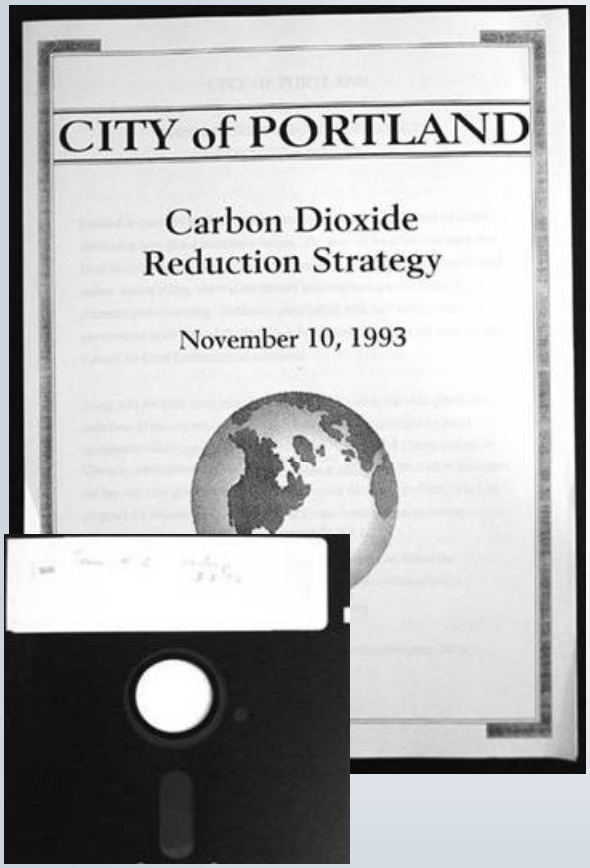
Climate Action Plan and Climate Change Preparation Strategy

City of Portland
and Multnomah County

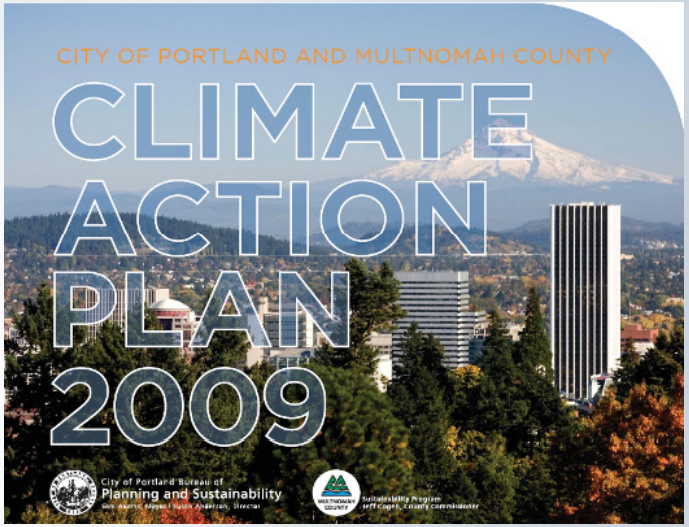
20 Years of Climate Action Planning

1993



2001

2009



Climate Action Plan

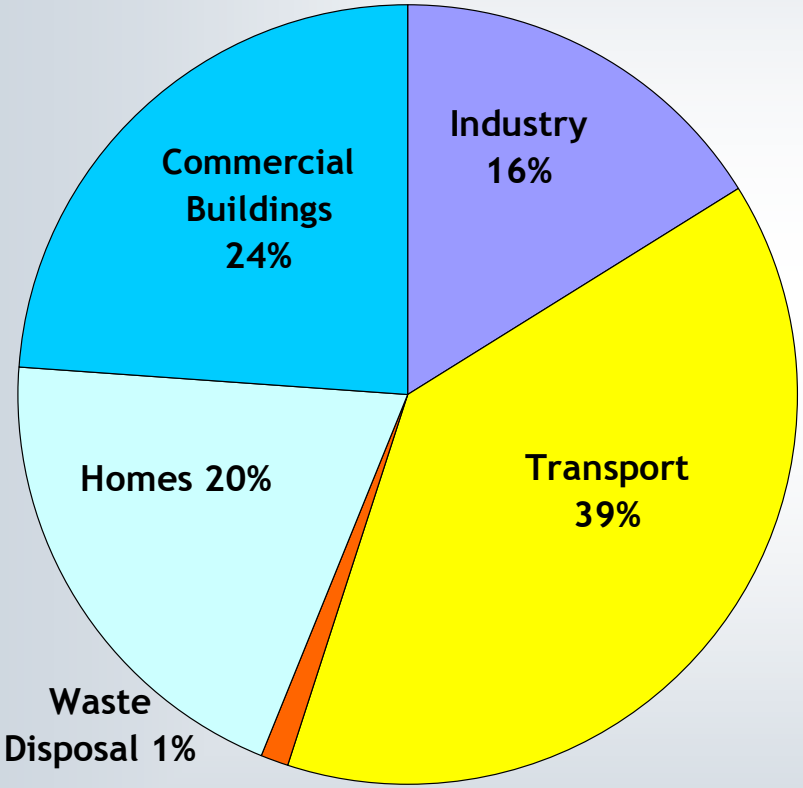
2050 Goal: 80% reduction in carbon emissions

CAP Update Project

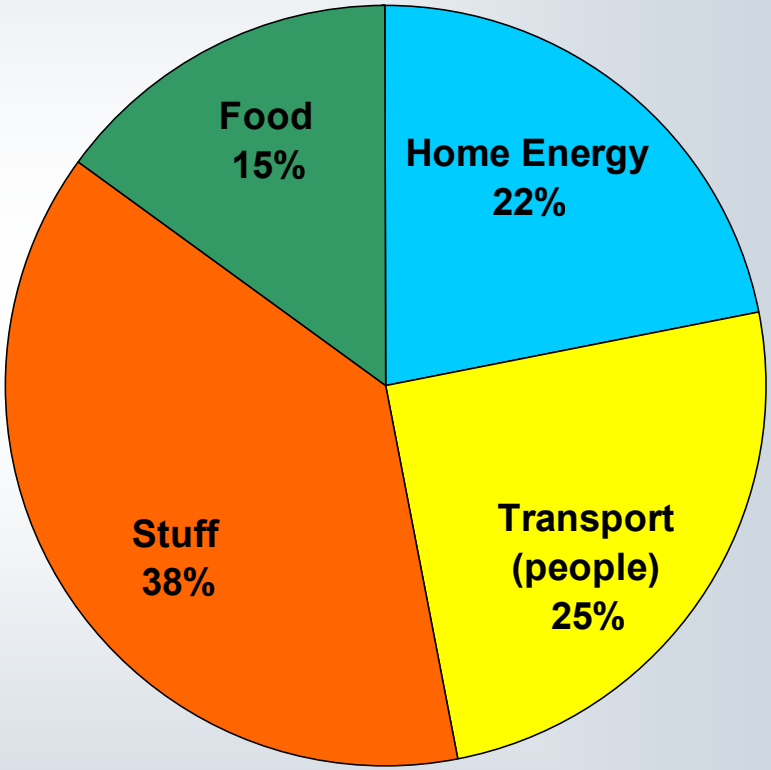
- Assessing progress
- Identifying priority short-term actions
- New focus areas
  - Consumption based inventory
  - Climate equity
  - Climate Change Preparation

Multnomah County Carbon Emissions

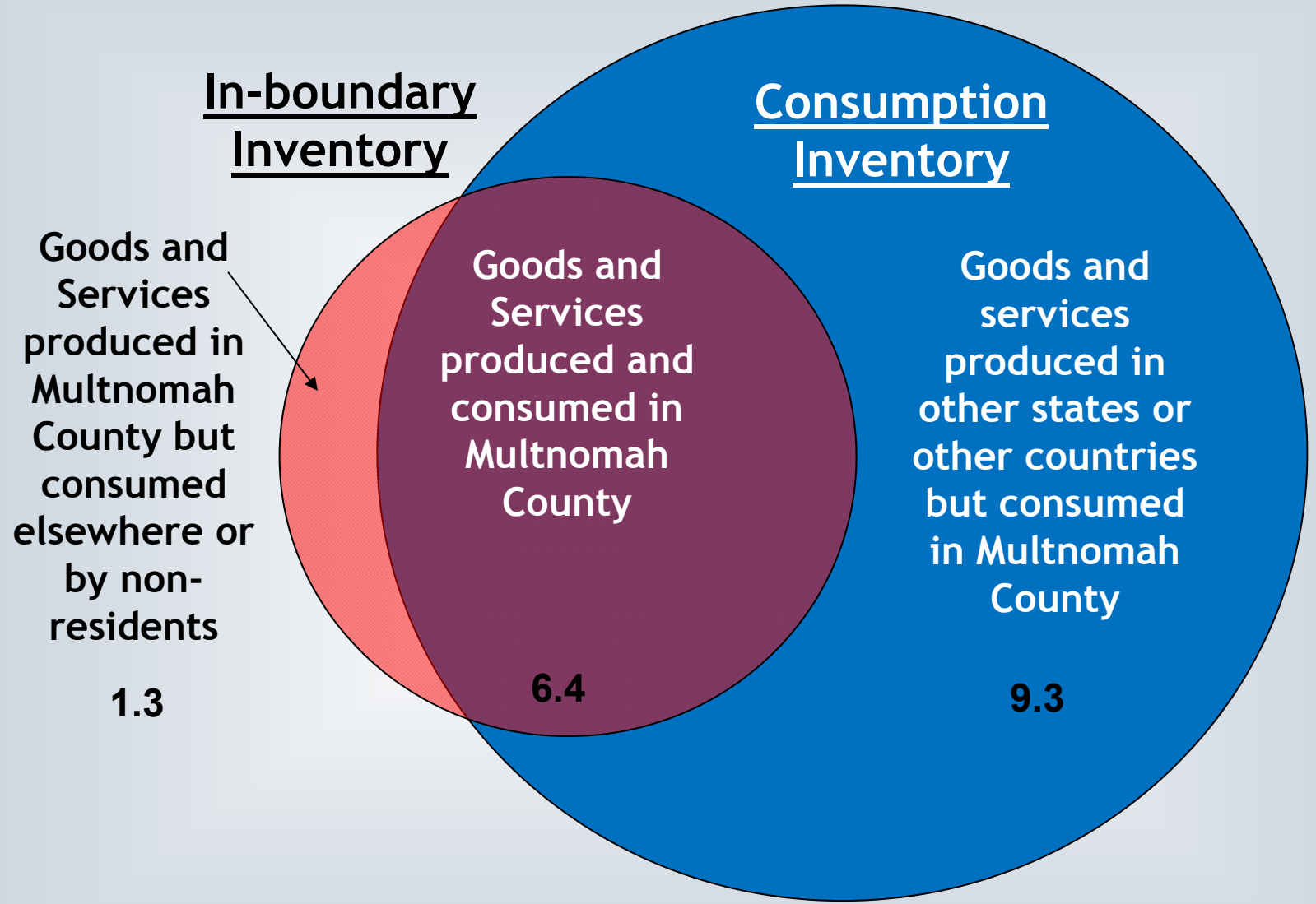
"Production Based Inventory"



"Consumption Based Inventory"



Total emissions – 17 Million Metric Tons CO_2e



Not to Scale

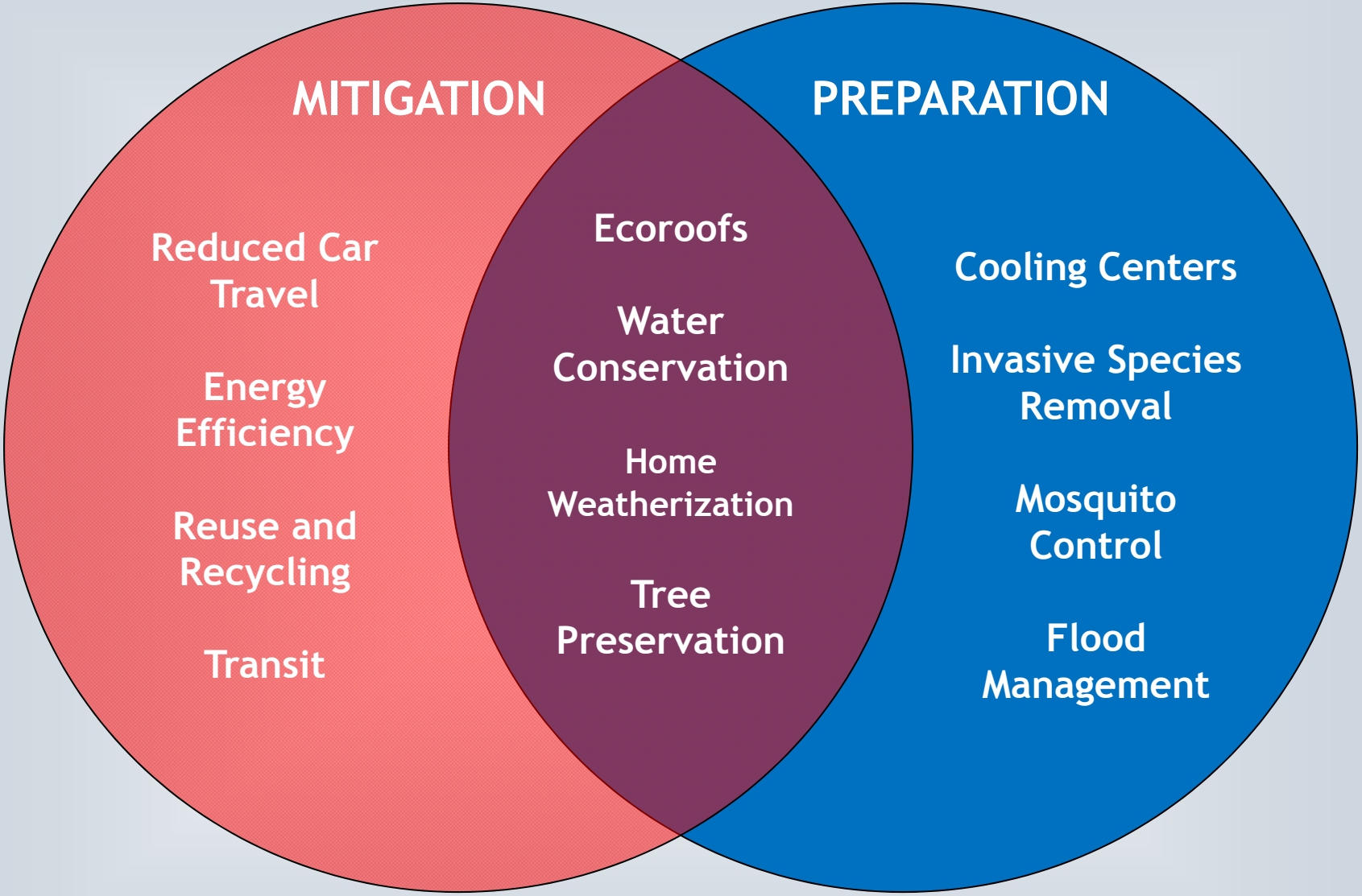
Equity and Climate Action

- Equity Workgroup
- Equity Scan
- Implementation Guide

Equitable Climate Actions

- Current and historical disparities related to the action?
- Who primarily benefits?
- Are we missing an opportunity to further reduce disparities for communities of color and low-income communities?
- Are there unintended consequences or burdens? If so – how can we fix that?

2009 Climate Action Plan


MITIGATION
Reduced Car Travel
Energy Efficiency
Reuse and Recycling
Transit
Ecoroofs
Water Conservation
Home Weatherization
Tree Preservation
PREPARATION
Cooling Centers
Invasive Species Removal
Mosquito Control
Flood Management

Climate Change Preparation Planning

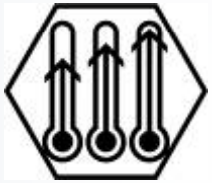
- Infrastructure and the Built Environment
- Natural Systems
- Health and Human Services



We Are Seeing the Impacts

- Increased average annual temperatures
- Declines in Cascade snowpack
- Shifts in seasonal stream flows
- Receding glaciers
- Sea level rise

Priority Climate Risks

Hotter, drier summers	Warmer, wetter winters
HEAT 	FLOODS 
DROUGHT 	LANDSLIDES 
WILDFIRE 	

Natural Systems – Projected Impacts

Hotter, drier summers

- drought stress on wildlife and habitat
- increased invasive species
- fire risk
- loss of wetland habitat

Warmer, wetter winters

- flooding
- increased erosion
- landslides

Natural Systems – Existing Efforts

Since 2008 the City has:

- Acquired 420 acres of natural areas
- Planted over 206,000 trees
- Restored 4 lineal miles of stream
- Constructed 11 acres of ecoroofs
- Restored acres of floodplain

Natural Systems – Preparation Strategies

- Cool urban streams
- Increase ability of plantings to withstand drought
- Address invasive species, and support species needing to alter their range
- Reduce urban-wildland interface fire risk
- Restore floodplains and prepare to manage increased runoff in streams

Infrastructure – Projected Impacts

Hotter, drier summers

- increased wastewater temperatures
- pavement buckling
- rail warping
- increased water demand for outdoor uses (irrigation)

Warmer, wetter winters

- erosion and turbidity of water supply
- landslides
- overwhelming of stormwater facilities
- flooding of roadways and bike paths

Infrastructure – Existing Efforts

- Water supply climate change study and secondary groundwater supply
- Reducing stormwater flow into pipes
- Water saving computer controlled irrigation systems (Parks)

Infrastructure – Preparation Strategies

- Expand capacity of groundwater system and improve water efficiency
- Continue to assess potential impacts to Bull Run watershed
- Work with partners to update floodplain data and maps
- Incorporate landslide hazard reduction techniques into construction projects
- Incorporate climate change as a risk in asset management

Human Systems – Projected Impacts

Hotter, drier summers

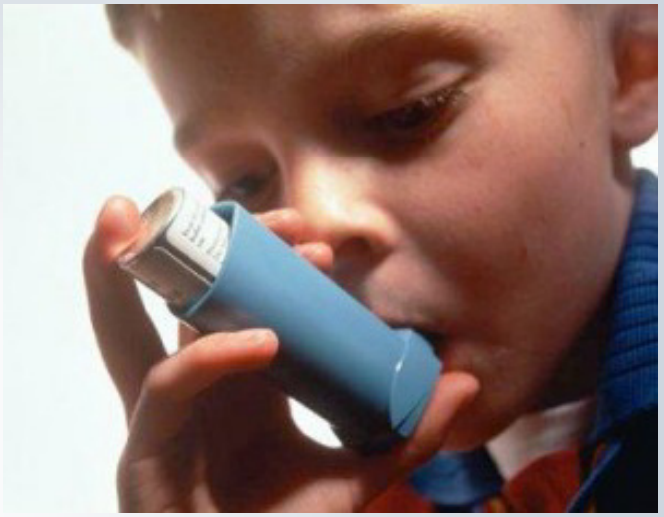
- heat-related illness
- reduced air quality and increases in respiratory diseases
- demand for services like cooling centers

Warmer, wetter winters

- mold and associated health conditions
- personal injury and property damage from floods and landslides
- vector-borne diseases

Human Systems – Existing Efforts

- Healthy Homes program
- Strong vector control program
- All hazards planning
- Robust social services network
- Air toxics reduction work



Human Systems – Preparation Strategies

- Work with partners to increase tree canopy in areas with vulnerable populations
- Improve extreme heat preparation and response plans
- Manage habitat for vector populations (e.g. mosquitoes)
- Advance new research on climate impacts to public health

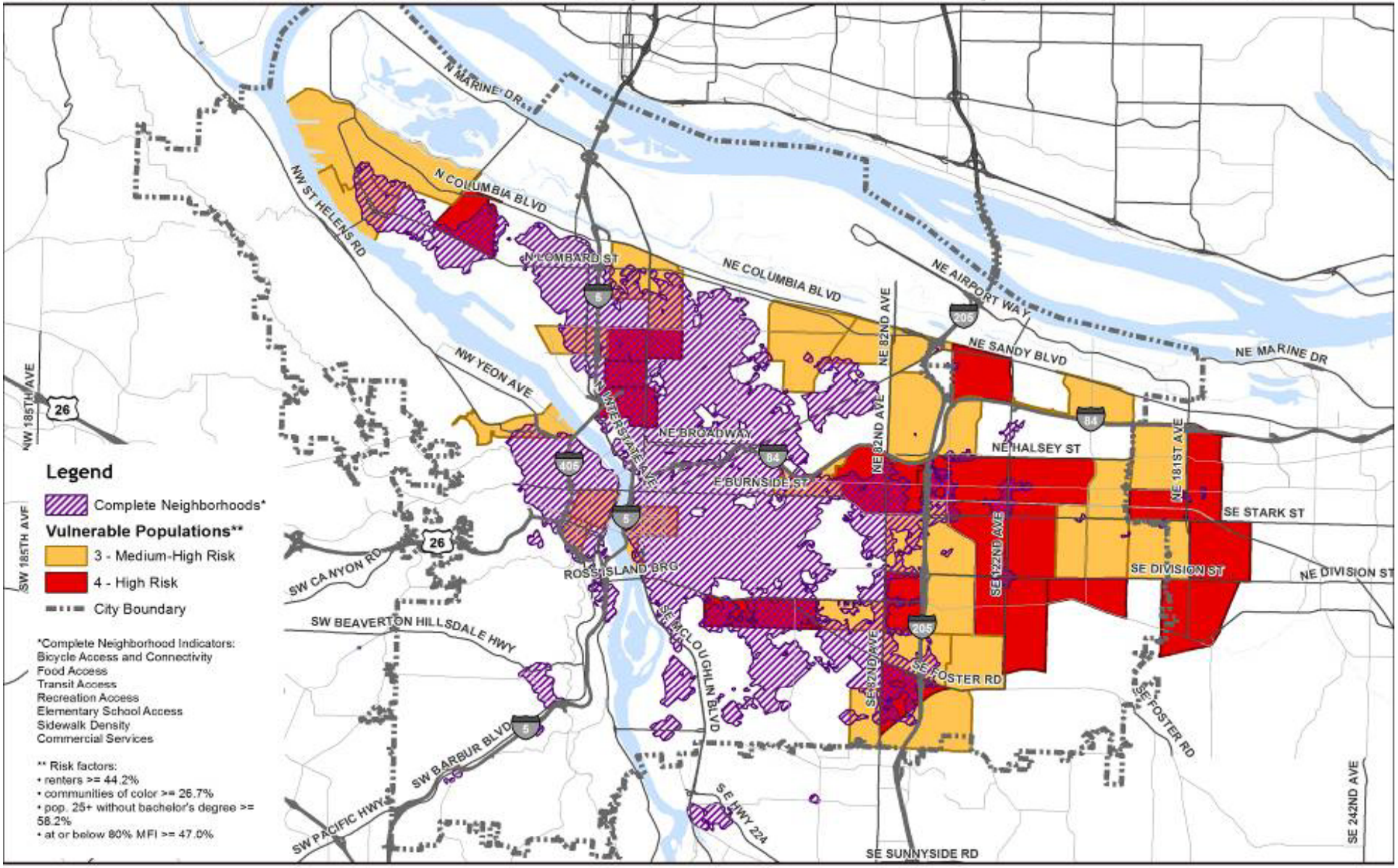
Vulnerable Populations

- All people are impacted - but not all have the same ability or resources to respond
- Existing disparities will be exacerbated
- Portland Plan:
  - “We want a city where we are better on a good day so we can bounce back form a bad day. It requires that everyone thrive and everyone participate.”

Maximize Co-Benefits

- Improved health and safety
- Economic development
- Cost savings
- Environmental protection

Urban Resilience: Vulnerable Populations and Complete Communities



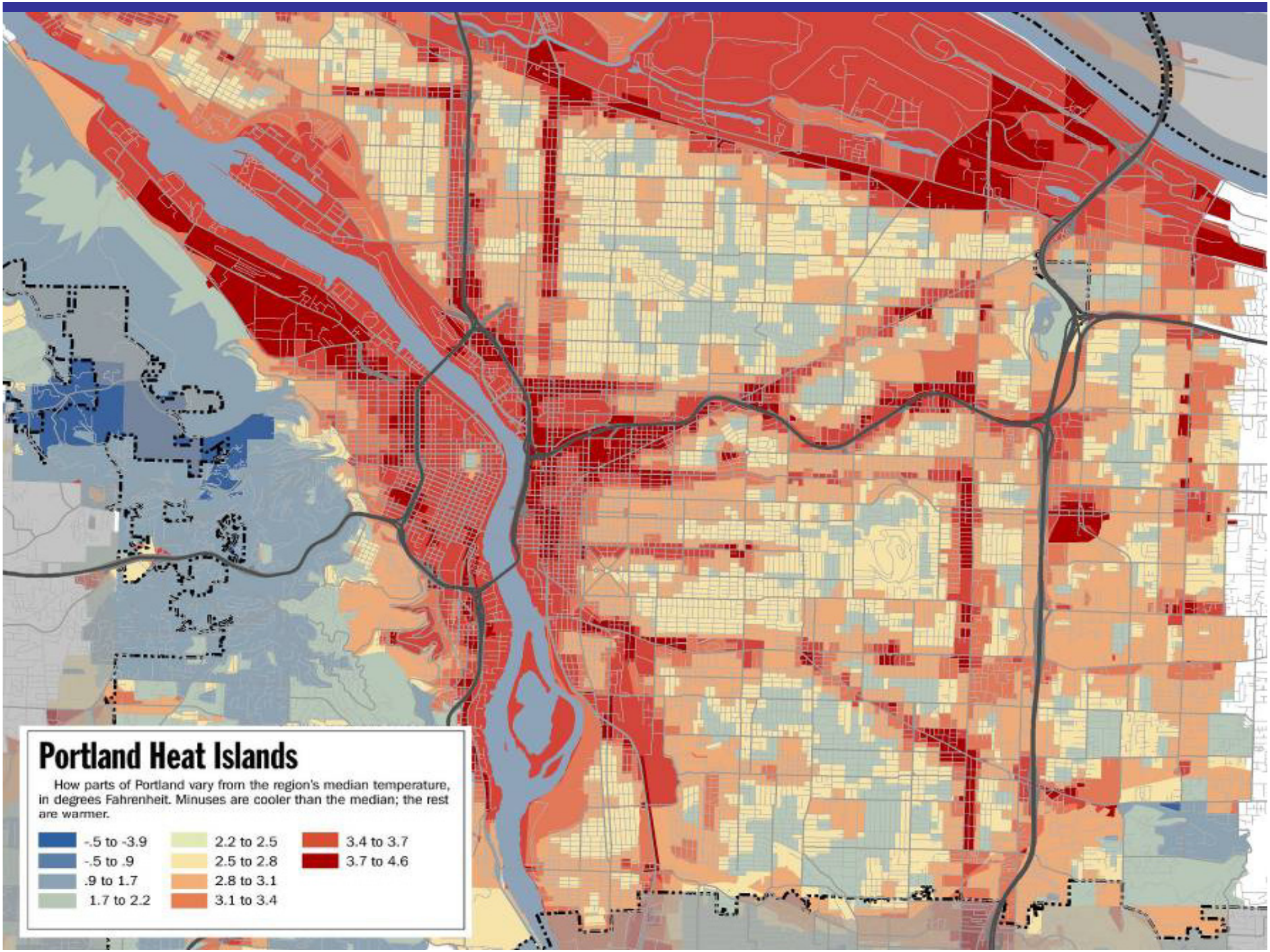
October 14th, 2013

City of Portland, Oregon //
Bureau of Planning & Sustainability //
Geographic Information System

NORTH

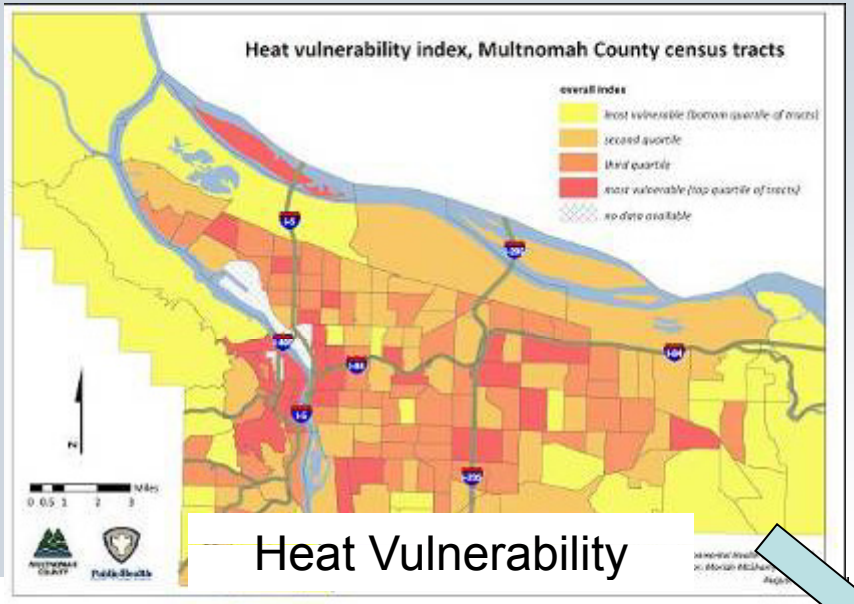
0 1 2 4 Miles

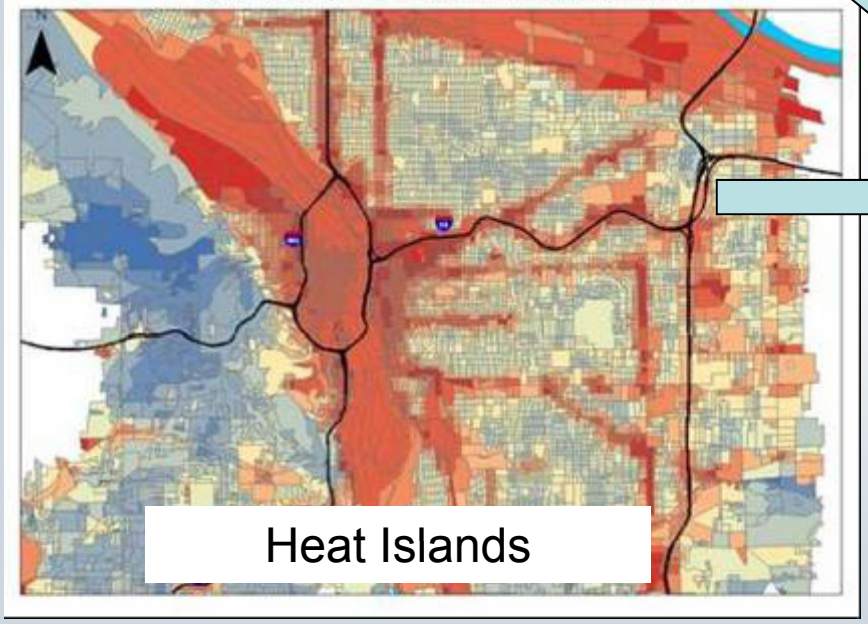
Bureau of Planning and Sustainability
Innovation. Collaboration. Practical Solutions.
City of Portland, Oregon
Charlie Hales, Mayor • Susan Anderson, Director


Portland Heat Islands
How parts of Portland vary from the region's median temperature, in degrees Fahrenheit. Minuses are cooler than the median; the rest are warmer.
-.5 to -3.9
-.5 to .9
.9 to 1.7
1.7 to 2.2
2.2 to 2.5
2.5 to 2.8
2.8 to 3.1
3.1 to 3.4
3.4 to 3.7
3.7 to 4.6

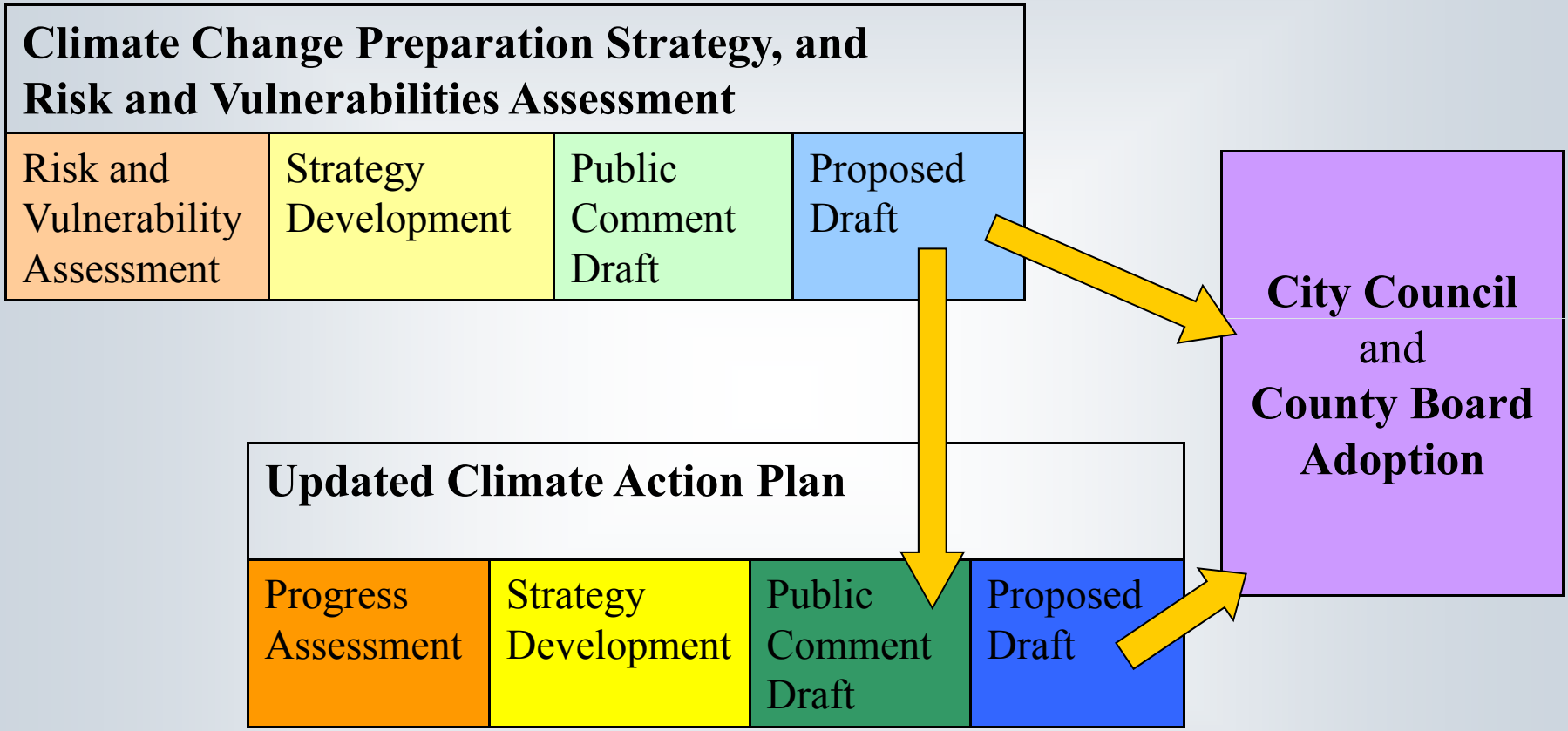
Sample Strategy

- **2030 Objective:** Decrease the urban heat island effect, especially in areas with vulnerable populations.
  - **3 Year Action:** Consider vulnerable populations living in urban heat islands when making decisions about tree planting, protection and maintenance, green infrastructure placement, and access to vegetated open spaces and natural areas.





Where to prioritize tree plantings…


Climate Change Preparation Strategy, and Risk and Vulnerabilities Assessment
Risk and Vulnerability Assessment
Strategy Development
Public Comment Draft
Proposed Draft
Updated Climate Action Plan
Progress Assessment
Strategy Development
Public Comment Draft
Proposed Draft
City Council and County Board Adoption