensure that Rochester remains a safe, inclusive, and vibrant place to live and visit.

City of Rochester, NY
Lovely A. Warren, Mayor

MEETING IN A BOX

WHAT IS A MEETING IN A BOX?

The Meeting in a Box "kit" contains everything needed to hold your own discussion including instruction sheets for the host/facilitator, discussion questions, worksheets for participant responses, and directions for recording and returning responses.

HOST GUIDE

1. INVITE

Identify 5-10 participants to invite to your meeting. This is the best size for a small group discussion, but if you are comfortable, you can invite more people. If you have a larger group, simply split the participants into smaller groups when they arrive. Send meeting invitations via e-mail, or mail or call invitees.

2. REMIND

Call and/or e-mail the people you invited one to two days before the scheduled meeting.

3. SET UP

Select a location where all participants can comfortably sit together. Sort copies of meeting materials into sets for participants. Have enough pens/pencils available. Feel free to take photos and provide refreshments.

4. FACILITATE (Meeting format)

Lead a small group discussion, making sure the meeting stays on topic and all questions included for discussion are answered. You are also a participant and can share your opinions as an equal member of the discussion, but make sure everyone has a chance to express his/her opinion. If you have a group larger than 5-10 people, simply split the participants into smaller groups and have each group select a leader.

Make sure all participants sign in on the attached sign in sheet (to be returned)

Start your meeting with brief introductions, and review the ground rules:

- Everyone should have an equal opportunity to speak
- Focus on your group's discussion
- Avoid making things too personal
- Be willing to listen to other people's views and have an open mind
- Be honest, but avoid criticizing others' viewpoints
- Be concise
- Avoid interrupting the facilitators or other group members

5. FACILITATE (Pop-Up Format)

If you are using these materials for a Pop-Up station at a larger event, you will need one or two facilitators, depending on how busy the event is. Generally a pop up event should last no longer than two hours. Greet each participant, walk them through the exercises, then thank them for participating. Be sure to collect contact info

in the sign in sheet from those who are willing to share it!

6. RETURN

Collect all materials, including the individual responses. Scan and return materials by email to: andre@highland-planning.com

EXAMPLE MEETING AGENDA

Introductions (5 minutes)
Presentation (5 minutes)
Exercise A (10 minutes)
Exercise B (30 minutes)

PRESENTATION

The is presentation has four slides,

- one with background information about climate change generally
- one with background information about impacts in Rochester
- one with information about the resilience concept
- and one with background on the project itself.

If your meeting venue is equipped with projection or a screen, you can use these four slides to do a short presentation. If it is not, printing the four sheets as an informational packet and handing them around will do just as well.

If you are using the materials for a pop-up station, you can print the four pages as a packet, a single informational board with four sections, or four informational boards.

How does the CCRP fit into existing efforts?

Rochester 2034 (in progress)

- The City's comprehensive plan for the next 15 years framework
- Targets strategies in areas including land use, housing, public health/ safety, natural resources, transportation, and economic opportunity
- Establishes "resilience" as a policy principle to guide decision-making
- Calls for the development of a Climate Change Resilience Plan

Climate Action Plan (2017)

- Outlines Rochester's approach to reduce greenhouse gas emissions, mitigate, and adapt to climate impacts

Climate Vulnerability Assessment (2018)

- Identifies in greater depth Rochester's key strengths and vulnerabilities.
- Provides adaptation and preparedness recommendations, including the development of a resilience plan.

Climate Change Resilience Plan (2019, in progress)

- Establishes a vision for a climate resilient Rochester
- Identifies goals and strategies to achieve resilience for the City's infrastructure, natural resources, and socioeconomic resources

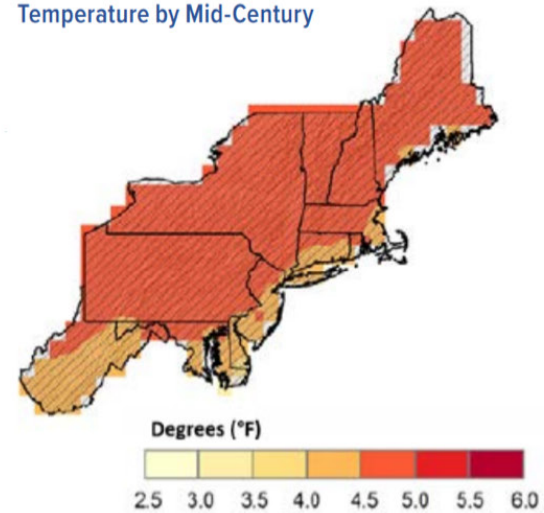
Other Existing Plans and Ongoing Efforts
(that also inform CCRP process)

- City of Rochester Comprehensive Access and Mobility Plan (2019)
- Monroe County Hazard Mitigation Plan (2017)
- Genesee-Finger Lakes Regional Critical Transportation Infrastructure Vulnerability Assessment (2016)
- Finger Lakes Regional Sustainability Plan (2013)

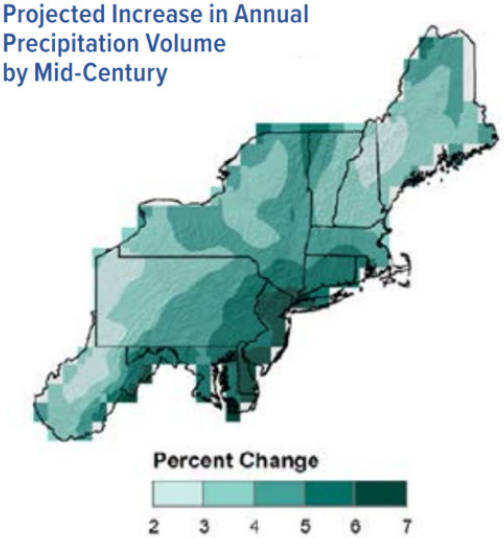
Projected Climate Conditions

- Warmer winters and hotter summers
- More short-duration summertime droughts
- More days with temperatures above 90°F and longer heatwaves annually
- About 10% increase in average annual rainfall
- Two to three times more frequent extreme weather events

Projected Increase in Annual Temperature by Mid-Century



Projected Increase in Annual Precipitation Volume by Mid-Century



Source: NOAA Technical Report NESDIS 142-1, "Regional Climate Trends and Scenarios for the U.S. National Climate Assessment. Part 1, Climate of the Northeast U.S.

Potential Climate Impacts from Increased Temperature Days & Duration

- Increase in pollen production which may exacerbate asthma, allergies, and other respiratory conditions
- Changes or loss of ecosystems and biodiversity (especially in nearby Lake Ontario)
- Quality of soil and crop yields reduced
- Increased demand for water for irrigation
- Depletion of water supply
- Increase in public health and safety risks, particularly for the elderly, children, and pregnant women populations
- Urban heat island effects
- Increase in growing season, but potential shift in crop production and livestock areas due to climate shift
- Reduced demand for heating (reduced energy consumption), but at the same time, energy demand for cooling may increase

Potential Climate Impacts from Changing Frequency and Intensity of Precipitation

- Increase in sediment and contaminants in water bodies
- Increase in soil erosion and runoff due to greater flood or flash flood risk
- Potential sanitary sewers and stormwater management systems overflow, pollutant run-offs, and therefore putting water quality and recreational activities at risk
- More frost heaves and potholes on road and bridge surfaces due to more freeze-thaw conditions
- Increase in mold problems in homes and businesses
- Increase in travel delays
- Potential damage to power plants, rail lines, trees, during extreme weather events

Mitigation vs. Resilience

Mitigation

- Reducing City's contribution to climate change impacts
- Potentially lessening degree/intensity of impacts
- Examples:
    - Energy efficiency, renewables
    - Fuel switching/electrification for homes and vehicles

Resilience

- Adapting to anticipated climate change impacts
- Fortifying assets, supporting vulnerable populations
- Examples:
    - Extreme weather preparedness
    - Protecting/strengthening at-risk infrastructure

EXERCISE A: PRIORITIZATION

For this prioritization exercise, you will be marking the goals you like best out of this list of 13. Each participant in the group gets 3 marks to distribute however they like. They could put all 3 on one idea, put one each on five different ideas, or anything in between. They can add their marks with a marker dot or sticker, whatever is provided. The goals that receive the most total marks will be discussed by the group in exercise B.

Pop-Up: If you are using the materials for a pop-up station, you can invite participants to mark their top 3 goals using either a marker dot or sticker, whatever is provided. Note which goals they mark, as they will suggest strategies for that goal in exercise B.

EXERCISE A: FACILITATORS WORKSHEET

Please count how many marks were added to each goal and write the totals on the blanks below, along with your group's total. Your group's total should be 3 times the number of meeting participants.

NATURAL RESOURCES	TOTALS
Goal 1:	
Goal 2	
Goal 3	
Goal 4	
INFRASTRUCTURE	
Goal 1:	
Goal 2	
Goal 3	
Goal 4	
Goal 5	

SOCIOECONOMIC RESOURCES	TOTALS
Goal 1:	
Goal 2	
Goal 3	
Goal 4	
Goal 5	

EXERCISE A

Goal 1: Ensure equitable distribution of recreational and environmental resources

Goal 2: Maintain and protect water resources

Goal 3: Increase amount and enhance connectivity of green spaces

Goal 4: Restore and strengthen the city's natural systems that best protect from future climate conditions

EXERCISE A

Goal 1: Fortify and build flexibility into critical infrastructure/assets

Goal 2: Improve public-private communication and coordination for emergency management

Goal 3: Ensure land use regulations and building standards to prepare Rochester for the next century

Goal 4: Improve the long-term functioning of infrastructure through maintenance and adaptive reuse

Goal 5: Develop a sustainable transportation system to support future needs and functions under changing climate conditions

EXERCISE A

Goal 1: Enhance the ability of all populations to prepare for and respond to climate impacts

Goal 2: Emphasize public health protection and improvement in planning for the future

Goal 3: Engage and educate the community on climate change and its implications for the future of Rochester

Goal 4: Invest in workforce development and job creation aligned with future industry and economic conditions

Goal 5: Ensure that infrastructure and services support access to basic needs across all neighborhoods

EXERCISE B: BRAINSTORMING

For this brainstorming exercise, you will be telling us what specific actions you think should be taken to accomplish your groups top 3 goals as determined by exercise A.

For instance, if a goal you selected was: “Restore and strengthen the city’s natural systems that best protect from future climate conditions” An example of a specific action would be: “Modify Rochester’s tree planting guide, and introduce new street trees that are more drought resistant”

Or, if a goal you selected was: “Engage and educate the community on climate change and its implications for the future of Rochester” An example of a specific action would be: “Introduce school programs to educate children about climate change impacts and preparedness”

You can write as many specific actions as you want.

Pop-Up: If you are using the materials for a pop-up station, you can invite participants to write strategies for their top three goals on three separate sheets, and give them to you.

EXERCISE B: MEETING WORKSHEET

1. What is the first goal your team selected?

What strategies should be undertaken to accomplish this goal?

2. What is the second goal your team selected?

What strategies should be undertaken to accomplish this goal?

3. What is the third goal your team selected?

What strategies should be undertaken to accomplish this goal?

EXERCISE B: POP-UP WORKSHEET

What is the goal you selected?

What strategies should be undertaken to accomplish this goal?

EXERCISE B: POP-UP WORKSHEET

What is the goal you selected?

What strategies should be undertaken to accomplish this goal?

PLEASE SIGN IN!

Discussion Leader Name:

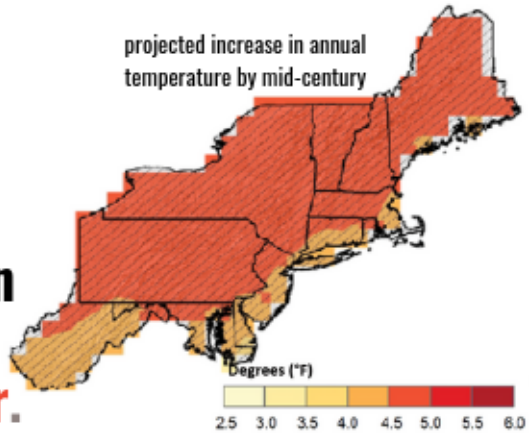
Discussion Leader E-mail:

Date Meeting Conducted:

Location of Meeting:

Name	Organization	Phone or email

Rochester's climate is changing. By 2050 our region is expected to be 4.5° warmer.



Source: NOAA Technical Report NESDIS 142-1, "Regional Climate Trends and Scenarios for the U.S. National Climate Assessment. Part 1, Climate of the Northeast U.S."

Get involved in making Rochester a climate change resilient city: visit www.cityofrochester.gov/CCRP

Rochester's climate is changing. This means more extreme temperature days (over 90°F) and **heatwaves,** and an increase in **heat-related illness** for those in buildings or homes without adequate ventilation, especially the elderly, young children, and pregnant women.

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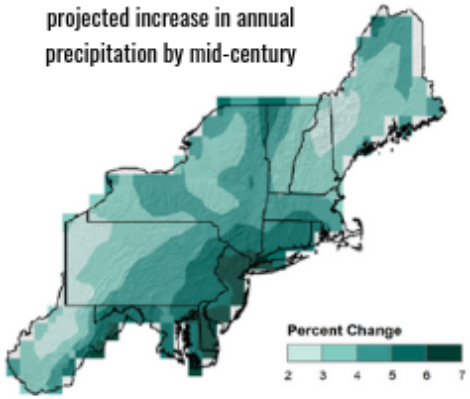

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Rochester's climate is changing.

This means more days per year with over 1 inch of rainfall, bringing an increased risk of **pollutant run-off**, and **pesticides** entering the food chain.

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