

Portland Public Library

December 4, 2019

City of  
*South  
Portland*





City of  
*South  
Portland*

## Sustainability Offices

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South Portland

[oneclimatefuture.org](http://oneclimatefuture.org)



# Mission

Promoting a more sustainable  
community now and into the future.



# Which includes...

- **Energy policy and implementation** - focused on transitioning to renewables
  - **LED street light upgrades** - using new technology to make lighting efficient
  - **Waste reduction initiatives** - plastic bag and foam bans, recycling, compost
  - **Pesticide use ordinance** - banning the use of dangerous pesticides
  - **Energy benchmarking ordinance** - tracking energy use of large buildings
  - **Attaining climate action goals**
- 
- An aerial photograph of a large-scale solar farm. The solar panels are arranged in neat, parallel rows that recede into the distance. The panels are a deep blue color with a grid pattern. The ground between the rows is a mix of green grass and brown earth. In the background, there is a dense line of trees with some autumn-colored foliage. The sky is overcast and grey.

# Climate Goals

**80%** reduction in greenhouse gas by 2050

**100%** clean energy by 2040



This is a  
World-Wide  
EMERGENCY

SCHOOL  
STRIKE FOR  
CLIMATE

Tolerance  
for  
D.I.

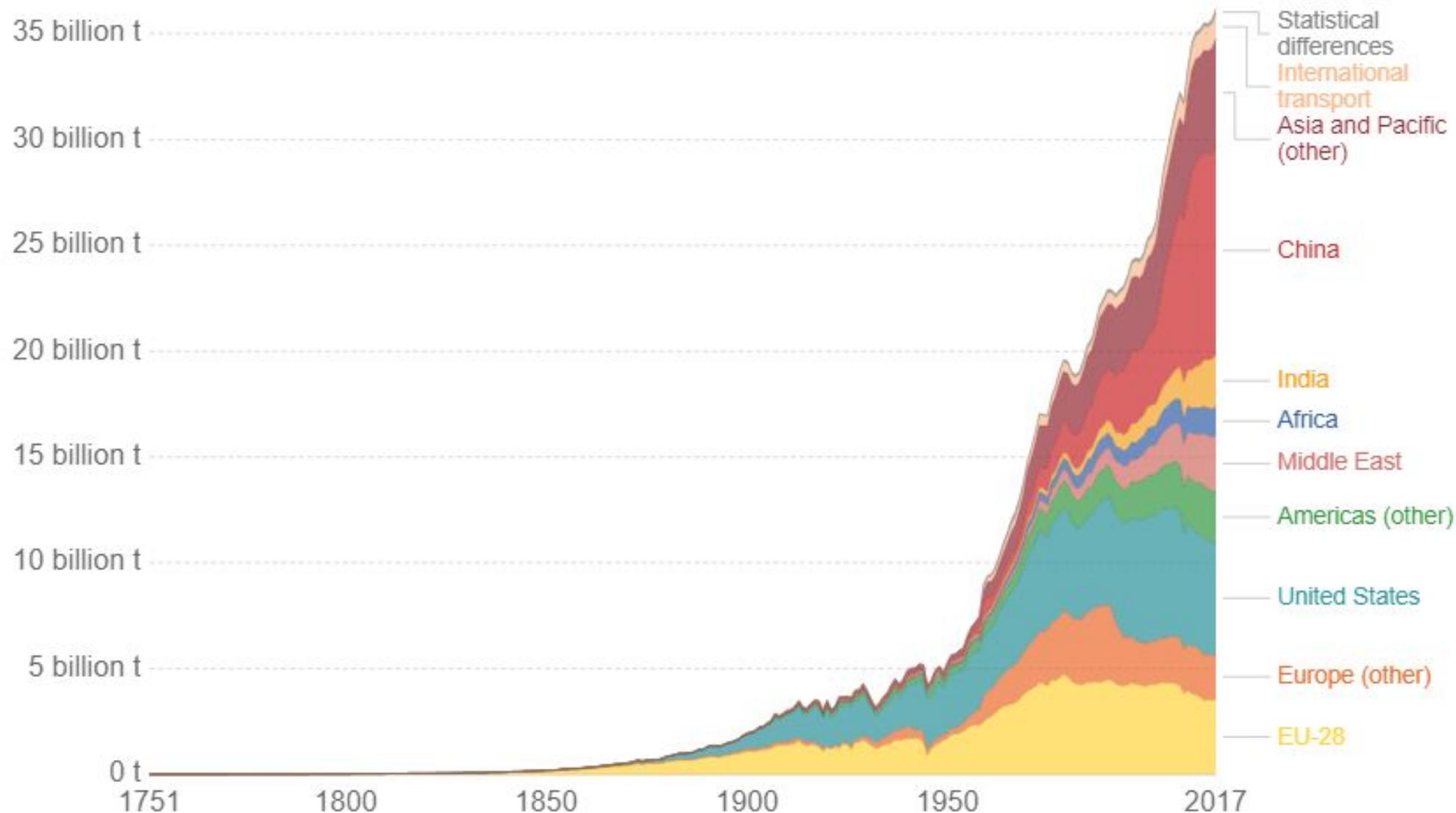
HONOR OF THE  
MEN OF PORTLAND  
WHO SERVED THEIR COUNTRY AND CIVILIZATION  
IN THE  
1898 - SPANISH WAR - 1899  
1914 - WORLD WAR - 1918  
DIRECTED

ACT  
NOW  
CLIMATE  
EMERGENCY

Climate Emergency



# Annual total CO<sub>2</sub> emissions, by world region



Source: Carbon Dioxide Information Analysis Center (CDIAC); Global Carbon Project (GCP)

Note: The difference between the global estimate and the sum of national totals is labeled "Statistical differences".

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY

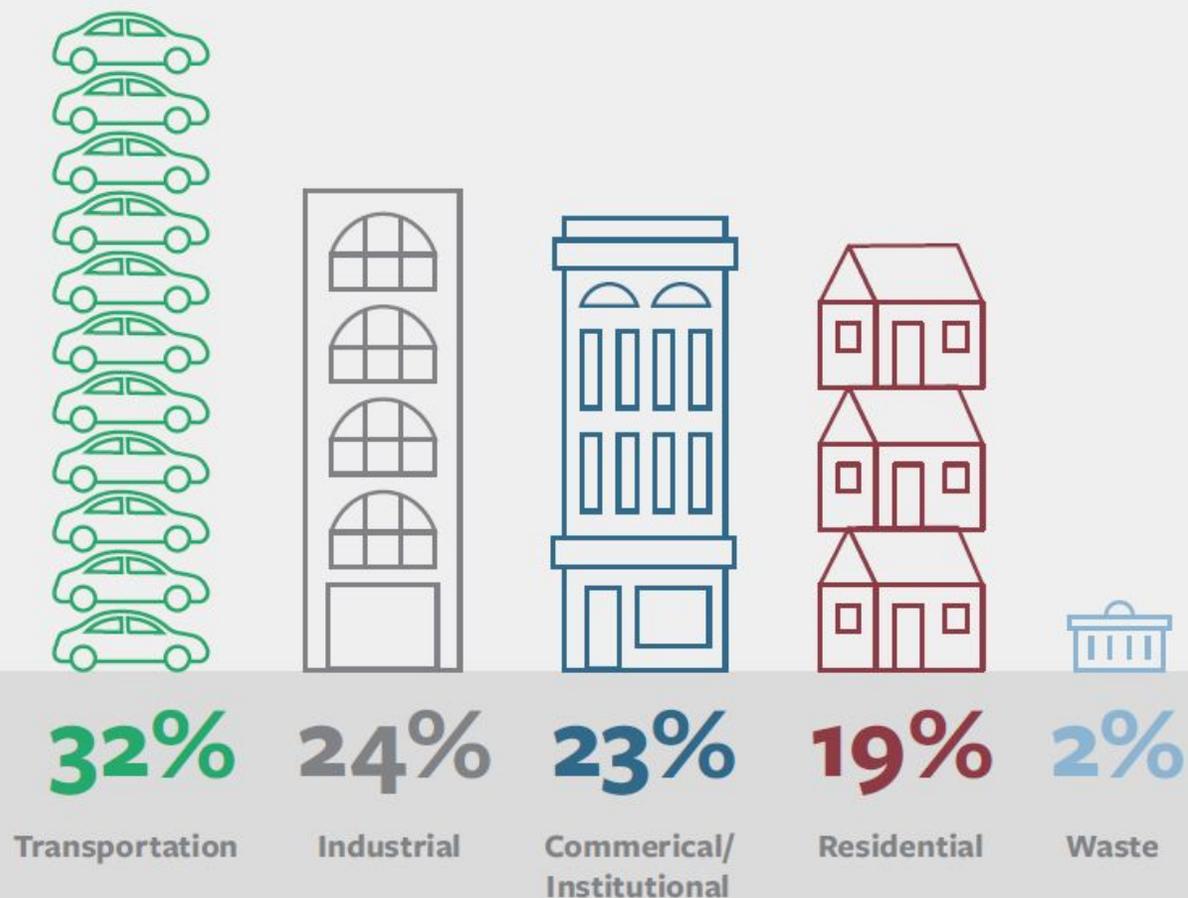
## City of Portland's Greenhouse Gas Emissions

Total Emissions in 2017 = 837,940 tCO<sub>2</sub>e/year



## City of South Portland's Greenhouse Gas Emissions

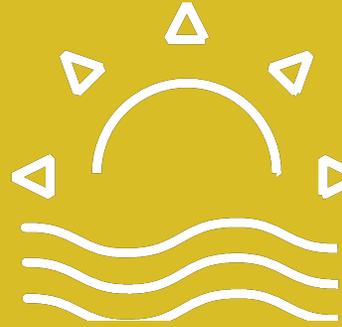
Total Emissions in 2017 = 352,364 tCO<sub>2</sub>e/year



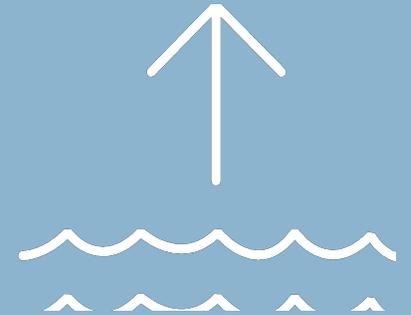
# Portland & South Portland's Climate Trends, Projections, and Impacts



More Rainfall &  
Less Snow



Increasing  
Temperatures



Sea Level Rise

# A note about scenarios

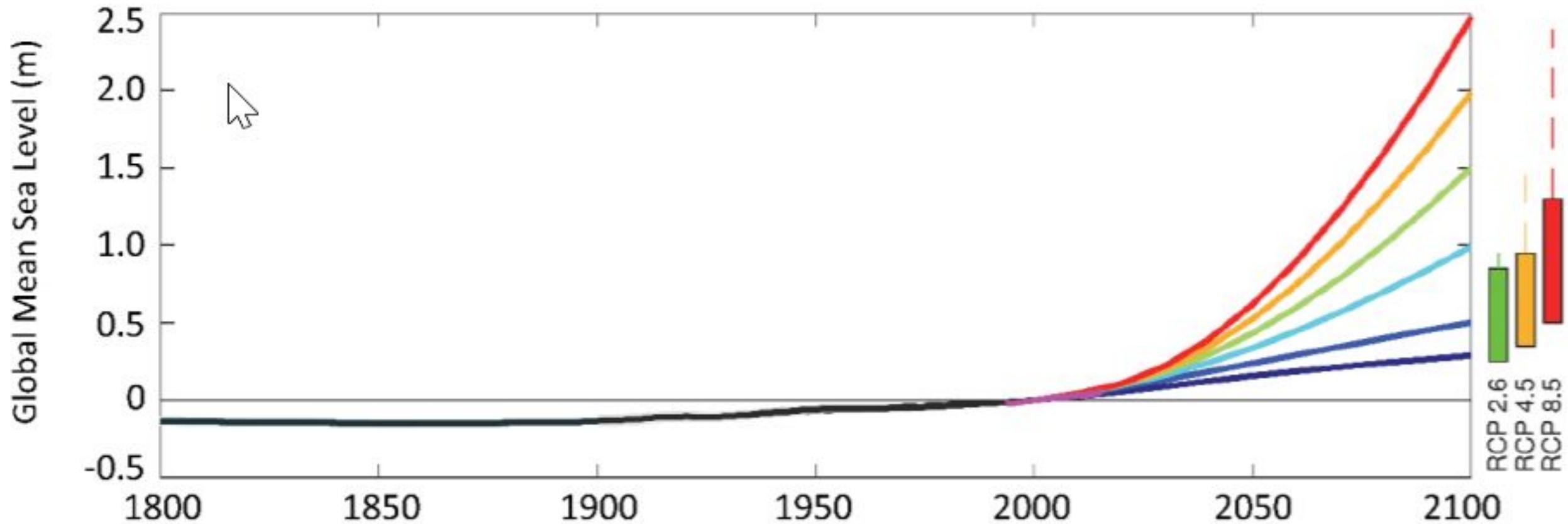
- **RCP 2.6 (low scenario):** We all act now and drastically reduce emissions in the near future. Temp rise of 1.9 -2.3 degrees C by 2100
- **RCP 4.5 (intermediate scenario):** We act now and are carbon neutral by 2050 and have negative emissions after. Temp rise of between 2.0 - 3.6 degrees C by 2100
- **RCP 8.5 (high scenario):** We continue business as usual. Temp rise of 3.2 - 5.4 degrees C by 2100



# Sea Level Rise

# Scale of Uncertainty...

NOAA Global Mean Sea Level (GMSL) Scenarios for 2100

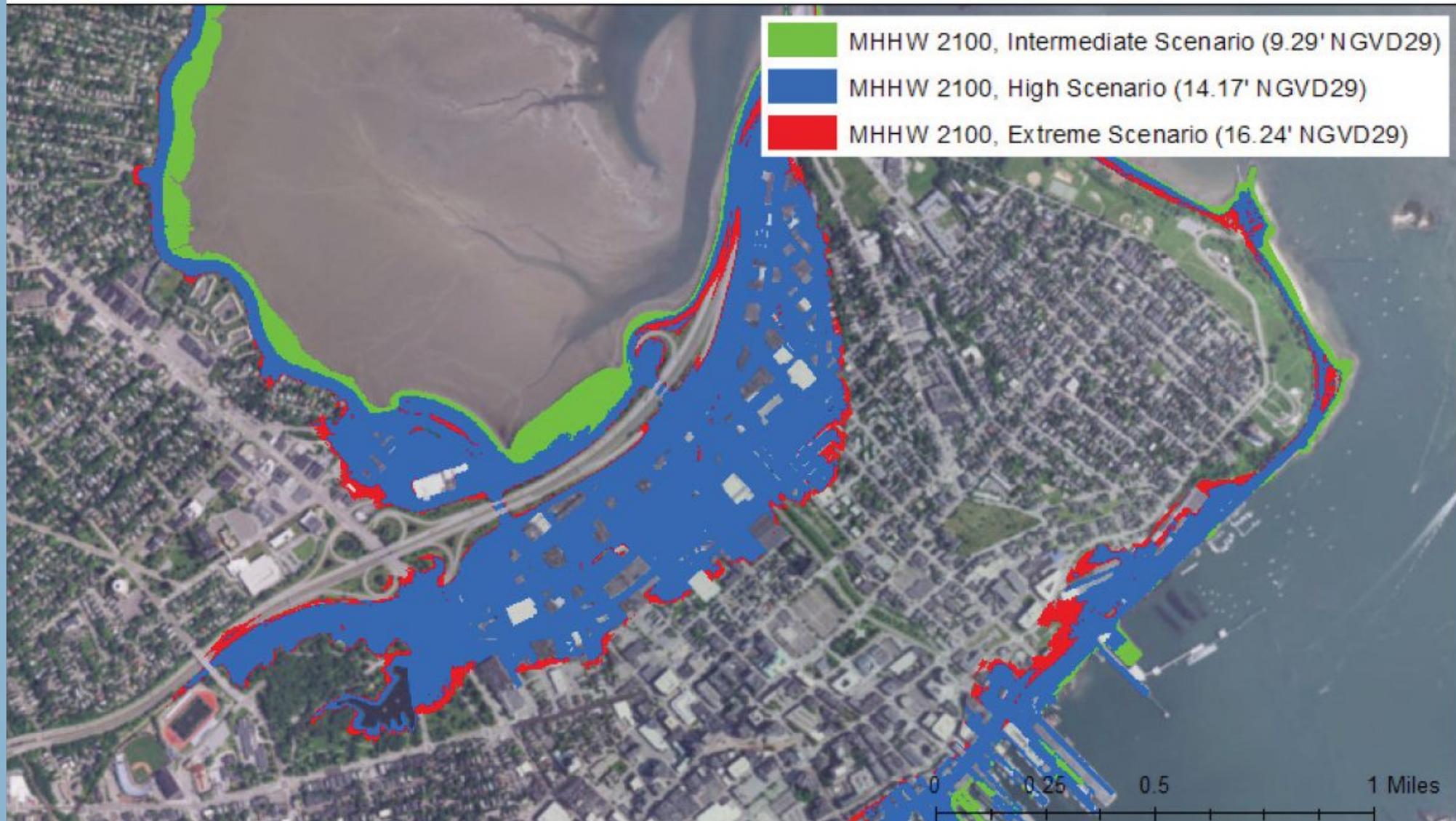


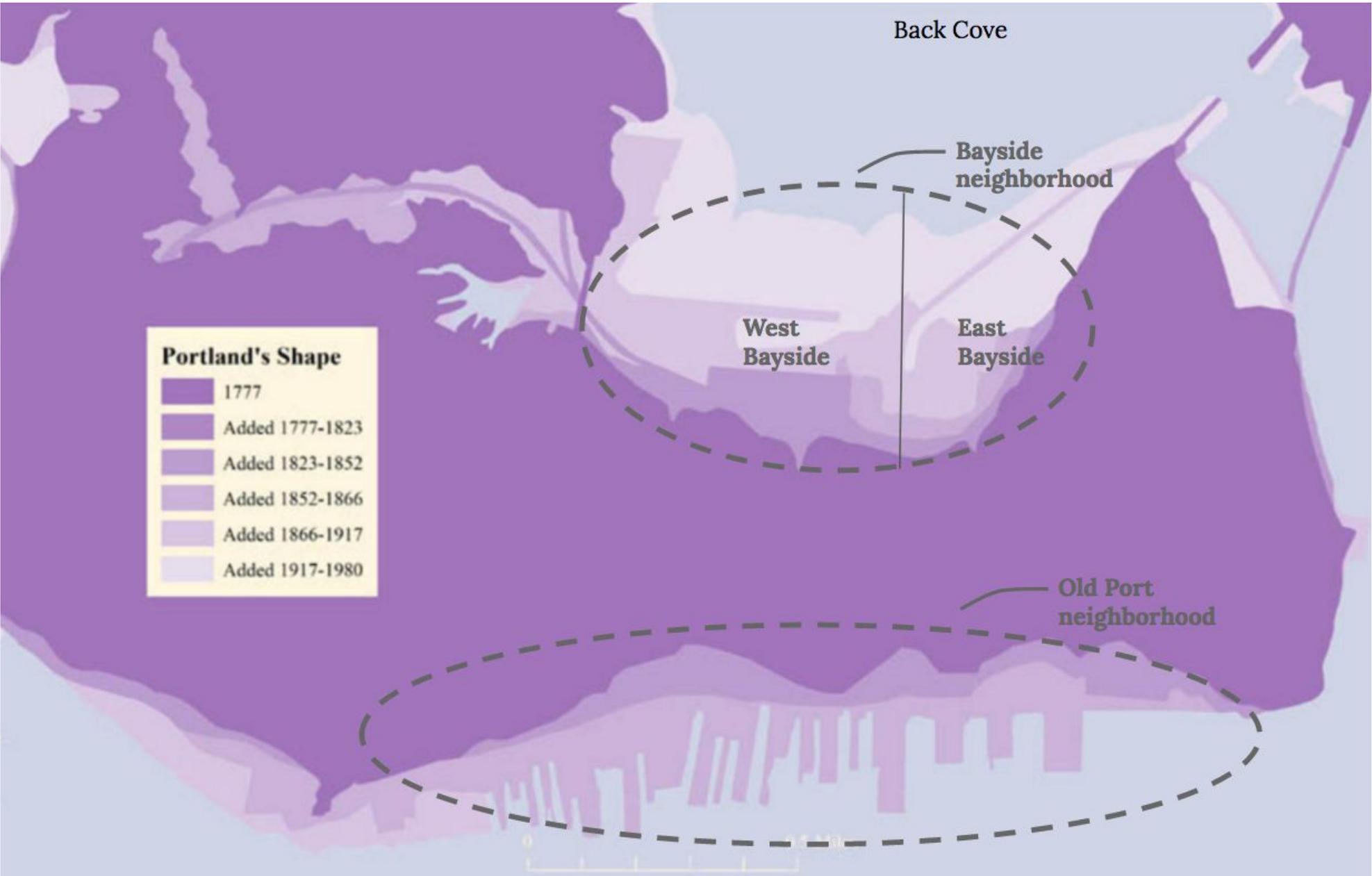
# What Sea Level Rise Means for Us...

Reported from the Bayside Adapts study:

Scenario	Mean Sea Level (feet), relative to NGVD29	
	2050	2100
Low	1.08	1.58
Intermediate Low	1.28	2.00
Intermediate	1.94 – “Commit to manage”	4.30 – “Commit to manage”
Intermediate High	2.63	6.46
High	3.41	9.19 – “Prepare to manage”
Extreme	3.84 – “Prepare to manage”	11.25 – “Be aware of”

## DAILY HIGH TIDE LEVELS IN 2100





# Intense Rain Events AND Sea Level Rise



September 30, 2015



**Portland Police**

@PolicePortland

Following



If there are barricades, yes, the road is closed. If there's a small river forming on a street, don't attempt to drive through it— your civic is not a canoe. Finally, please don't swim in the road. There will be no lifeguards on duty. I think that about covers it.



Frequent street closures due to nuisance flooding during astronomical high tides or storm tides

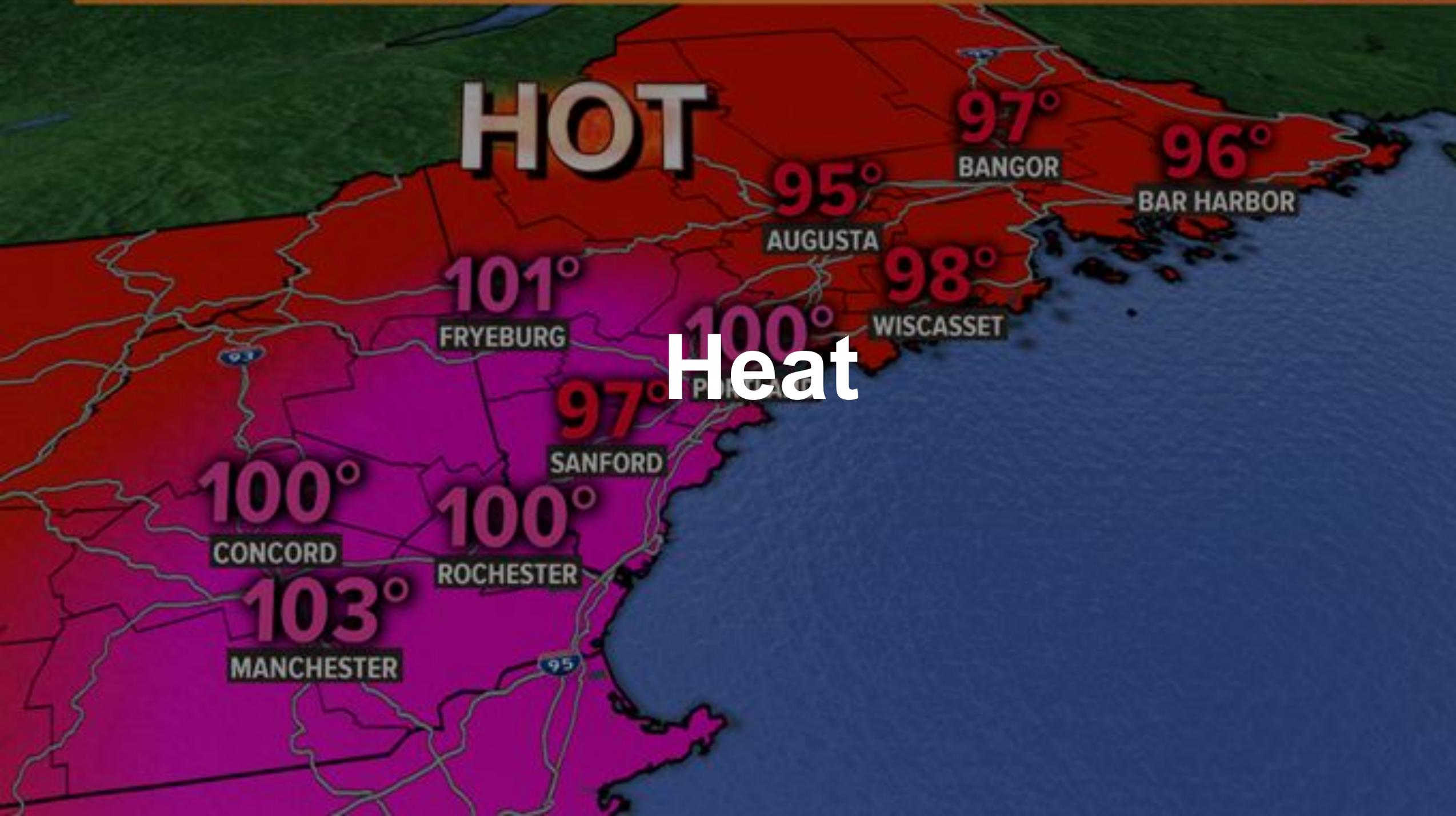
# Record rainstorm causes 'life threatening' flooding, road closures in southern Maine

Flood waters had receded in Portland by Thursday morning after more than 6 inches of rain fell Wednesday night.

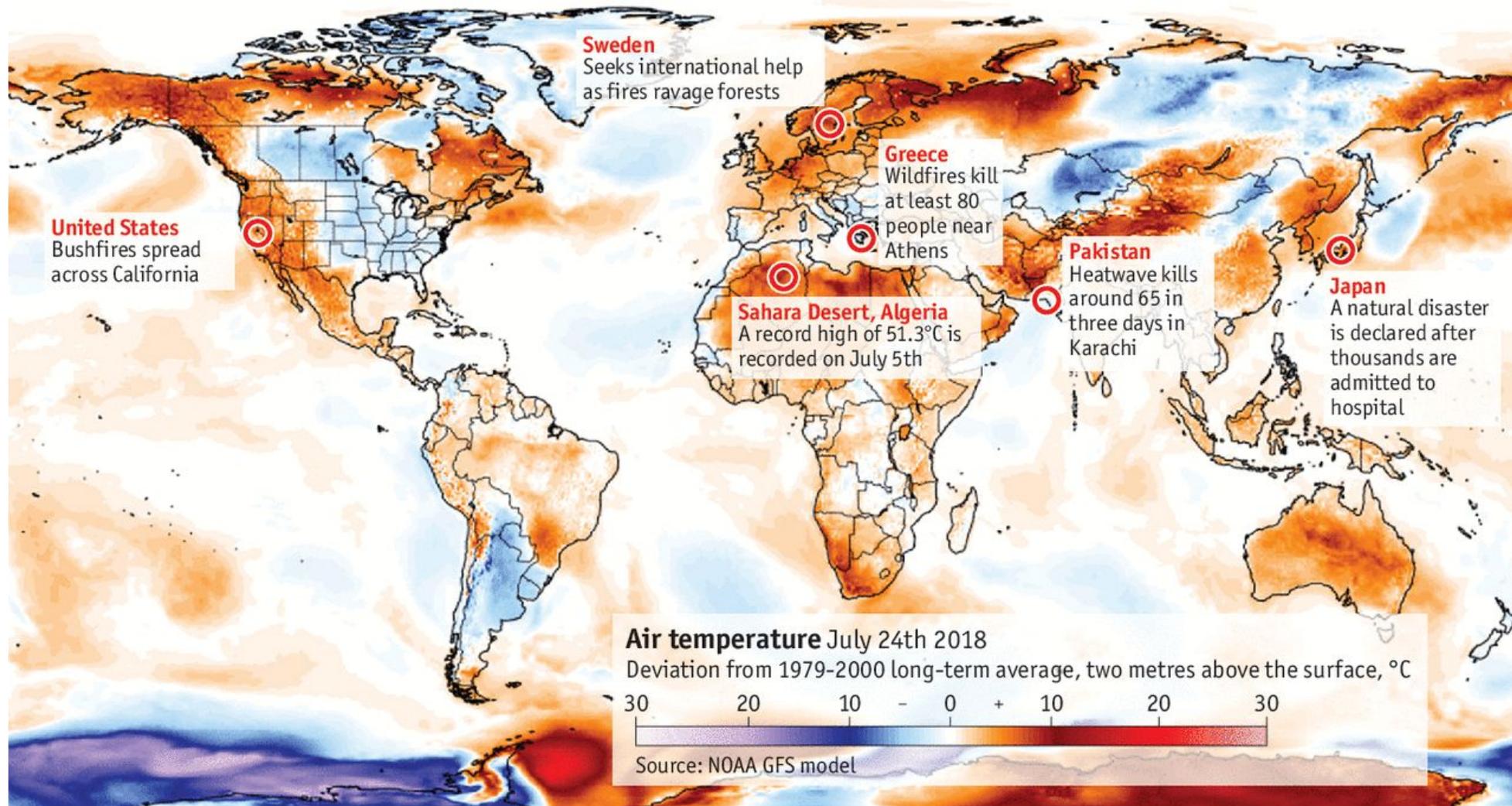


# HOT

# Heat



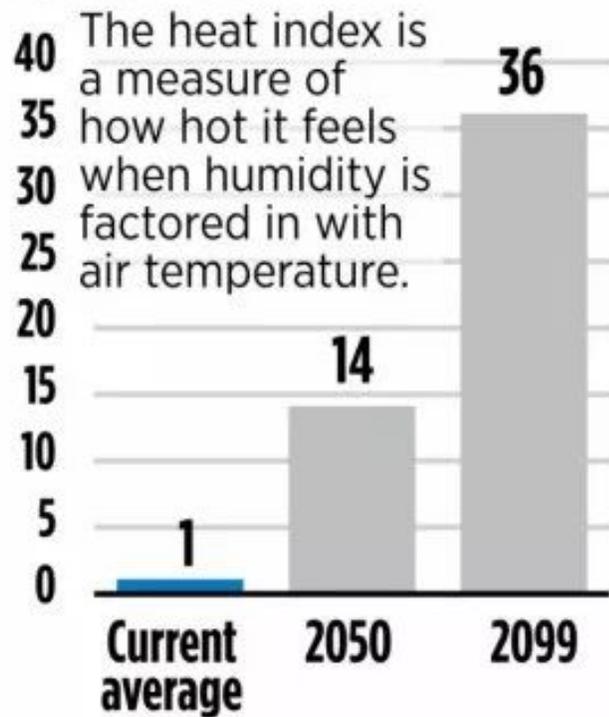
# Temperatures are Rising



The Economist

## Maine heats up

Projected number of days a year when Maine's heat index is above 90.



SOURCE: Union of Concerned Scientists  
STAFF GRAPHIC | MICHAEL FISHER

“A new climate report from the Union of Concerned Scientists predicts that Maine could see more than a 10-fold increase in the number of 90-plus degree days by midcentury and up to 11 days by century’s end when temperatures top 100 degrees.”

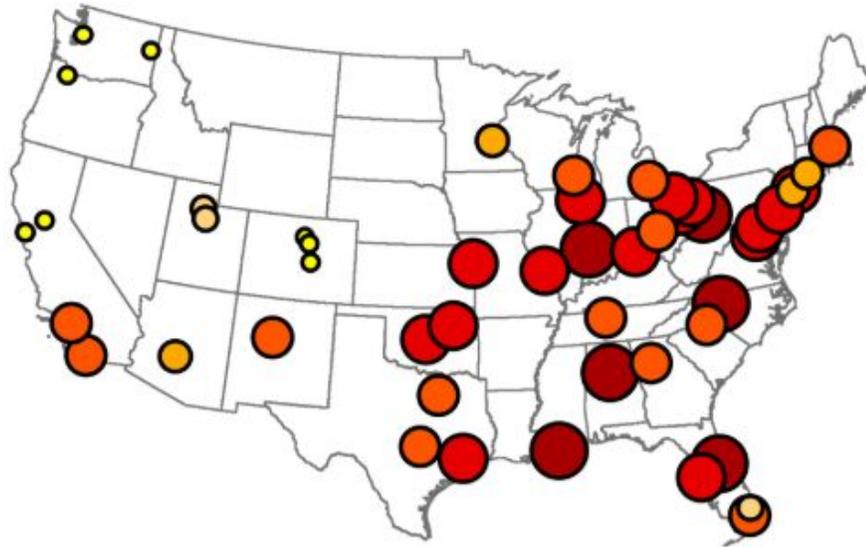
Portland Press Herald  
July 16, 2019

# Rise in Heat Related Deaths

Lower Scenario  
(RCP4.5)



Higher Scenario  
(RCP8.5)



Change in Mortality Rate  
(deaths per 100,000 people)





**CLIMATE CHANGE  
IS A HEALTH  
CRISIS**

I CARE  
ABOUT  
CLIMATE  
CHANGE

ABOUT  
CLIMATE  
CHANGE

AC  CLIMATE 911

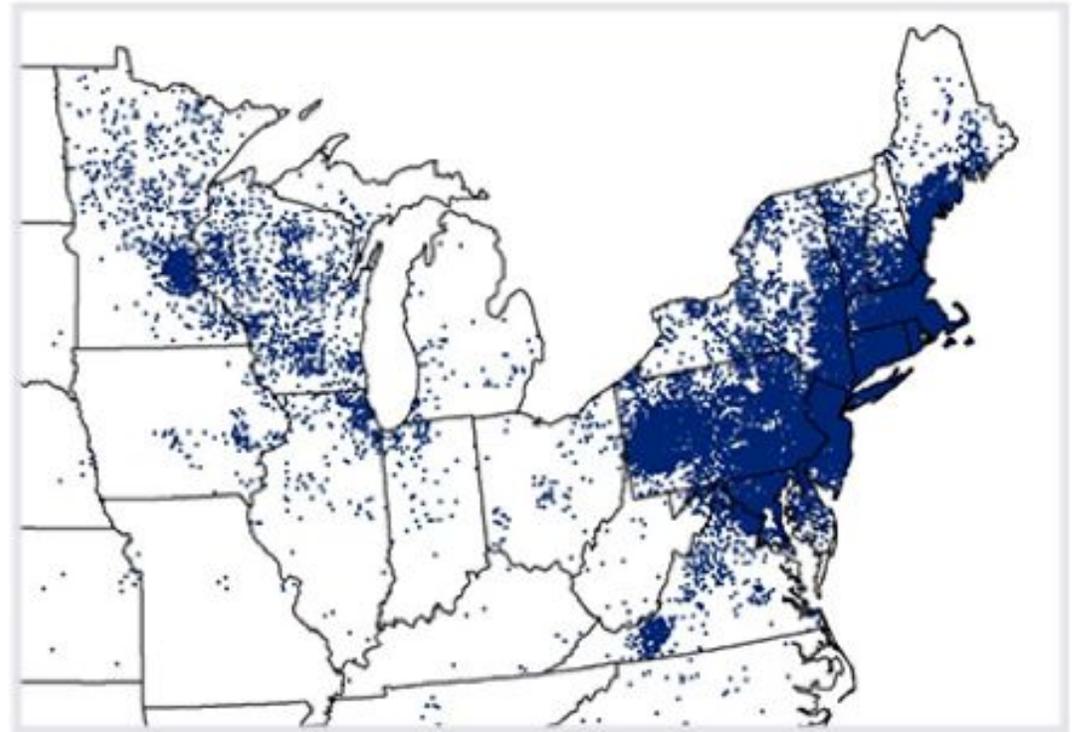
A close-up photograph of a brown and black tick on a green leaf. The tick has a large, rounded, reddish-brown body and a smaller, dark, textured head. It has eight dark legs. The text "Vector-Bourne Diseases" is overlaid in white, bold font across the center of the tick.

# Vector-Bourne Diseases

# Proliferation of Lyme Disease



**1996**



**2014**

# Mosquito-Borne Illness



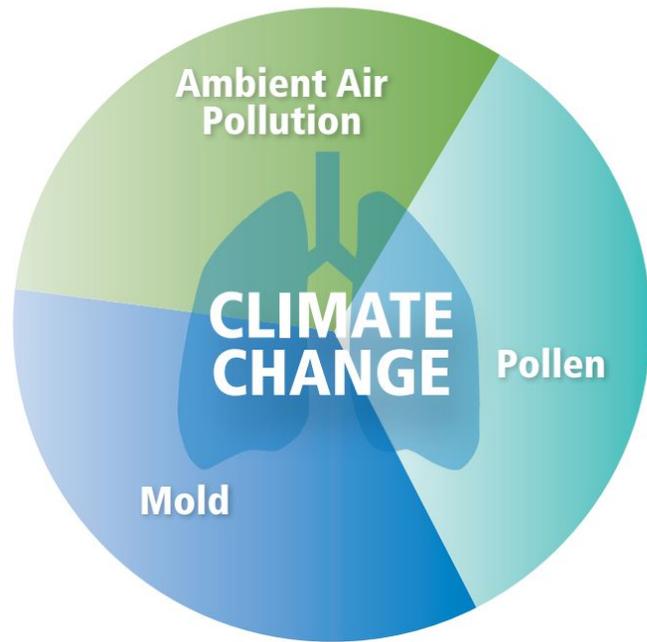
The environmental conditions and weather conditions ... that come with climate change are all consistent with creating suitable conditions for increased mosquito populations.

— THEODORE ANDREADIS, HEAD OF THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION'S MOSQUITO MONITORING AND RESEARCH PROGRAM

# Increased Air Quality Concerns

## Climate Change Impacts on Asthma and Allergies

Three main exposures affect asthma and allergies: pollution, pollen, and mold.



MAKING THE CONNECTION:

## Climate Changes Allergies and Asthma



APHA

AMERICAN PUBLIC HEALTH ASSOCIATION

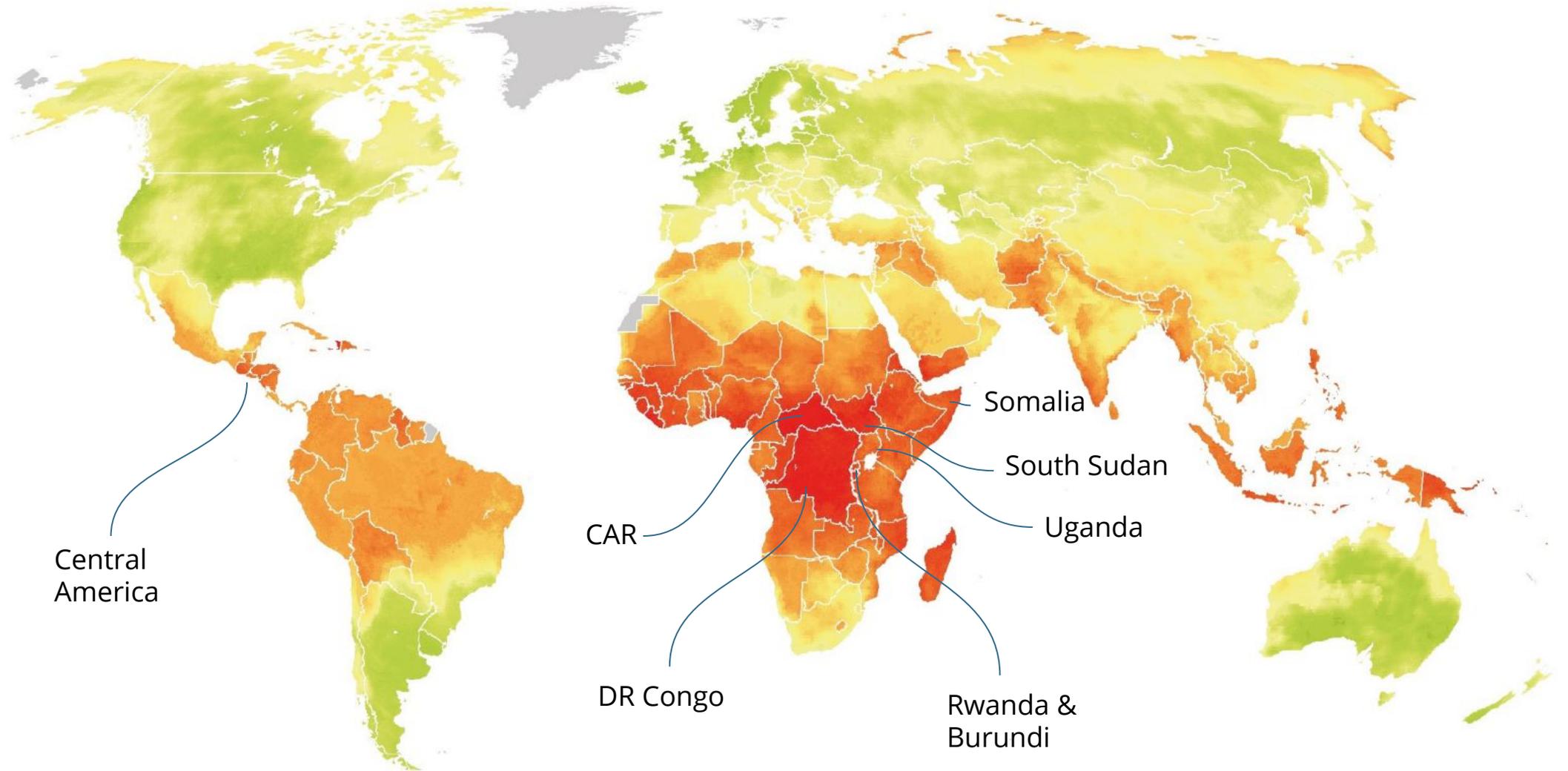
*For science. For action. For health.*

An aerial, high-angle photograph of a massive, dense crowd of people. The individuals are packed closely together, filling the entire frame. They are wearing a wide variety of colorful clothing, including red, blue, white, and yellow. The overall scene conveys a sense of a large-scale gathering or event.

# Get ready for tens of millions of climate refugees

Researchers are creating models of where people will move when climate shocks hit, but so far we're just making educated guesses.

# Climate Change Vulnerability Index 2017



SUB-SAHARAN AFRICA

SOUTH ASIA

LATIN AMERICA

86 MILLION

40 MILLION

17 MILLION



Climate Refugees Anticipated by 2050 -- World Bank



**Leah Namugerwa** @NamugerwaLeah · 13m



Nowadays Uganda is hit by landslides every three days. This happened yesterday leaving several people dead.

This is a [#climateemergency](#) wake up world.

Support [#birthdaytrees](#) to restore our lost forest cover





Portland Expo - Summer 2019

# Portland Expo to serve as emergency shelter as influx of asylum seekers creates ‘a very critical situation’

Portland receives 86 asylum seekers from the southern border in 3 days, and the city manager says the city manager of San Antonio, Texas, told him to expect as many as 150 more to arrive soon.

neen NECN

## Hundreds Volunteer to Help Asylum Seekers in Portland, Maine

Hundreds Volunteer to Help Asylum Seekers in Portland, Maine ....  
Originally, he had hoped to find a number of refugees who spoke Arabic so

...

Jun 24, 2019



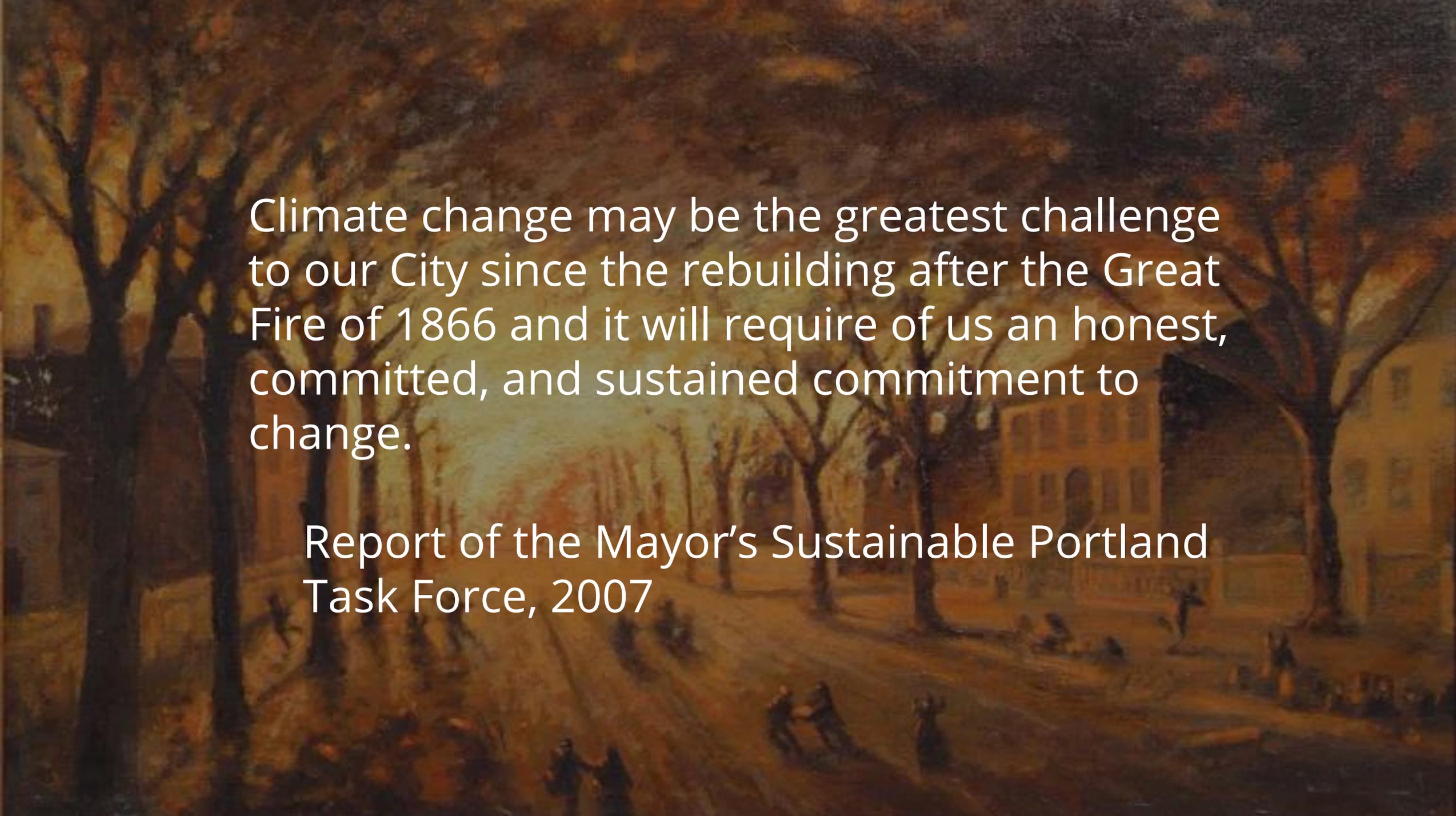
Fox News

## Brian Lonergan: Compassion for refugees can hurt US communities

The federal government is forcing refugees onto states and ... Maine began to attract Somali immigrants in the Portland and Lewiston areas.

Jun 21, 2019



A painting of a street scene with trees and buildings, serving as a background for the text. The scene is rendered in a dark, moody style with a palette of browns, oranges, and greys. Bare trees line a street that leads towards a building. Small figures of people are visible on the street, adding a sense of scale and activity. The overall atmosphere is somber and historical.

Climate change may be the greatest challenge to our City since the rebuilding after the Great Fire of 1866 and it will require of us an honest, committed, and sustained commitment to change.

Report of the Mayor's Sustainable Portland Task Force, 2007



# ONE CLIMATE FUTURE

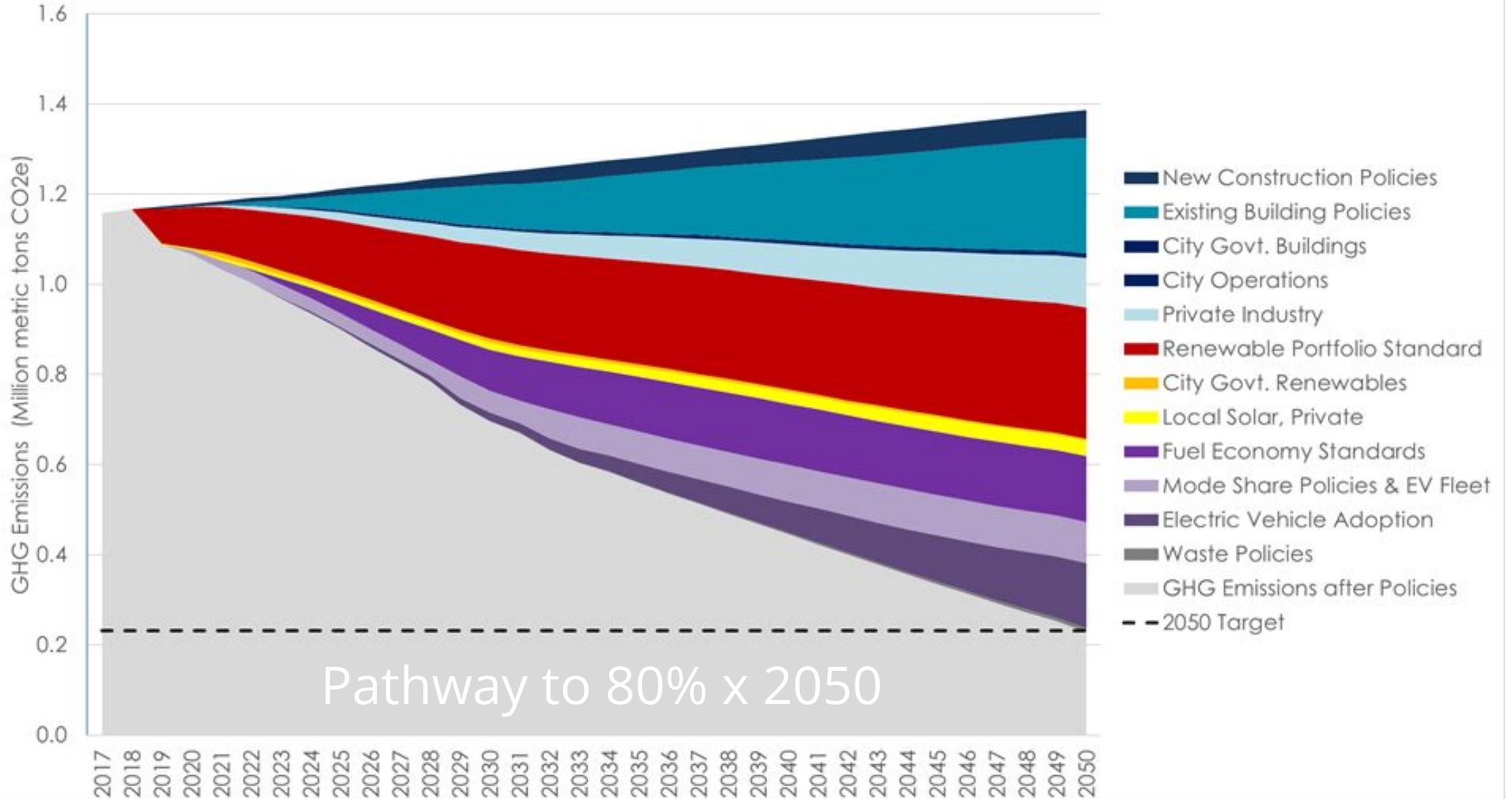
Charting a Course *for*  
Portland and South Portland

# The Vision

Together, Portland and South Portland work to be inclusive, vibrant communities that provide opportunities for residents and businesses to thrive in a changing climate.



# GHG Reductions by Policy



# Four Plan Elements

## Buildings & Energy Use



**ONE  
CLIMATE  
FUTURE**

Charting a Course *for*  
Portland and South Portland

### Goal:

Use energy efficiently, transition to renewable energy, and encourage high performing buildings.

Portland emitted over 298,000 tons of CO<sub>2</sub>e from its buildings in 2017.

**298,000 =**

Tons of CO<sub>2</sub>e

# Four Plan Elements

## Transportation & Land Use



**ONE  
CLIMATE  
FUTURE**

Charting a Course *for*  
Portland and South Portland

### Goal:

Design and connect our homes, businesses, and public spaces around an efficient transportation network.

South Portland emitted over 109,000 tons of CO<sub>2</sub>e through transportation in 2017.

**109,000 =**

Tons of CO<sub>2</sub>e

# Four Plan Elements

## Waste Reduction

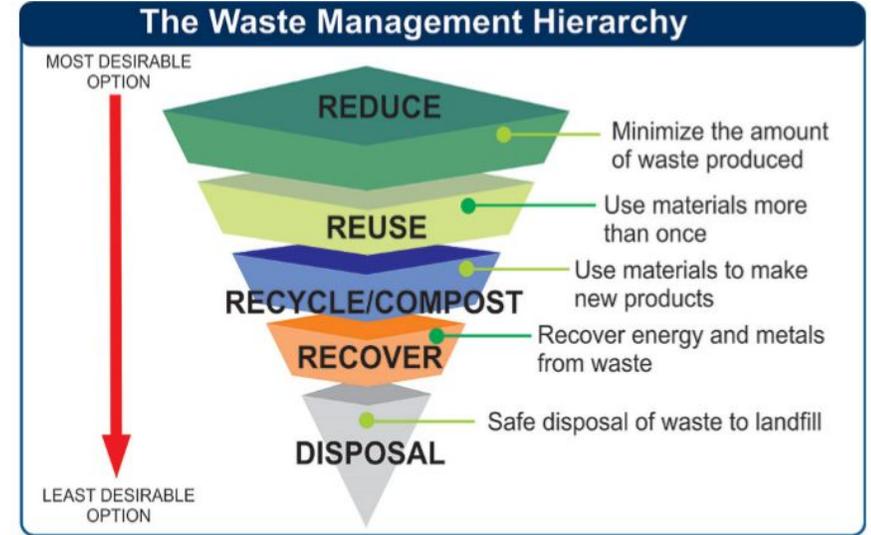


**ONE  
CLIMATE  
FUTURE**

Charting a Course *for*  
Portland and South Portland

### Goal:

Minimize waste by changing how our community consumes and disposes of goods and materials.



# Four Plan Elements

## Climate Resilience



**ONE  
CLIMATE  
FUTURE**

*Charting a Course for*  
**Portland and South Portland**

### **Goal:**

Ensure all our neighborhoods can withstand, respond to, and recover from natural disasters.

# Public Engagement Strategy

## How to Get Involved Today

**Together we can successfully develop a plan to make Portland and South Portland stronger.** We invite you to participate in this year-long process by sharing your ideas, talking with friends and family, attending events, and engaging in our online tools. Stay up-to-date by following us on social media and checking the *One Climate Future* website.



Take  
surveys



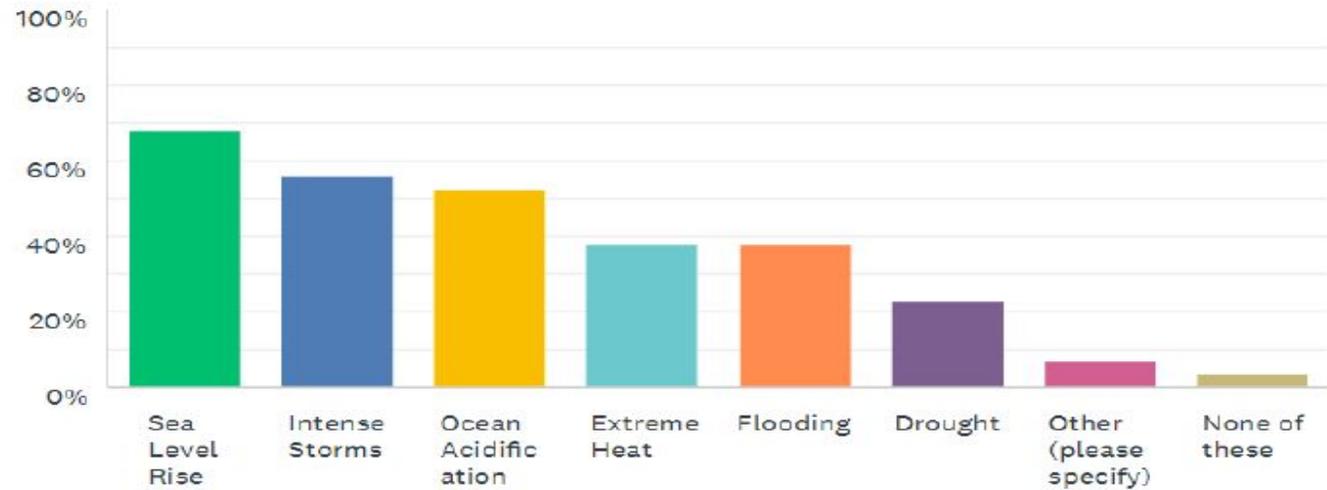
Attend community  
events



Talk to your family,  
friends, and colleagues

# Public Engagement Strategy - Surveys

## Overall Top Climate Hazard Concerns



*\*Based on the 645 respondents that answered this question.*

69% of respondents are **very concerned** that climate change will **affect them personally**

79% of respondents are **very concerned** that climate change will **affect the Cities** of Portland and South Portland

# Public Engagement Strategy - Translations



# Public Engagement Strategy - Street Team



The Street Team, made up of six paid community members, attended event throughout the summer to talk about the goals of One Climate Future and gather public feedback. One Street Team member will work throughout the Fall.

# Public Engagement Strategy - Social Media



sustainableportlandme

Edit Profile



168 posts

534 followers

169 following

**Portland Sustainability Office**

Official City of Portland, ME Sustainability Office government account.

[drivelessportland.com](http://drivelessportland.com)



soposustainability

Following



17 posts

88 followers

82 following

**SoPo Sustainability Office**

Official City of South Portland, ME Sustainability Office government account.

[www.surveymonkey.com/r/OneClimateFuture](http://www.surveymonkey.com/r/OneClimateFuture)

Followed by [maineconservationcollaborative](#), [gogorefill](#), [greenhealthymaine](#) + 14 more

# Public Engagement Strategy - Special Events



# Public Engagement Strategy - Volunteer Led

## **Our Community--Enduring Change**

**October 09, 2019.** A discussion for the residents of Redbank Village, Liberty Commons, and the West End Neighborhood about what it means to be an inclusive, vibrant community where all residents and businesses can thrive in a changing climate. Presented by the South Portland Sustainability Office staff and volunteers.

## **The Impacts of Climate Change in East Bayside and Surrounding Communities**

**October 24, 2019.** Jan Piribeck, One Climate Future, and Greater Portland Landmarks will present The Impacts of Climate Change in East Bayside and Surrounding Communities. Come learn about the joint climate action and adaptation plan.

# One Climate Future Timeline



Julie Rosenbach  
Sustainability Director  
South Portland

Troy Moon  
Sustainability Coordinator  
Portland



[oneclimatefuture.org](http://oneclimatefuture.org)

