

# Bethlehem Climate Action Plan: Public Meeting on Community Objectives

June 17, 2020



# Agenda

- Why is the City developing a Climate Action Plan?
- What is a Climate Action Plan?
- How to stay engaged
- Community input and discussion

## En español

Bethlehem wants to hear from all residents. If Spanish is your primary language, please provide input on the climate action plan in this survey:

(<https://tinyurl.com/bethlehemCAPpublicspanish>)

In addition, a Spanish translation of this presentation will be made available afterwards. We welcome input on this through the Submit an Idea form on this website:

[www.BethlehemCAP.org](http://www.BethlehemCAP.org)

La ciudad de Bethlehem quiere saber de todos los residentes. Si el español es su idioma principal, por favor, proporcione información sobre el plan de acción climática en esta encuesta: (<https://tinyurl.com/bethlehemCAPpublicspanish>).

Adicionalmente, una traducción al español de esta presentación va a disponible después de la reunión. Damos la bienvenida a la opinión a través del formulario "Enviar una idea" (Submit an Idea) en este sitio web: [www.BethlehemCAP.org](http://www.BethlehemCAP.org).

# Welcome

4



# Bethlehem City Operations Climate Progress

Reducing operational costs and emissions

## 37% emissions reduction 2005-2017

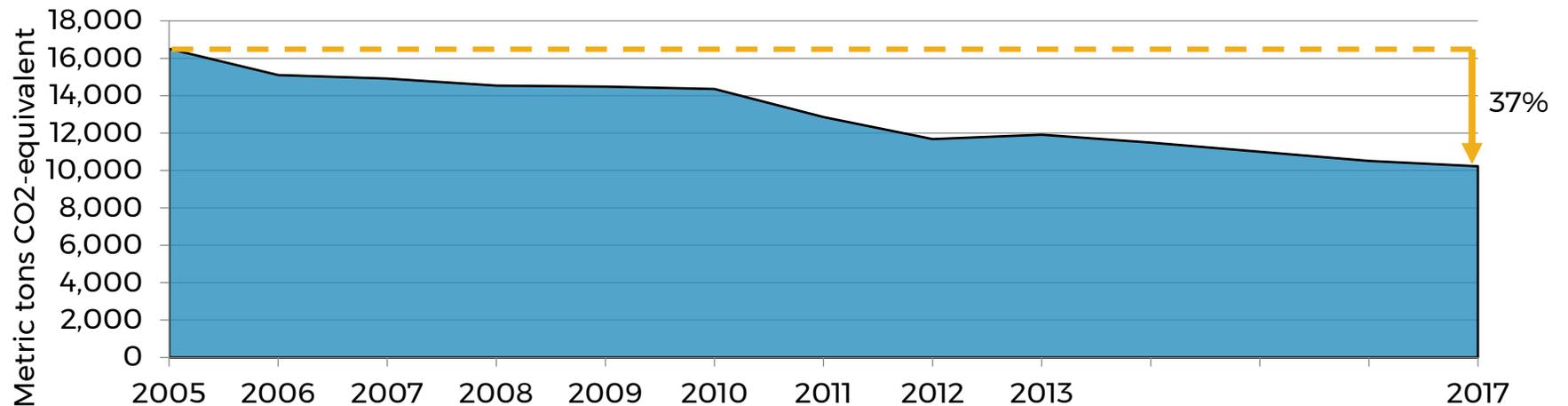
- Energy efficiency and conservation
- Water and wastewater systems upgrades
- Renewable electricity

## Community-wide impacts

- Increased recycling
- South Bethlehem Greenway
- Land use and community design

5

## City Operations Greenhouse Gas Emissions



# CAP Development Partners



6



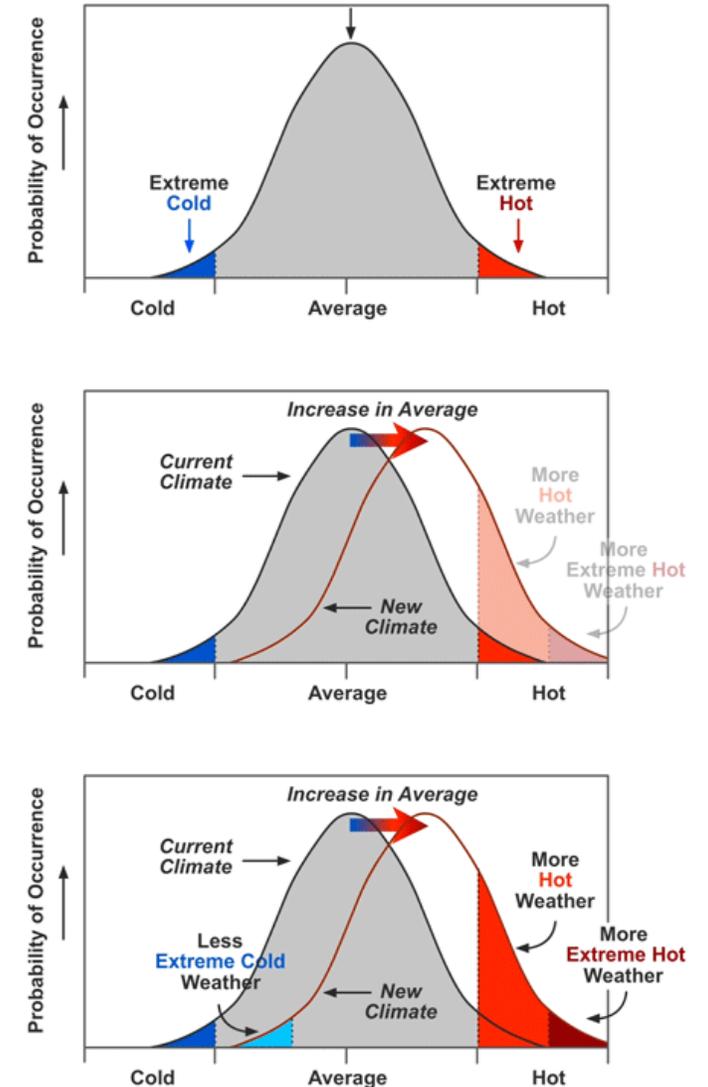
General public

- **Why is the City developing a CAP?**
- What is a CAP?
- How to stay engaged
- Community input and discussion

## Climate vs. Weather

**Climate** – average conditions of a place over a long period of time

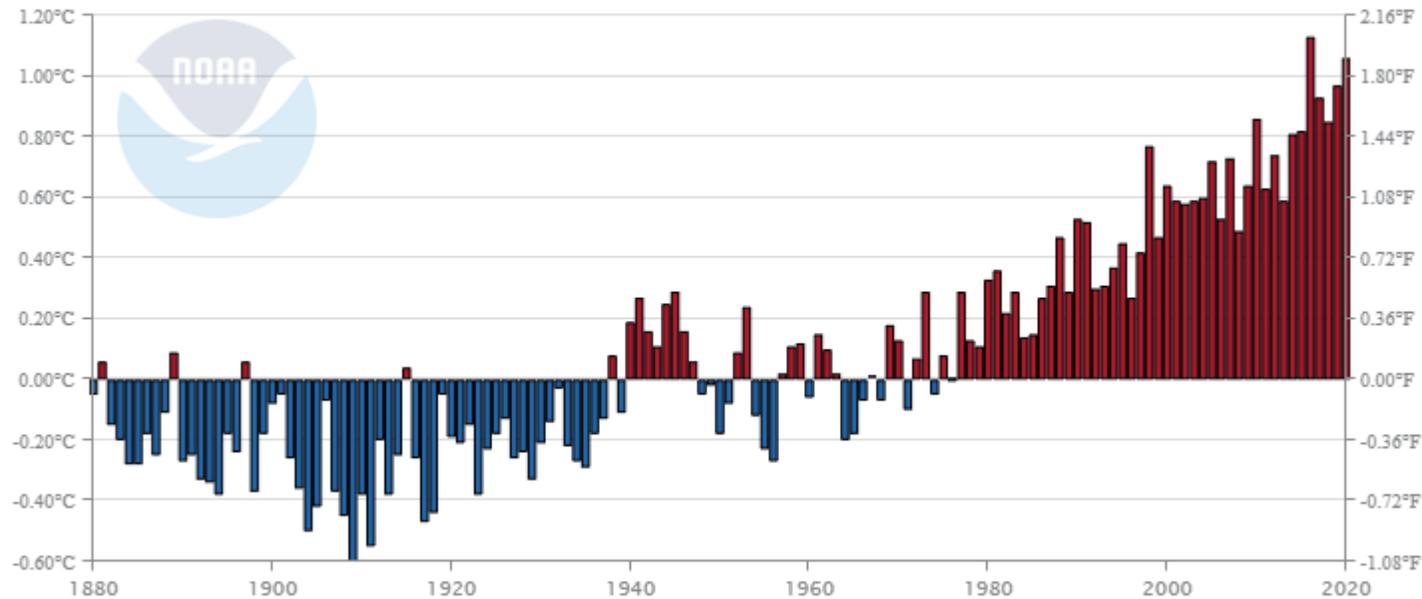
**Weather** – atmospheric conditions at a particular place and time



- **Why is the City developing a CAP?**
- What is a CAP?
- How to stay engaged
- Community input and discussion

# Climate Change

Global Land and Ocean  
April Temperature Anomalies



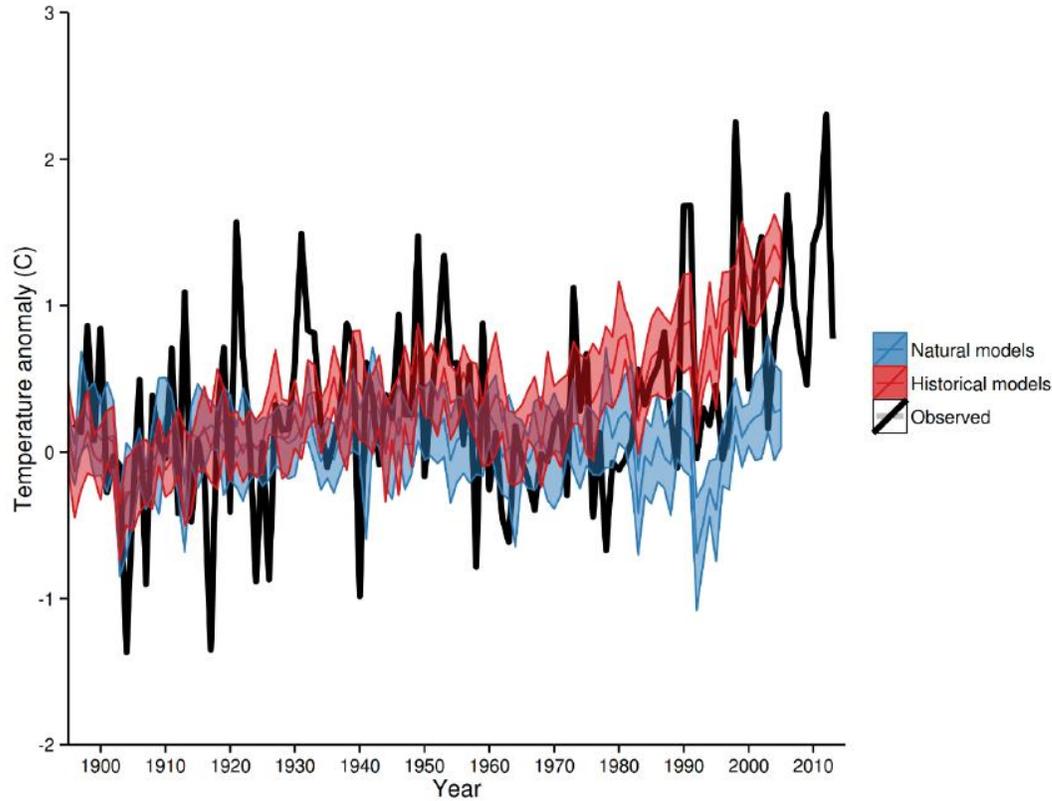
[Time Machine](#)

[Climate Explorer - Bethlehem](#)

April 2020 was 1.06°C (1.91°F) above the 20th century average of 13.7°C (56.7°F) and the second highest April temperature in the 141-year record.

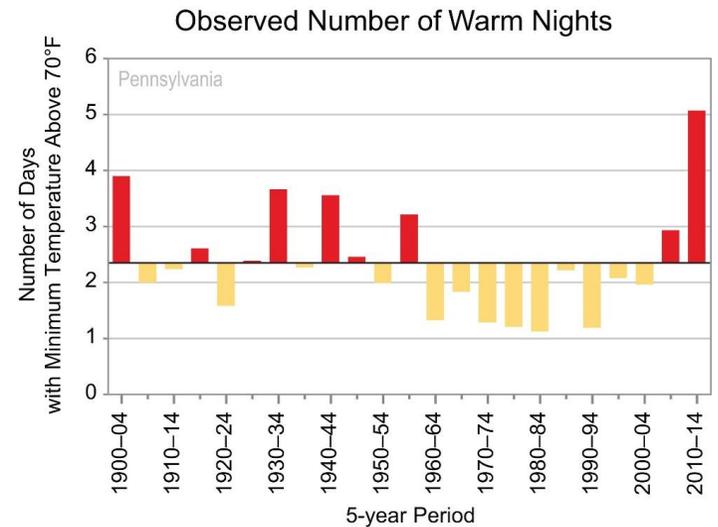
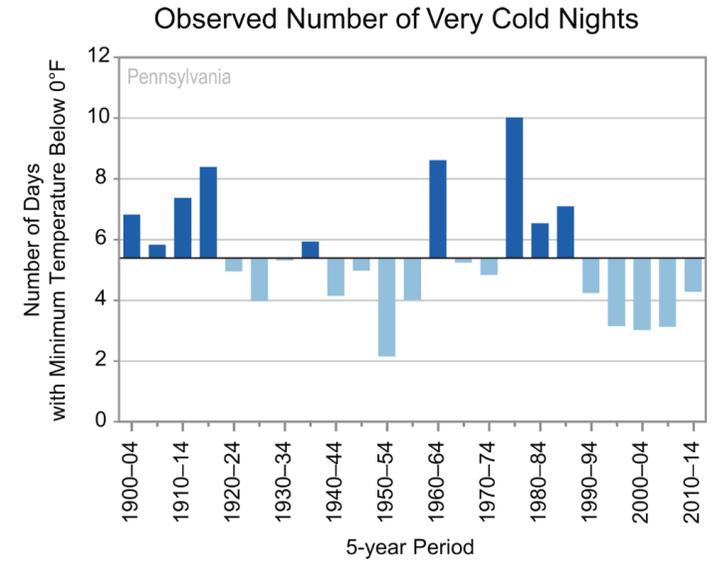
- **Why is the City developing a CAP?**
- What is a CAP?
- How to stay engaged
- Community input and discussion

# Observed changes in PA



Annual mean temperature anomaly (with respect to 1900-1929)

*From PA Climate Impact Assessment Update 2015*

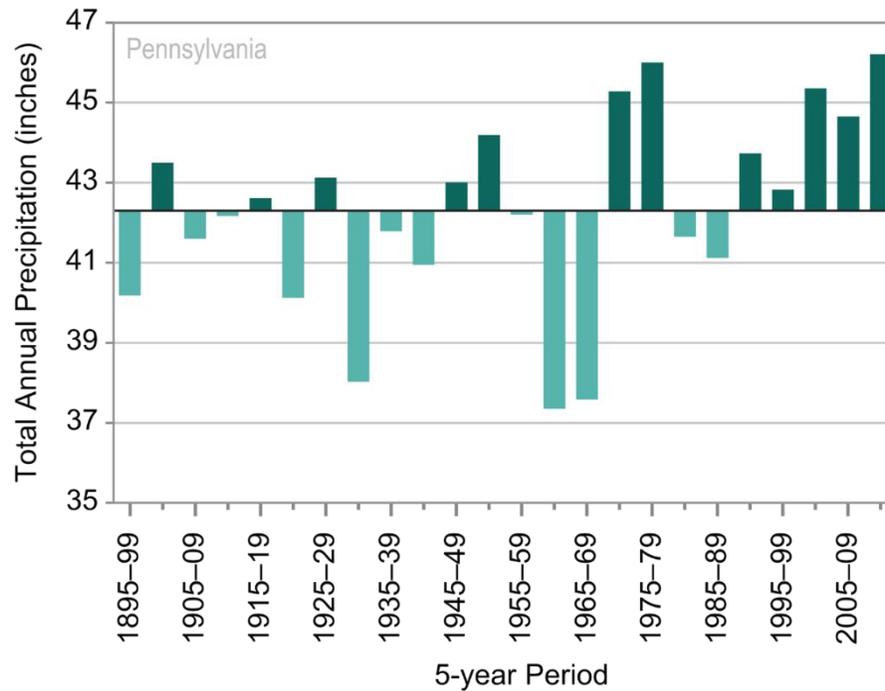




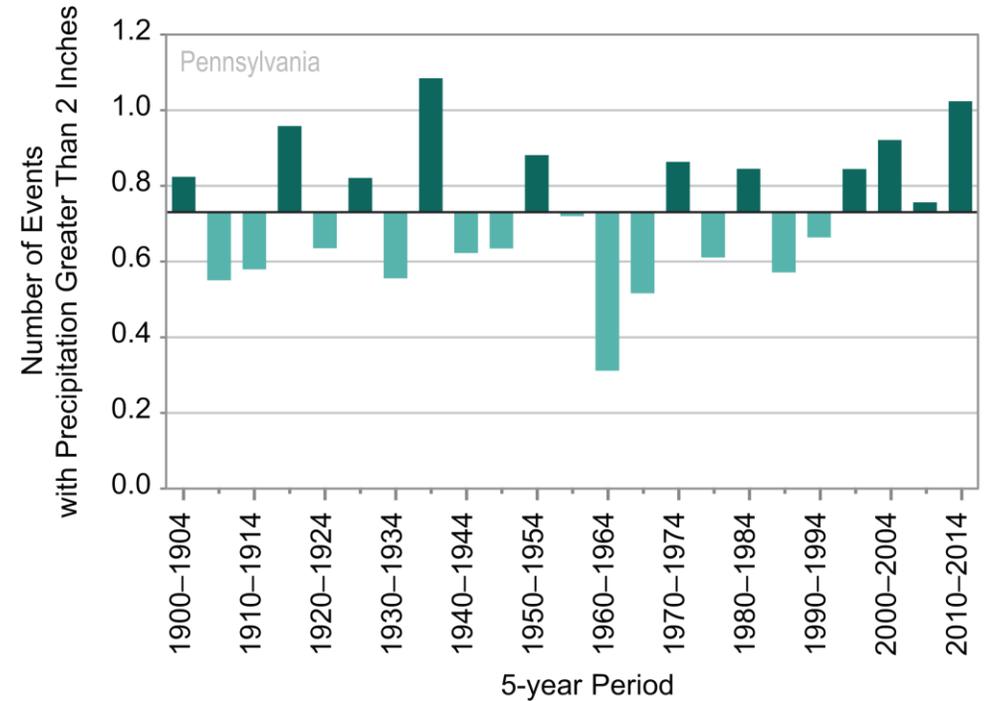
- **Why is the City developing a CAP?**
- What is a CAP?
- How to stay engaged
- Community input and discussion

# More moisture in atmosphere = more precipitation

Observed Annual Precipitation



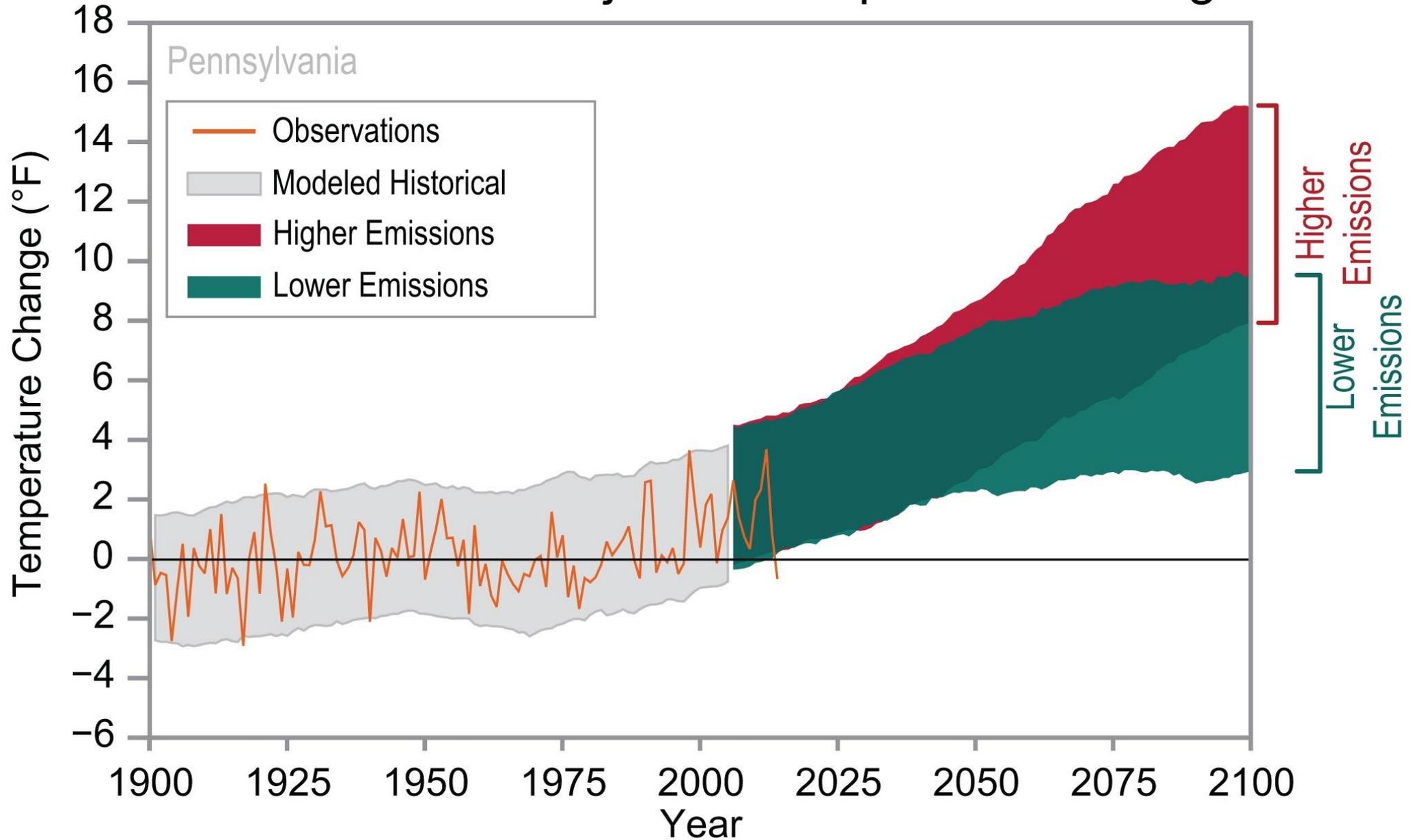
Observed Number of Extreme Precipitation Events



- Why is the City developing a CAP?
- What is a CAP?
- How to stay engaged
- Community input and discussion

12

# Observed and Projected Temperature Change



- **Why is the City developing a CAP?**
- What is a CAP?
- How to stay engaged
- Community input and discussion

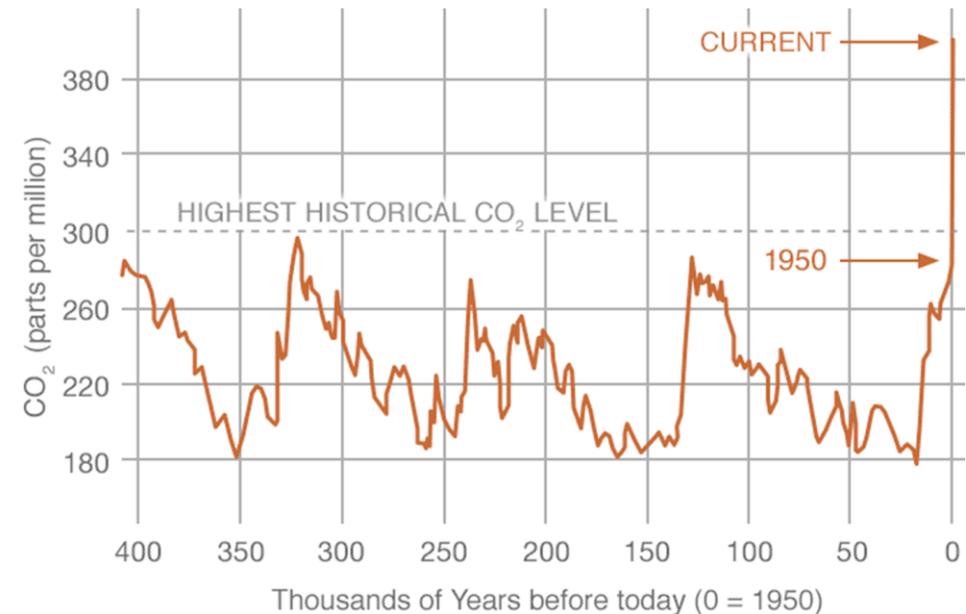
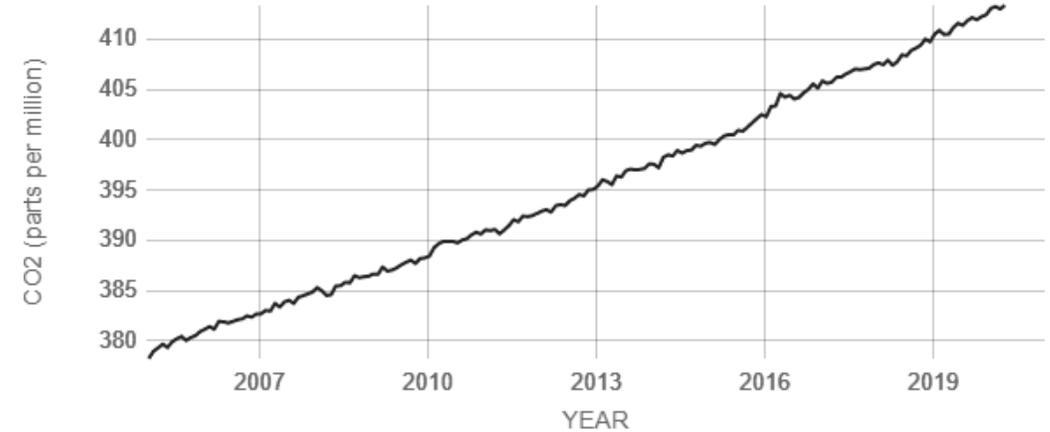
## Climate Change in PA

- Temperature increased 1.8°F since last century
- By 2050 PA will be 5.4°F (3°C) warmer than 2000.
- In 2050 Philadelphia will have the climate of Richmond, VA and Pittsburgh will have Washington, DC.
- More days with temperatures over 90°F
- The average precipitation to increase by 15-20% (winter), 10-15% (spring), 0-5% (summer), and 0-5% (fall) by the late 21st century Increased risk of flooding - increased runoff leads to reduced water quality.
- Snow cover decline by 20-60% (no winter sports by mid-century).
- Increased probability that storms will be stronger with heavier rainfall.
- Non-tropical extreme rainfall events will increase.

- **Why is the City developing a CAP?**
- What is a CAP?
- How to stay engaged
- Community input and discussion

## Some Causes: Carbon Dioxide

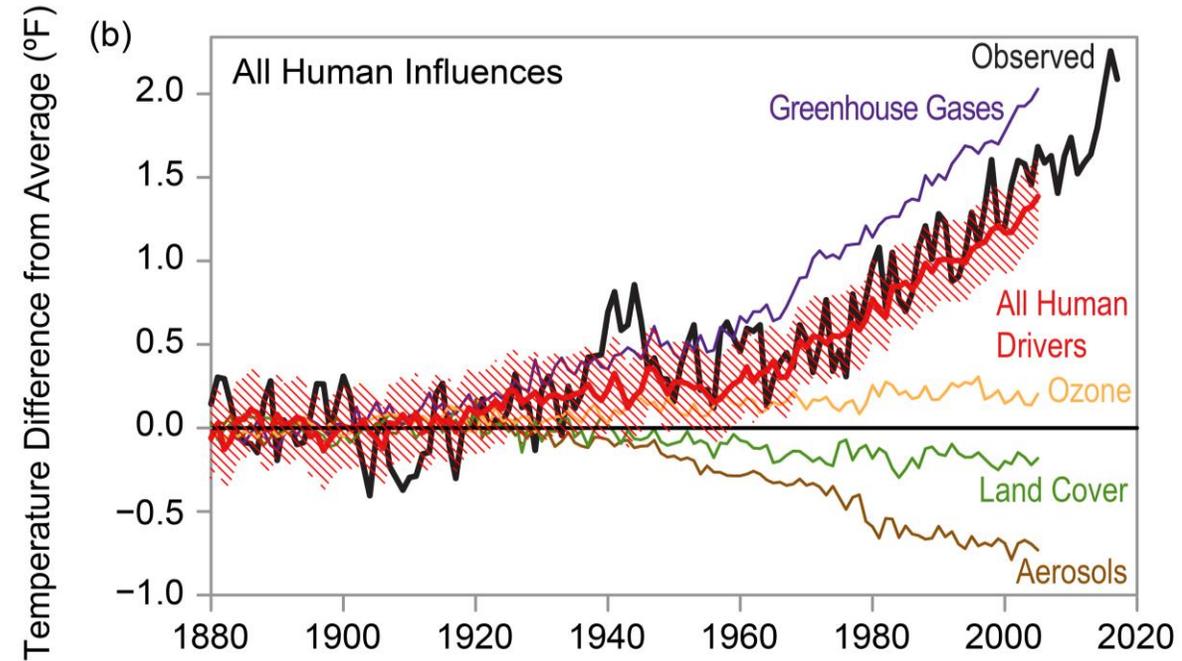
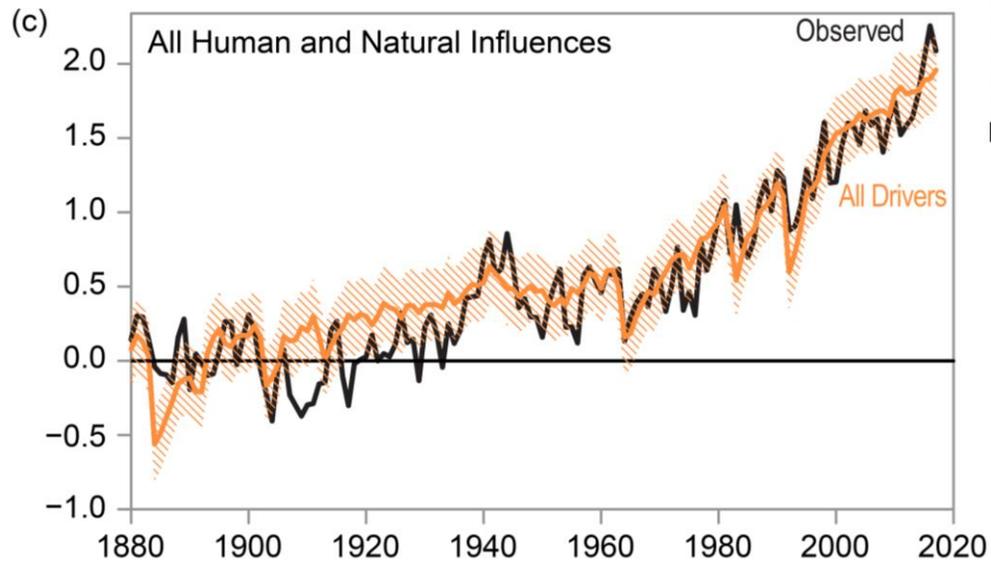
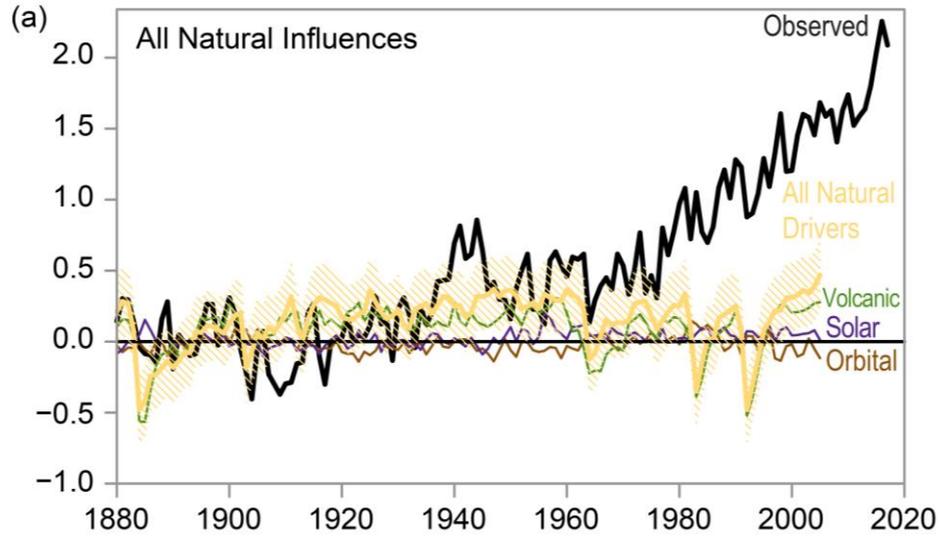
Fossil fuel emissions lead to increased carbon dioxide in the atmosphere which contributes to the rise in global temperatures



- **Why is the City developing a CAP?**

- What is a CAP?
- How to stay engaged
- Community input and discussion

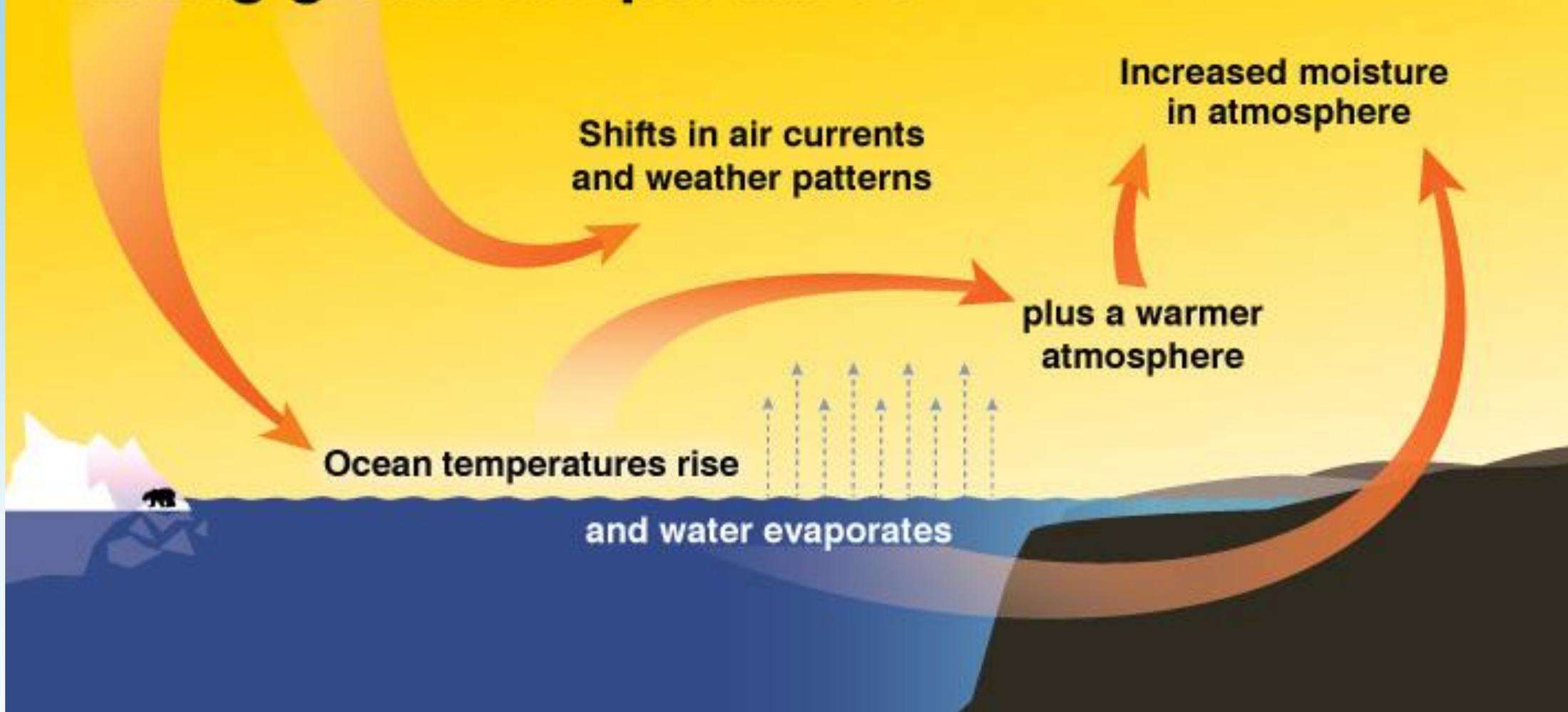
15



National Climate Assessment -  
<https://nca2018.globalchange.gov/chapter/2/#fig-2-1>

- **Why is the City developing a CAP?**
- What is a CAP?
- How to stay engaged
- Community input and discussion

# Rising global temperatures



- **Why is the City developing a CAP?**
- What is a CAP?
- How to stay engaged
- Community input and discussion

## Impacts

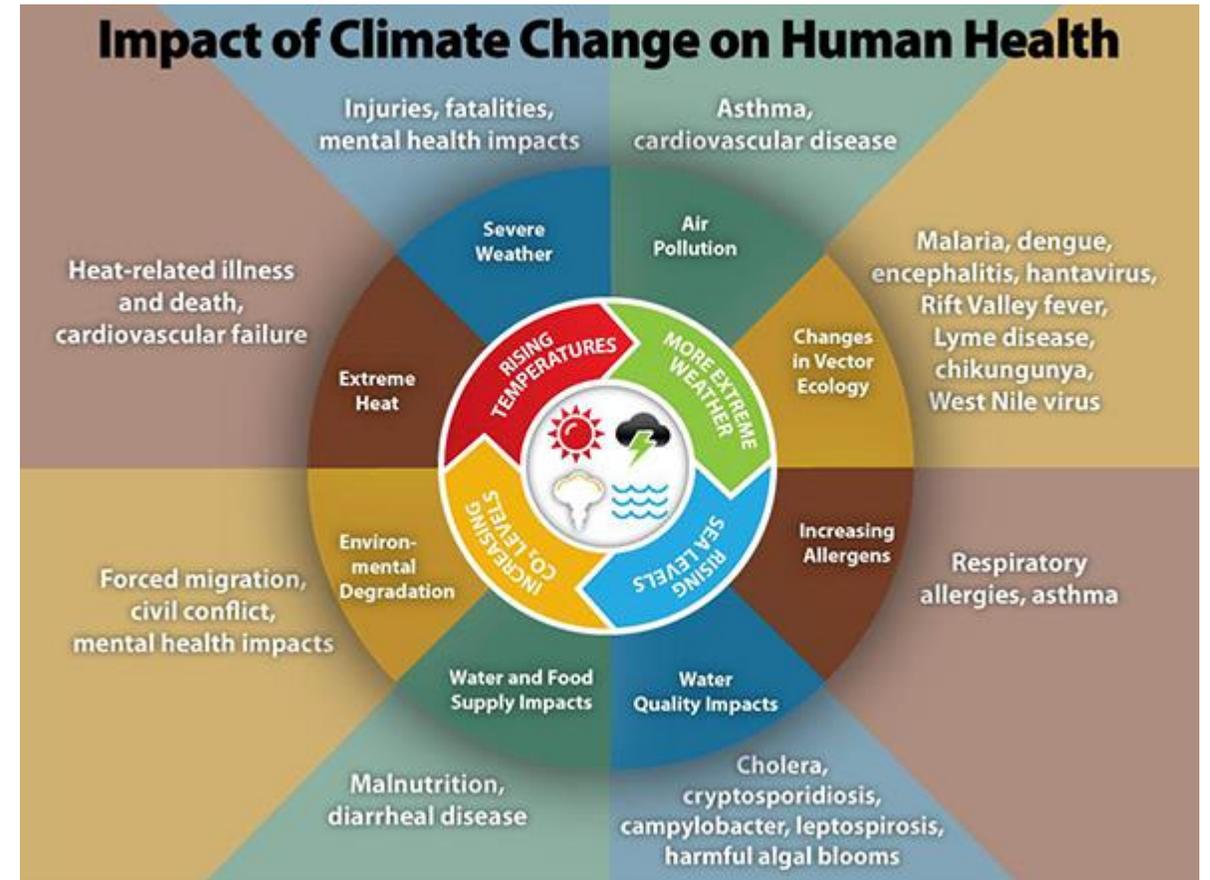
 More flooding & extreme weather events

 More heat and respiratory deaths

 Increased disease and pests

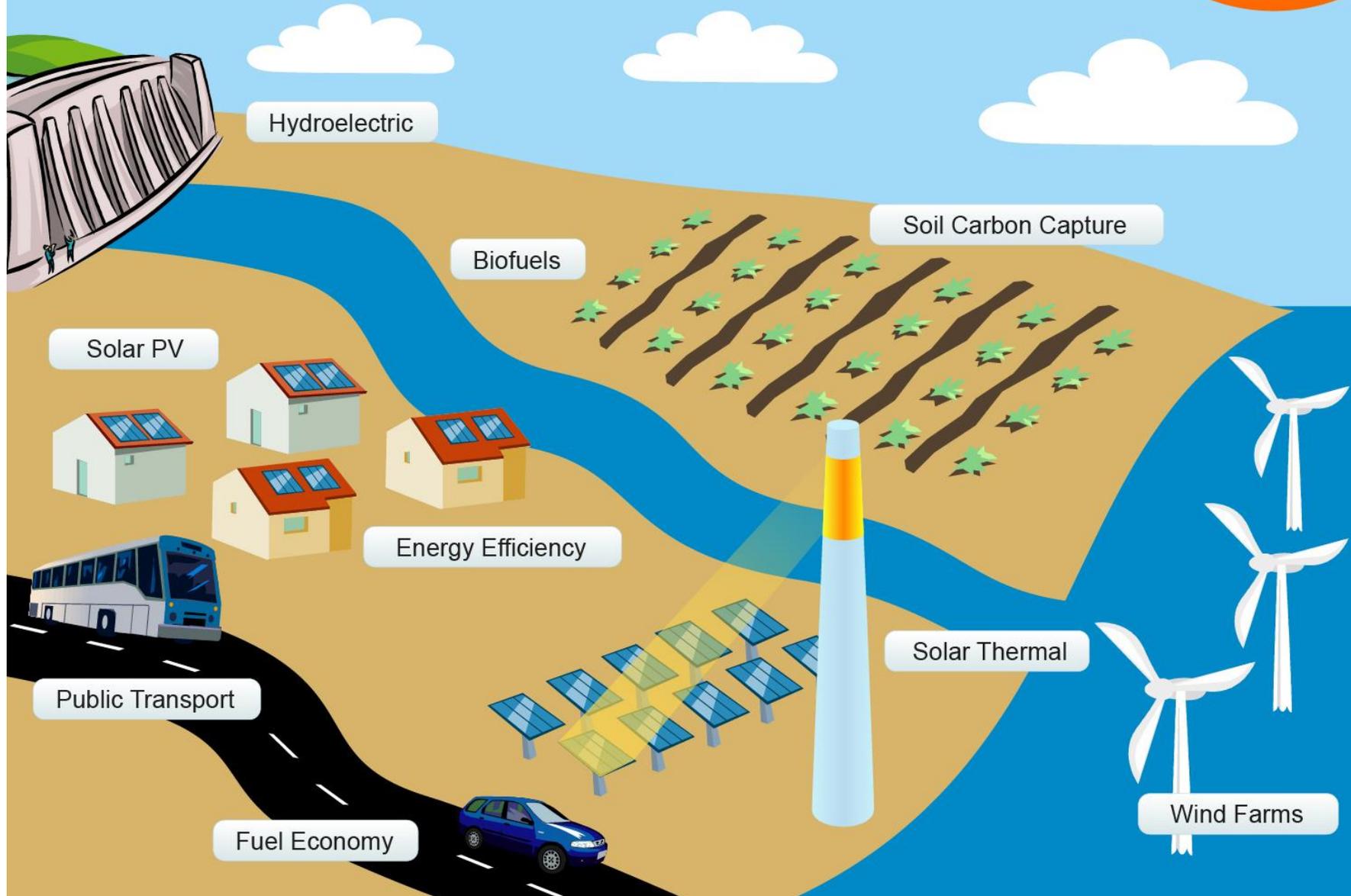
 Disruptions to agricultural systems

 Warmer, wetter weather may lead to an increase in mold and allergy-causing pollen.



<https://www.cdc.gov/climateandhealth/effects/>

# We have the technology to solve climate change

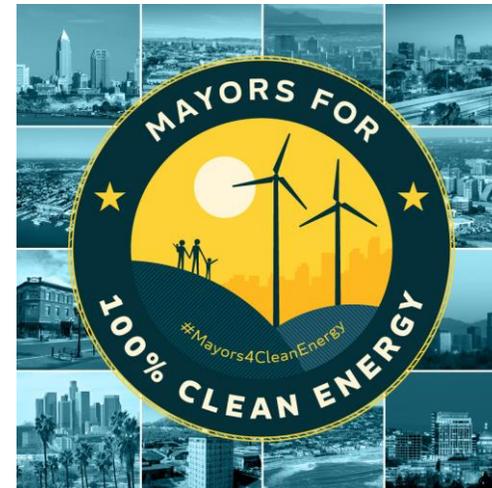


- **Why is the City developing a CAP?**
- What is a CAP?
- How to stay engaged
- Community input and discussion

- **Why is the City developing a CAP?**
- What is a CAP?
- How to stay engaged
- Community input and discussion

## Existing City commitments

Bethlehem has pledged to develop a Climate Action Plan and help uphold the U.S. commitments under the 2015 Paris Climate Agreement



- Why is the City developing a CAP?
- **What is a CAP?**
- How to stay engaged
- Community input and discussion

# What is a Climate Action Plan (CAP)?

Bethlehem's city-wide, comprehensive roadmap to:



Reduce greenhouse gas emissions



Increase adaptation and resilience to climate change

While delivering additional benefits:



Social



Environmental



Economic

- Why is the City developing a CAP?
- **What is a CAP?**
- How to stay engaged
- Community input and discussion

# What is in a Climate Action Plan (CAP)?

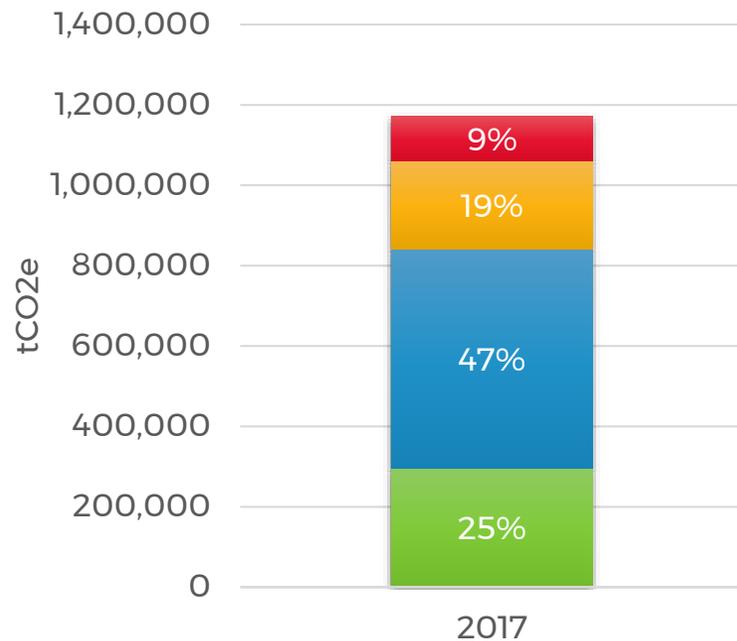
The Climate Action Plan is a roadmap. Implementation follows the release of the plan.



- Why is the City developing a CAP?
- **What is a CAP?**
- How to stay engaged
- Community input and discussion

# Bethlehem Community-wide GHG Inventory

The inventory serves as the baseline for the city's goals. The inventory will be refined and updated over time to measure progress.



- Waste
- Transportation
- Electricity
- Natural gas and other fuel

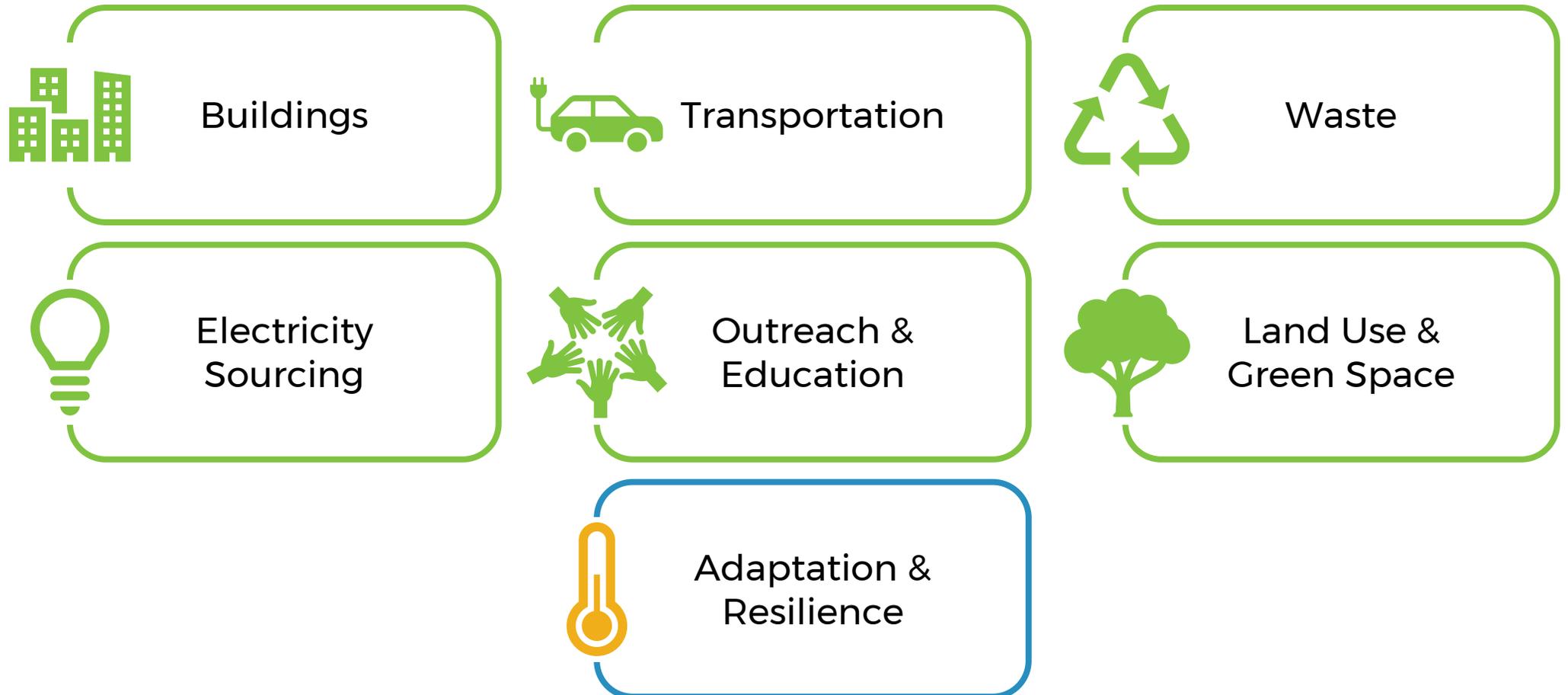
Bethlehem 2017 Community-wide GHG Emissions (tCO2e)		
<u>Natural gas and other fuel</u>	Residential	74,000
	Commercial and institutional	86,000
	Manufacturing	136,000
<u>Electricity</u>	Residential	170,000
	Commercial and institutional	249,000
	Manufacturing	126,000
<u>Transportation</u>		219,000
<u>Waste</u>		111,000
<b>Total</b>		<b>1,171,000</b>
Emissions for electricity generation in city limits		2,072,000

*\*Note: preliminary numbers still undergoing refinement*

- Why is the City developing a CAP?
- **What is a CAP?**
- How to stay engaged
- Community input and discussion

## Strategy and Action Areas

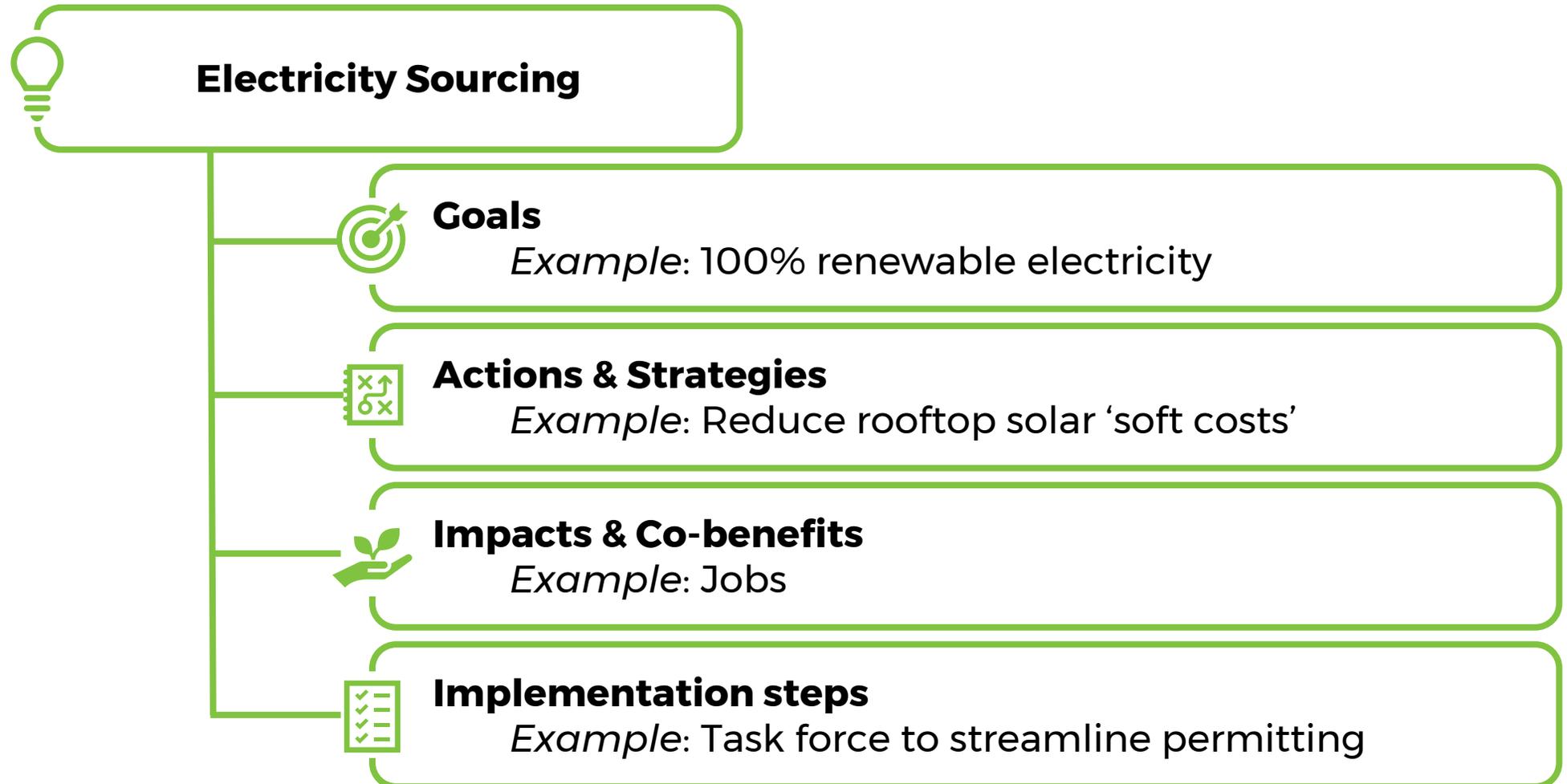
Strategies will be categorized by emission-reduction sector (**green**) and to increase the city's resiliency and protect vulnerable populations (**blue**) .



- Why is the City developing a CAP?
- **What is a CAP?**
- How to stay engaged
- Community input and discussion

# Example Action Area Components

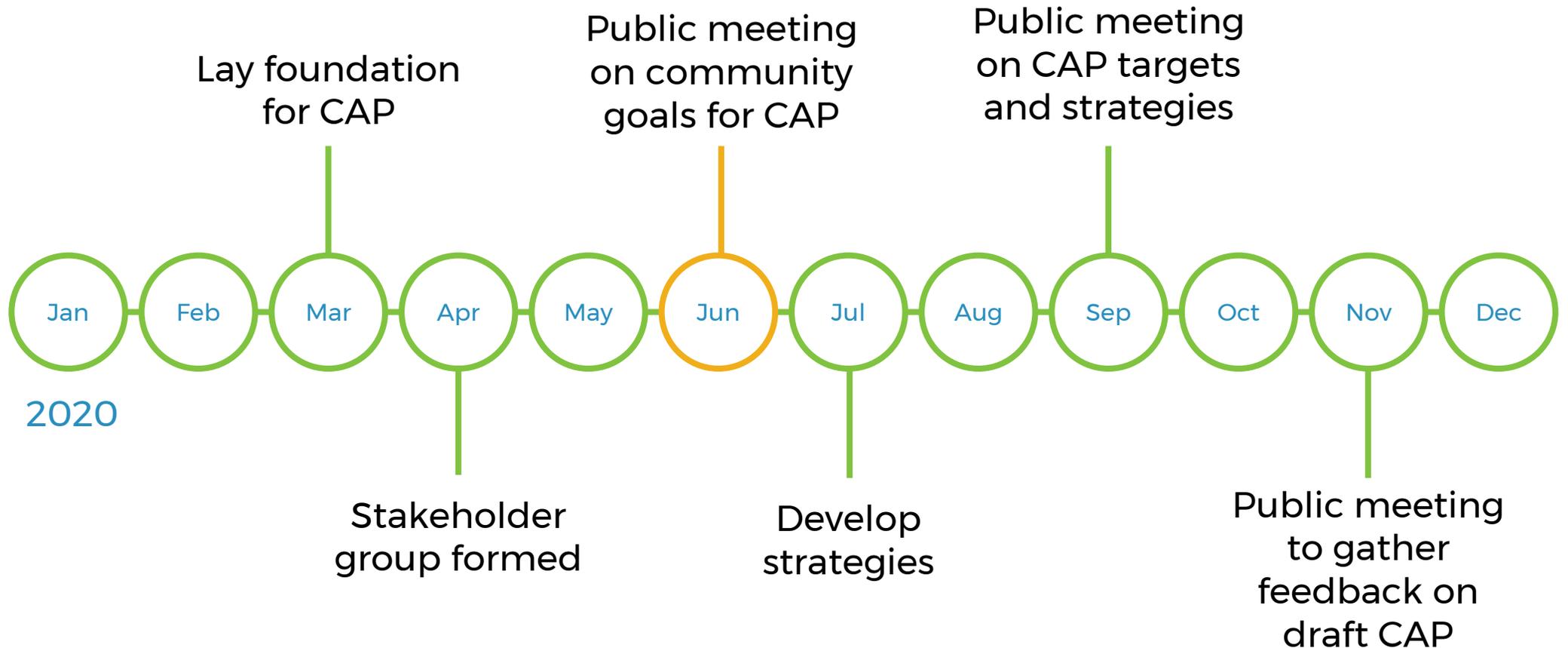
Each action area will include a roadmap to achieve goals.



- Why is the City developing a CAP?
- What is a CAP?
- **How to stay engaged**
- Community input and discussion

# CAP Schedule and Approach

The development of the CAP consists of two phases: (1) laying the foundation, and (2) developing the plan.



- Why is the City developing a CAP?
- What is a CAP?
- **How to stay engaged**
- Community input and discussion

## How to stay engaged

### Visit [BethlehemCAP.org](https://tinyurl.com/bethlehemCAPpublic) for updates and details:

- Fill out Bethlehem's CAP Community Survey!
  - *In English:* <https://tinyurl.com/bethlehemCAPpublic>
  - *En español:* <https://tinyurl.com/bethlehemCAPpublicspanish>
- Submit an idea or ask questions via online form
- Participate in CAP public meetings planned for later this year

### Get further involved:

- Follow the City of Bethlehem and Nurture Nature Center on social media for updates and ways to contribute
- Talk with your friends, family and neighbors - educate them about climate change and Bethlehem's CAP
- Discover ways you can make a difference as an individual - explore ways to save money and make your home more energy efficient, for instance
- You know your community best - be informed and speak up about your concerns and ideas!

- Why is the City developing a CAP?
- What is a CAP?
- How to stay engaged
- **Community input and discussion**

## Question 1: equity, accessibility and justice

**Question:** We are striving to embody equity, accessibility and justice into the Climate Action Plan. Do you have ideas or suggestions on how we can be successful at this?

**Example:** When reducing the carbon intensity of the city's electricity mix, mitigate any potential cost increases to low-income households, either through subsidies or energy retrofits.

### Mentimeter poll:

- Go to **menti.com** and enter code **415664**
- Alternately go directly to (provided in chat box):  
<https://www.menti.com/jtmbnmgwfq>
- If you cannot access Mentimeter, enter your response in the chat box of GoToWebinar

- Why is the City developing a CAP?
- What is a CAP?
- How to stay engaged
- **Community input and discussion**

## Question 2: plan objectives

**Question:** Write one sentence or one word on what you most hope the Climate Action Plan will achieve.

**Example:** Collaboration and partnerships.

### **Mentimeter poll:**

- Go to **menti.com** and enter code **415664**
- Alternately go directly to (provided in chat box):  
<https://www.menti.com/jtmbnmgwfq>
- If you cannot access Mentimeter, enter your response in the chat box of GoToWebinar

- Why is the City developing a CAP?
- What is a CAP?
- How to stay engaged
- **Community input and discussion**

## Question 3: principles

**Question:** Which of the following goals do you think should guide the development and prioritization of the Climate Action Plan strategies?

- *Reduce GHG emissions*
- *Improve resilience*
- *Improve equitable outcomes*
- *Demonstrate Bethlehem as a leader*
- *Promote workforce development*
- *Promote jobs and economic opportunities*
- *Reduce local air pollution (particulate matter, ozone, etc.)*
- *Create immediate impacts*
- *Up-front cost-effective and affordable*
- *Long-term investment and benefits*
- *Enhance accessibility*
- *Create or enhance infrastructure*

### **Mentimeter poll:**

- Go to **menti.com** and enter code **415664**
- Alternately go directly to (provided in chat box):  
<https://www.menti.com/jtmbnmwfg>
- If you cannot access Mentimeter, enter your response in the chat box of GoToWebinar

- Why is the City developing a CAP?
- What is a CAP?
- How to stay engaged
- **Community input and discussion**

## Question 4: goals

**Question:** What approach should the city take when setting goals in the climate action plan?

- *Set aspirational goals with greater ambition, even if ability to achieve them is less certain*
- *Set goals with a high degree of confidence for achievement*
- *Set the ambition of goals based on the latest climate science*
- *Set the ambition of goals based on current economic or technical feasibility*

### **Mentimeter poll:**

- Go to **menti.com** and enter code **415664**
- Alternately go directly to (provided in chat box):  
<https://www.menti.com/jtmbnmgwfg>
- If you cannot access Mentimeter, enter your response in the chat box of GoToWebinar

- Why is the City developing a CAP?
- What is a CAP?
- How to stay engaged
- **Community input and discussion**

## Question 5: concerns

**Question:** Do you have any concerns about what is under discussion for inclusion in the plan?

### **Mentimeter poll:**

- Go to **menti.com** and enter code **415664**
- Alternately go directly to (provided in chat box):  
<https://www.menti.com/jtmbnmgwfq>
- If you cannot access Mentimeter, enter your response in the chat box of GoToWebinar

- Why is the City developing a CAP?
- What is a CAP?
- How to stay engaged
- **Community input and discussion**

## Question 6: increasing inclusivity

**Question:** How can we involve more residents and businesses in this process?

### **Mentimeter poll:**

- Go to **menti.com** and enter code **415664**
- Alternately go directly to (provided in chat box):  
<https://www.menti.com/jtmbnmgwfq>
- If you cannot access Mentimeter, enter your response in the chat box of GoToWebinar

Thank you!



*City of*  
**BETHLEHEM PA**  
**CLIMATE ACTION PLAN**