

CLIMATE CHANGE AND WYANDOTTE COUNTY

Coping Strategies for a
Warmer World

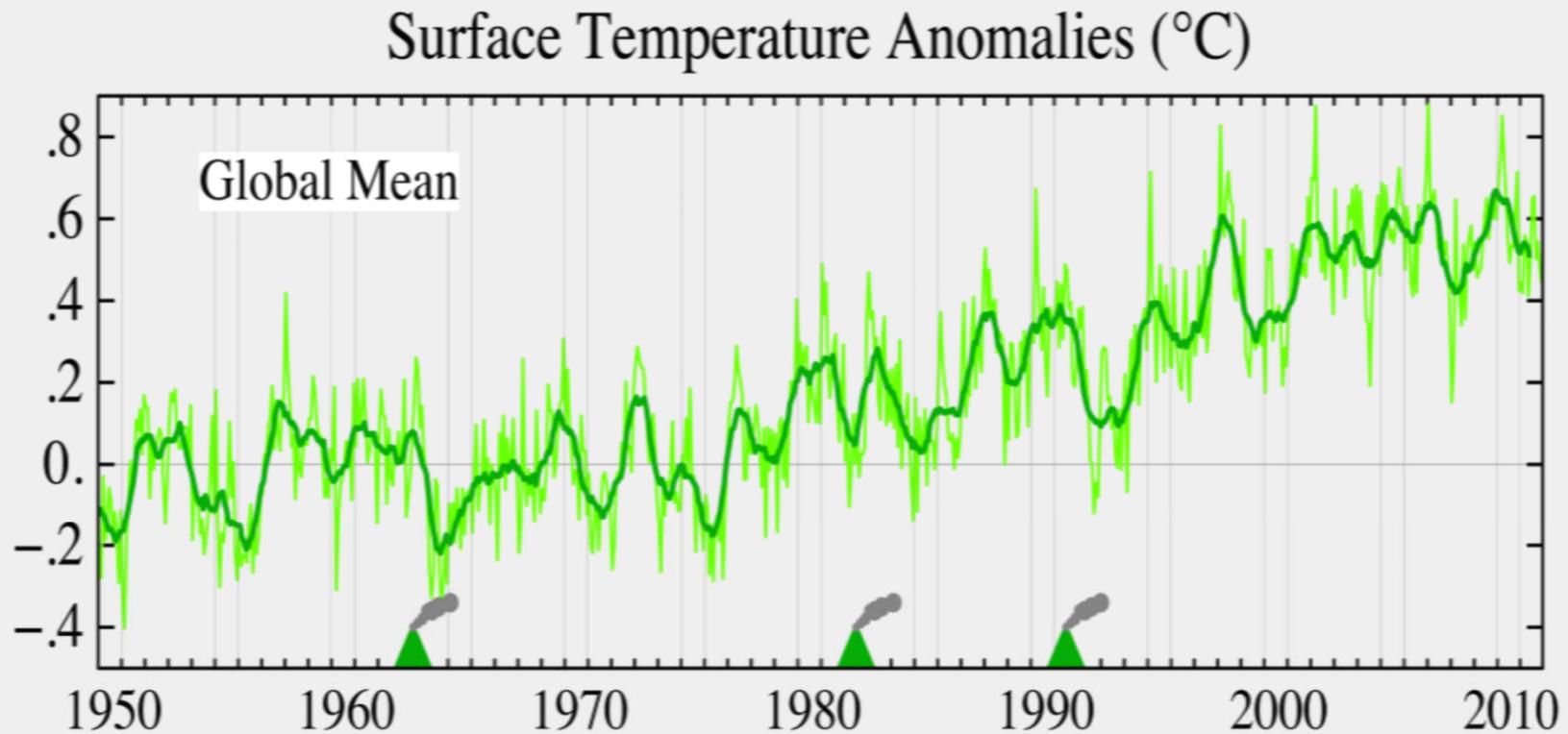
Planet Earth: Our only home



Humans are changing the climate around the earth



An increase in carbon and other greenhouse gases is causing an increase in global temperatures.



Increasing Temperatures Mean:

- ▣ Heat fatalities
- ▣ Drought
- ▣ Crop failures
- ▣ Famine
- ▣ Flooding
- ▣ Increased sea levels



Heat Waves

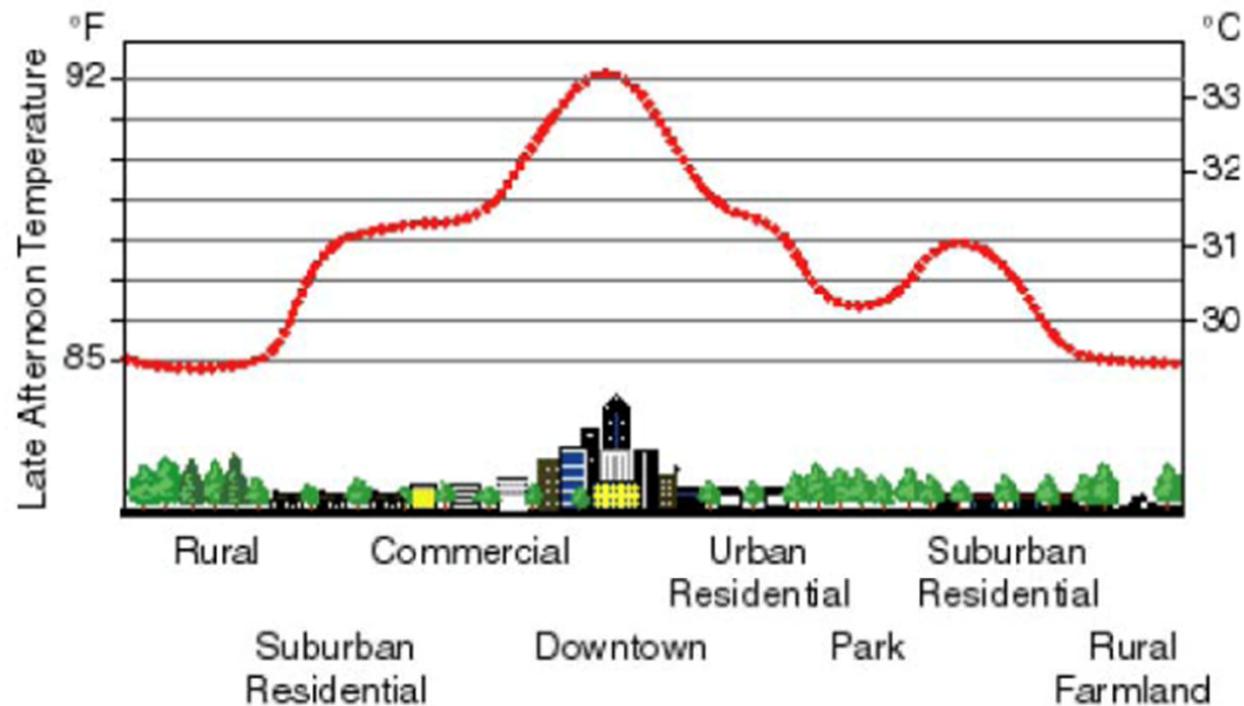


Figure 2.4: Temperature profile of an urban heat island.
(<http://www.epa.gov/globalwarming/greenhouse/greenhouse14/reduction.html>)

Urban Heat Island Problem

- ▣ 85% of U.S. population will live in cities by 2020
- ▣ Heat island effect especially severe in *low income, inner city setting*
- ▣ High population density
- ▣ Little open space
- ▣ Sparse vegetation

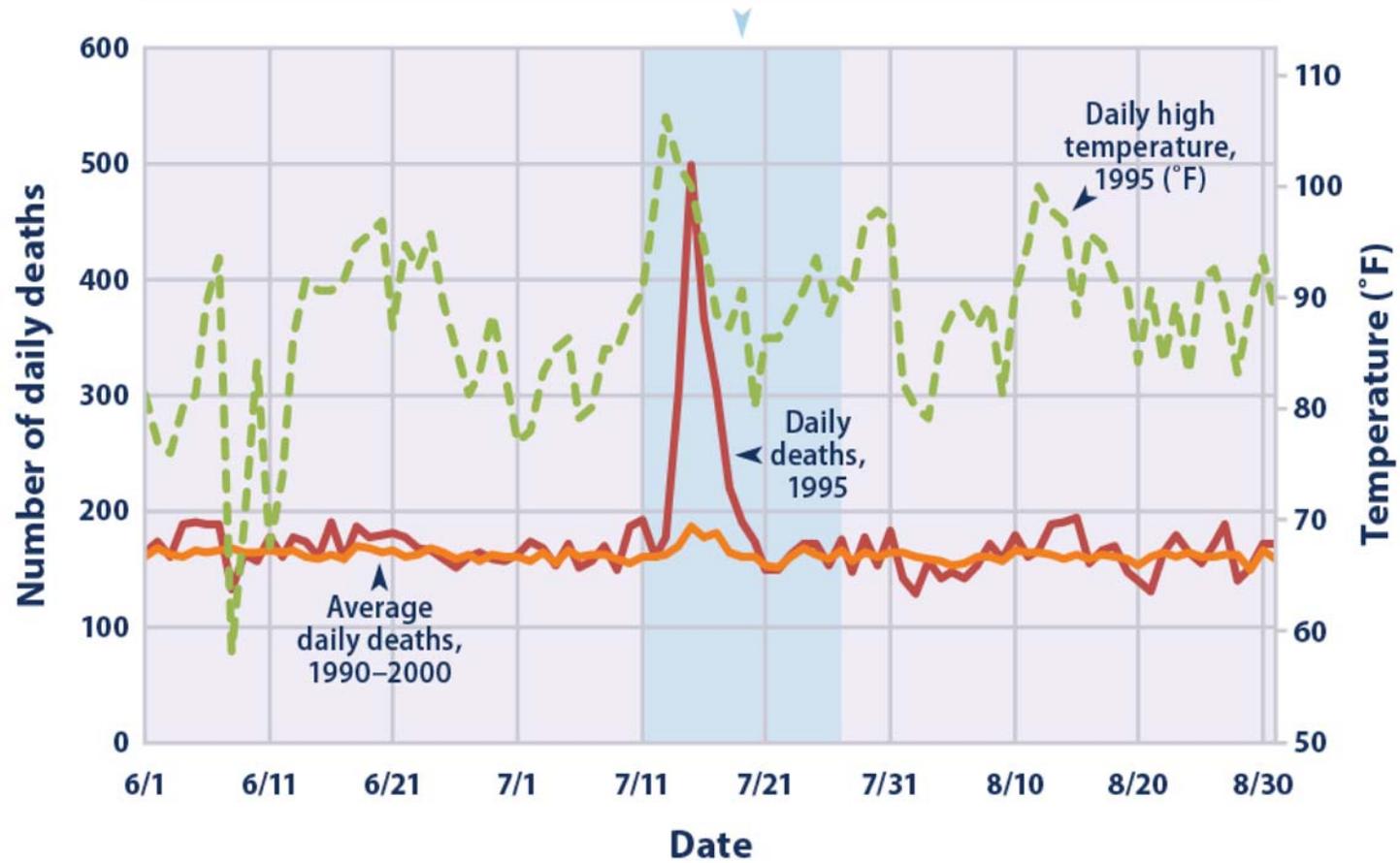
More Heat in Inner City

- ▣ Fewer people have air conditioning (AC);
- ▣ Higher risk for people in spaces closed up for security reasons;
- ▣ More need to check up on elderly and low-income people living alone
- ▣ *Higher bills* for running AC and fans;

Cook County, July 11–27, 1995:

Excess deaths compared with this time period during an average year: **about 700**

Deaths classified as "heat-related" on death certificates (not shown here): **465**



Ground Level Ozone Formation

Source - KDHE



Sunlight

+



Nitrogen Oxides

+



Volatile Organic Compounds

=



Pollutants "bake" together in direct sunlight forming ozone.

Will be especially hard on:

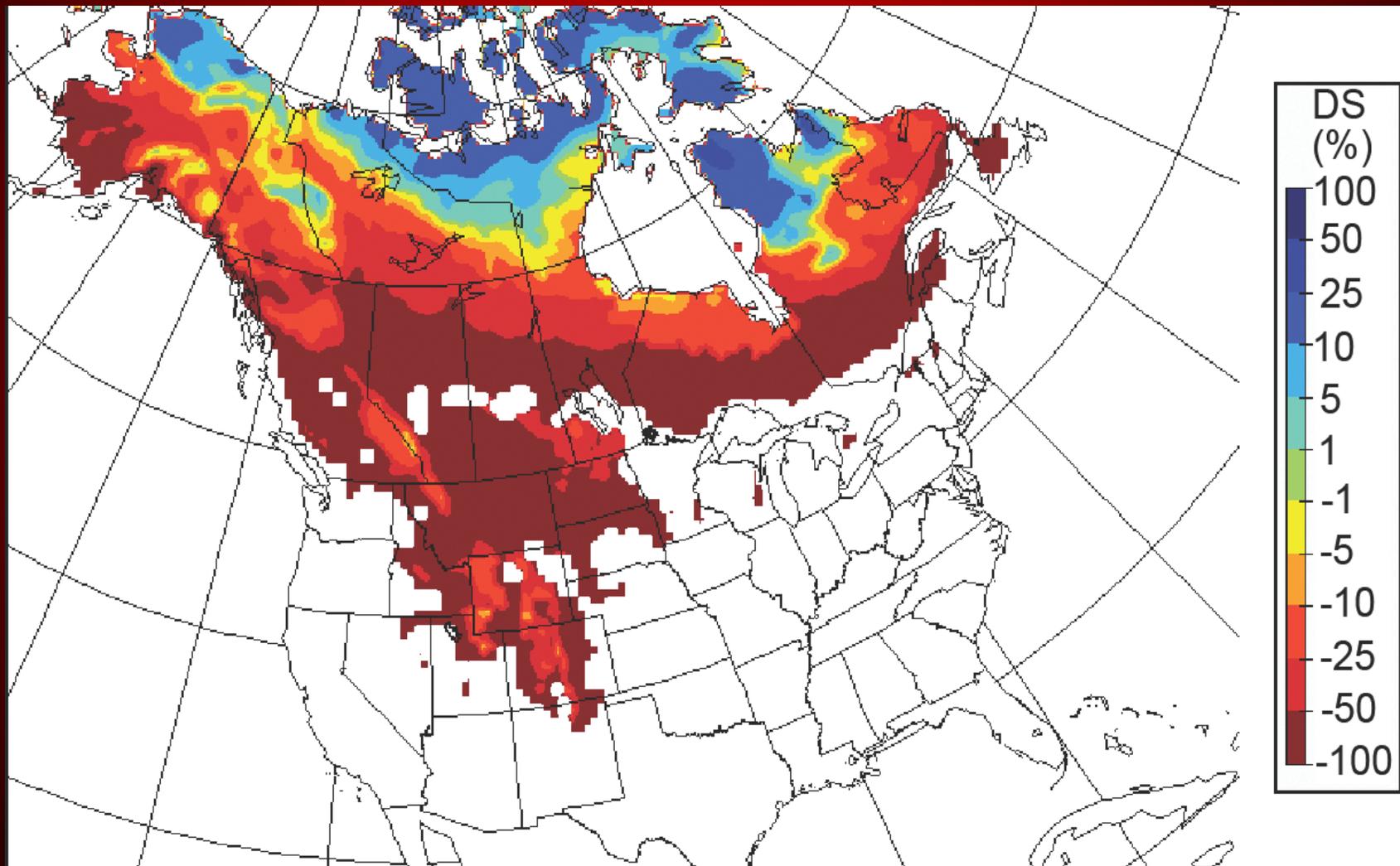


Ozone Standard Exceedances in Kansas City, Kansas: 2001 - 2012

- ▣ The heat waves of 2012 caused 13 bad air days in KCK;
- ▣ This was the worst air pollution conditions since 2003 despite reductions in pollutant emissions over the past decade;



Climate models predict serious loss of snow pack in Rocky Mountains = less MO River Flow



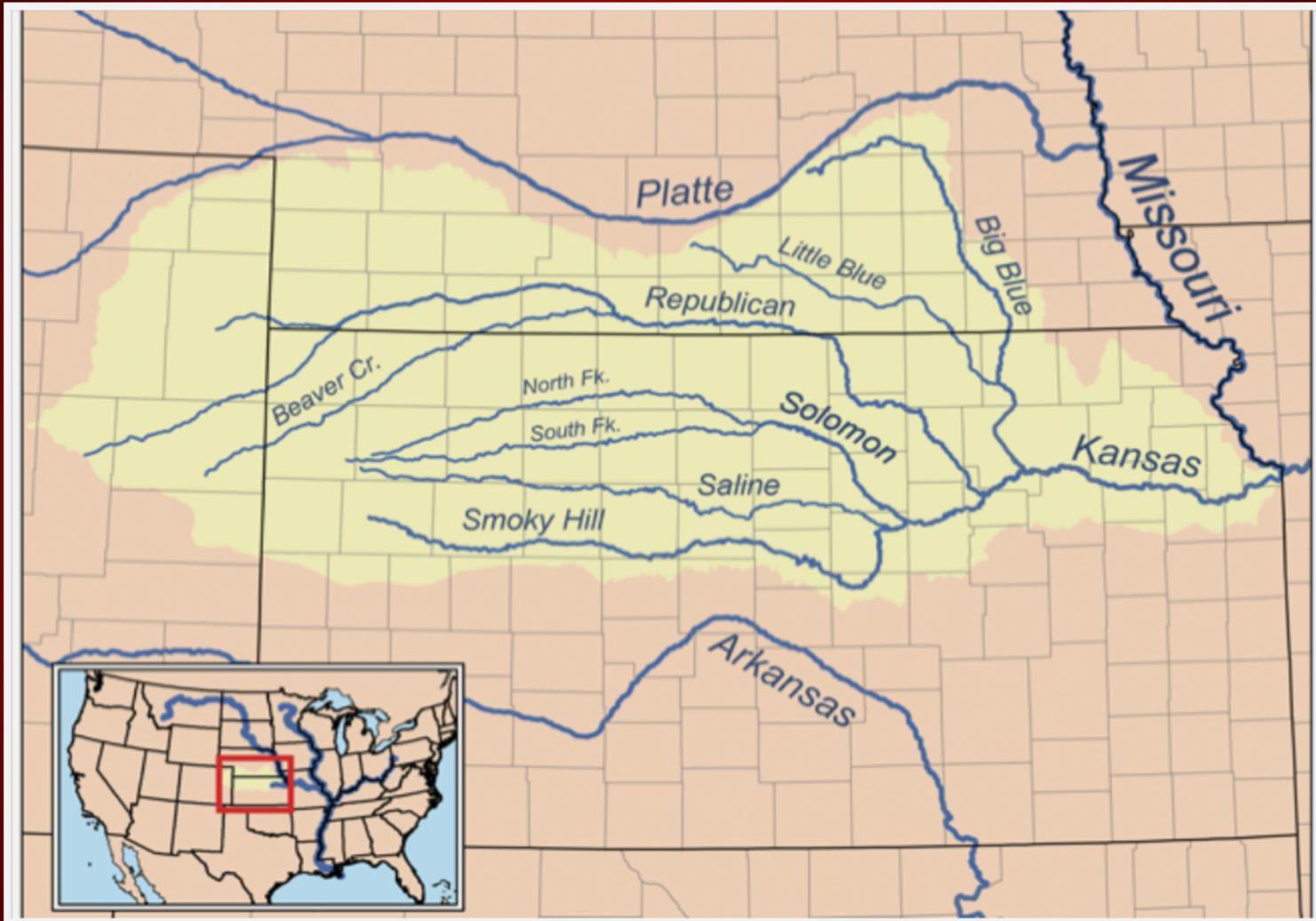
Impact of Less River Flow on Wyandotte County



Impact of Less River Flow on Wyandotte County

- ▣ Less drinking water for KC metro area
- ▣ Lack of cooling water for industry
- ▣ Less recreational opportunities on the Missouri River; loss of natural beauty
- ▣ Higher concentration of pollution
- ▣ Less wildlife habitat

Kansas River Watershed



Increasing Drought to the West

What can we do?

- ▣ Prevention

- ▣ Adaptation



Prevention



Prevention

- ▣ Greatly reduce your energy consumption per the Sierra Club's energy conservation campaign;
- ▣ Urge your city officials to do the same;
- ▣ Urge BPU to greatly expand their energy conservation programs; & switch to *clean, renewable energy sources* such as wind and solar power - *renewables use no water*;
- ▣ Contact federal officials to further regulate Green House Gas emissions

Adaptation



Adaptation

- ▣ **Increase cooling opportunities in the inner city**
- ▣ Plant shade trees and vegetation
- ▣ Improve insulation of housing
- ▣ Learn how to draw in cool air in early AM
- ▣ Help low income residents obtain highest efficiency ACs for essential , low-cost use
- ▣ Campaign for a more livable, walkable city to reduce emissions from personal vehicles

Our children and grandchildren
are depending on us to take
action

