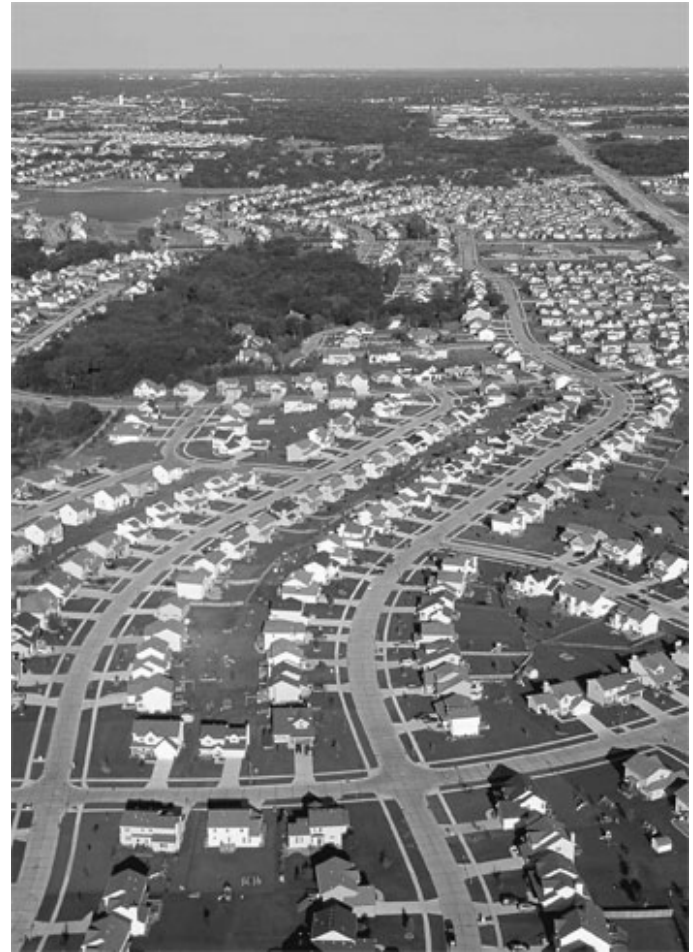


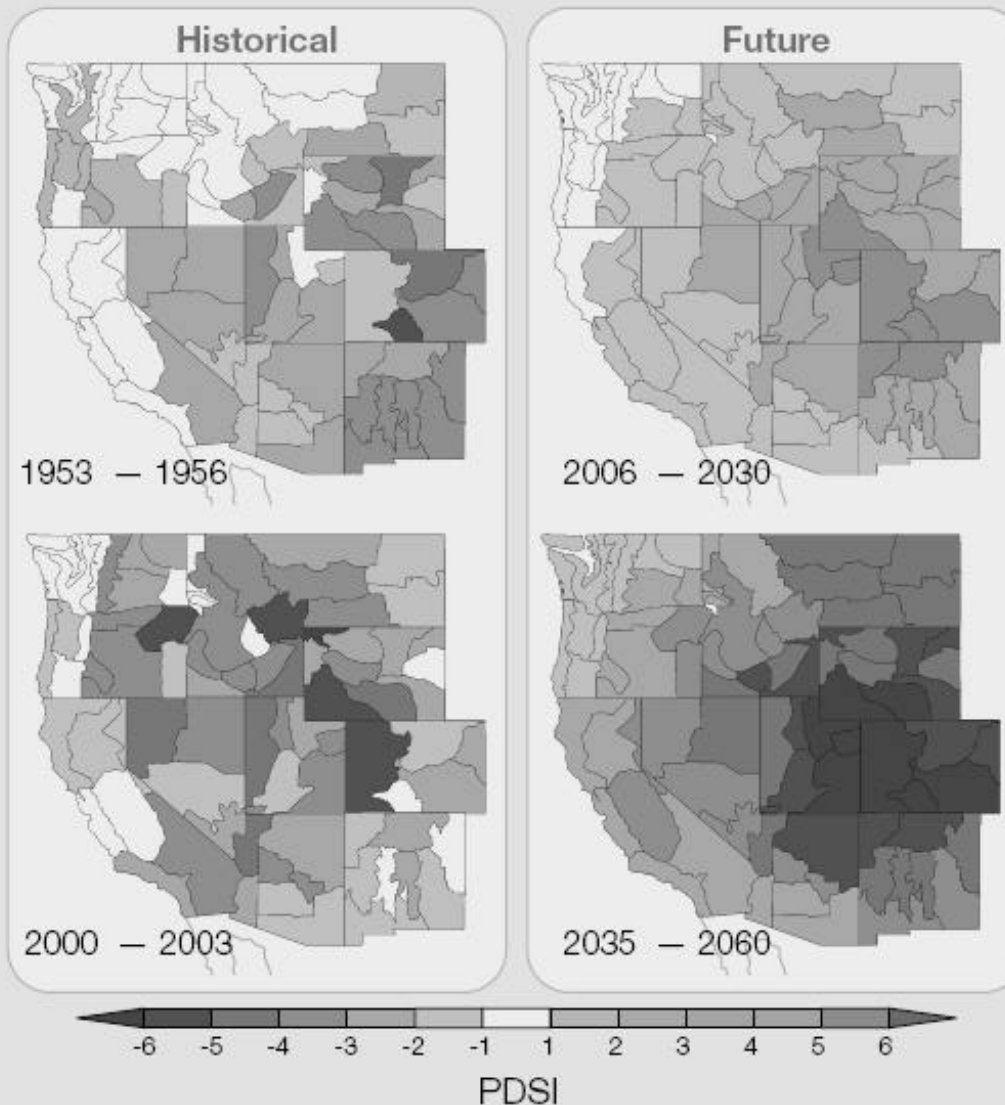
# Planning for Climate Change in the Interior West



# Panelists

- Peter Pollock, FAICP
- Rebecca Carter, PhD
- Mark Ruzzin
- William R. Travis, PhD

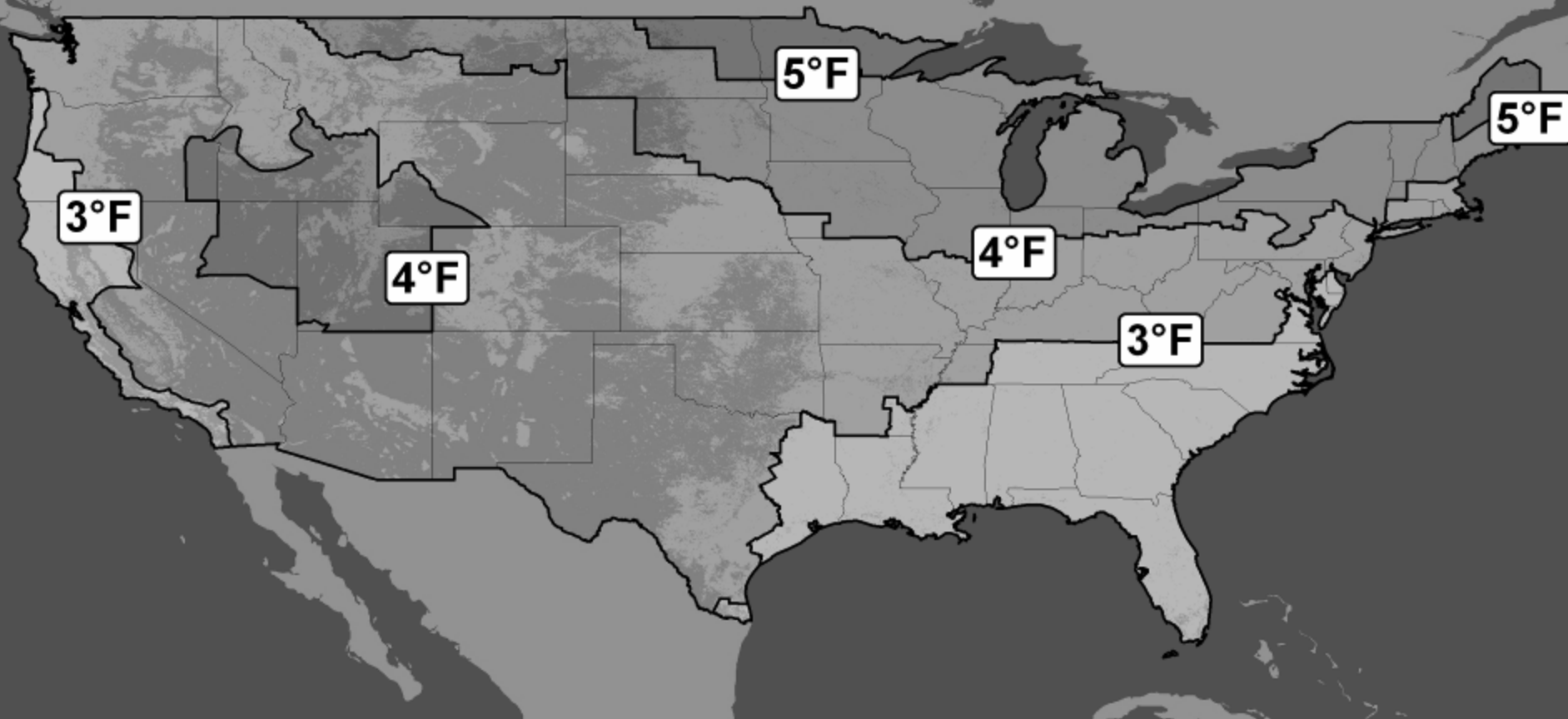




*Palmer Drought Severity Index (PDSI). Values less than -3 denote severe drought conditions. Left panels illustrate the 4-year average drought conditions experienced during the 1950s drought and the recent drought. Right panels are future projections of the PDSI based on 42 simulations conducted to support the Fourth Assessment Report of the IPCC. By about 2050, average moisture balance conditions will mimic conditions experienced only rarely at the height of the most severe historical droughts.*

Relative to  
1971-2000

*Scenario: A1b*



## Projected DJF Temperature Anomalies: 2046-2055

Drawn by JL Weiss

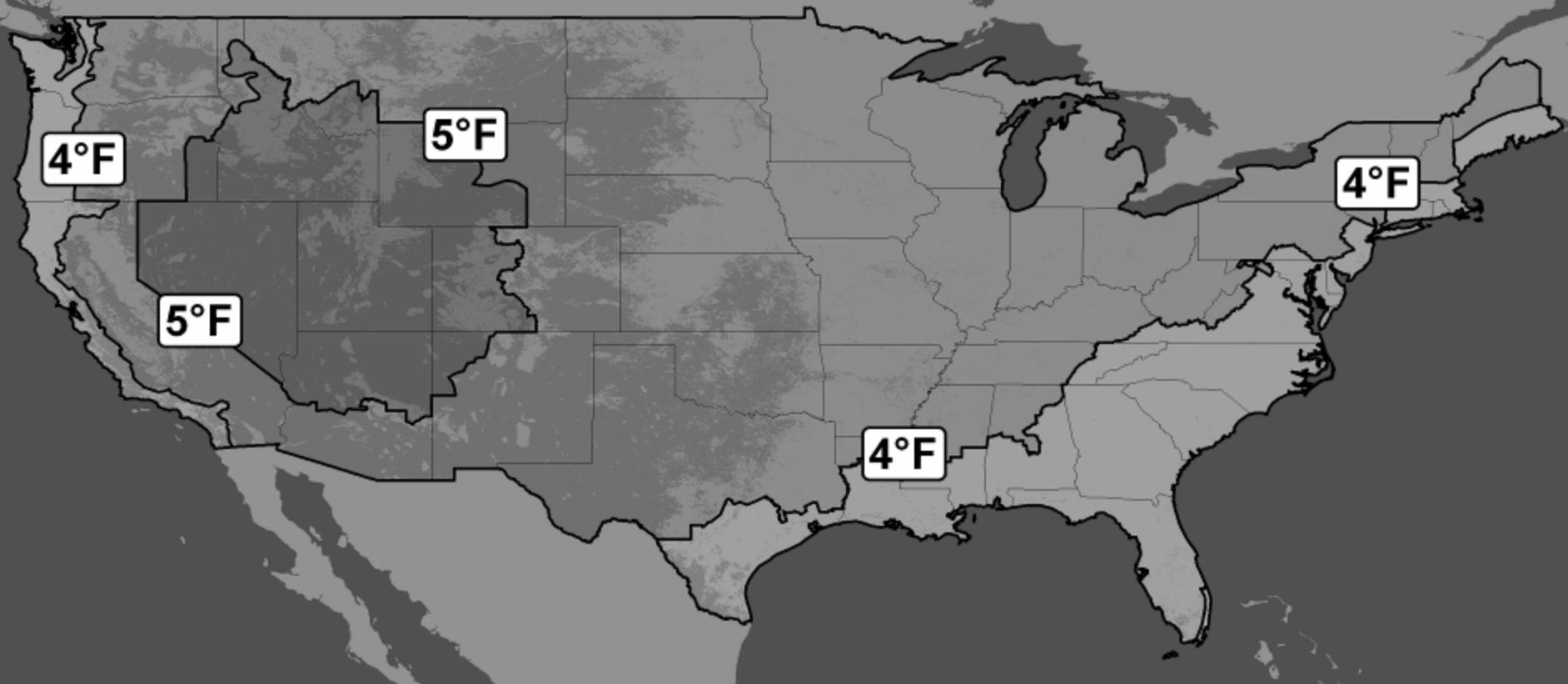
Data from Hoerling & Eischeid NOAA ESRL

Anomalies relative to 1971-2000

0 500 1000 1500 2000  
Kilometers

Relative to  
1971-2000

*Scenario: A1b*



## Projected JJA Temperature Anomalies: 2046-2055

Drawn by JL Weiss

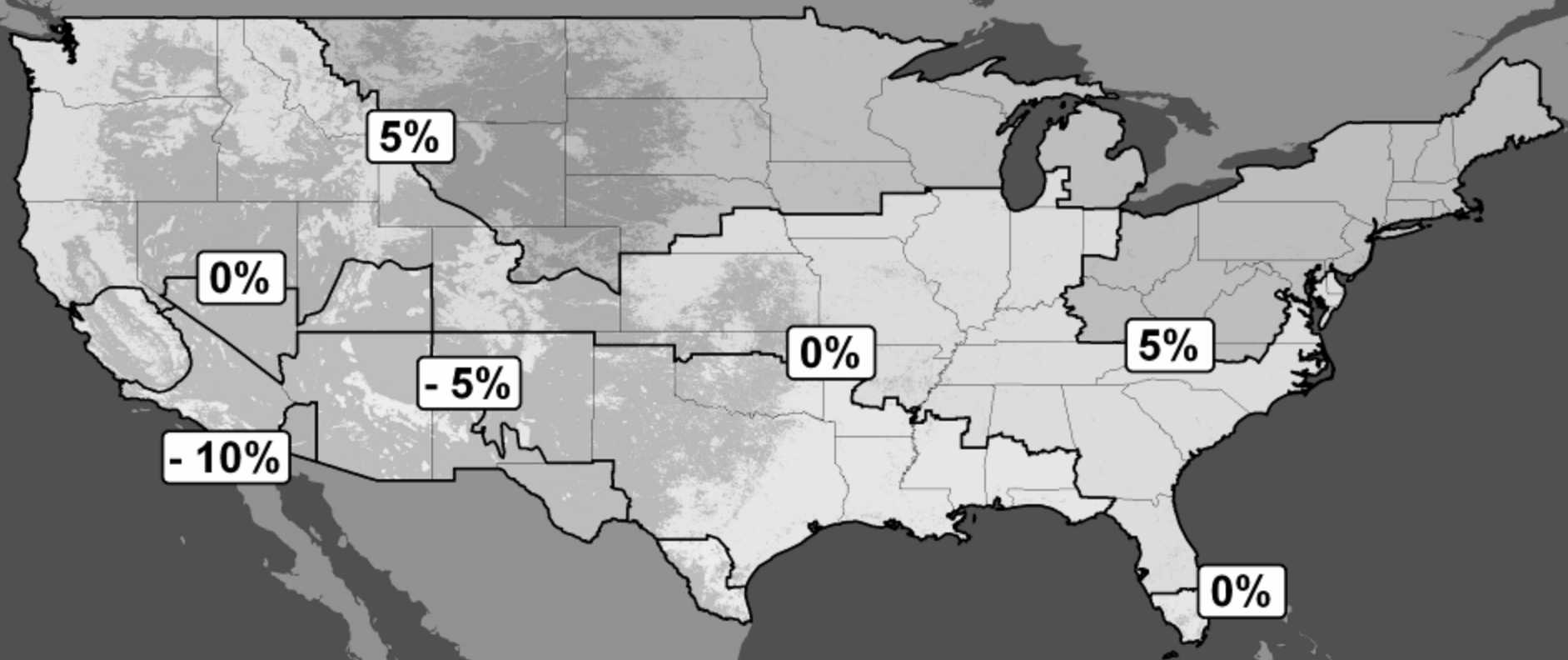
Data from Hoerling & Eischeid NOAA ESRL

Anomalies relative to 1971-2000

0 500 1000 1500 2000  
Kilometers

Relative to  
1971-2000

Scenario: A1b



## Projected DJF Precipitation Anomalies: 2046-2055

Drawn by JL Weiss

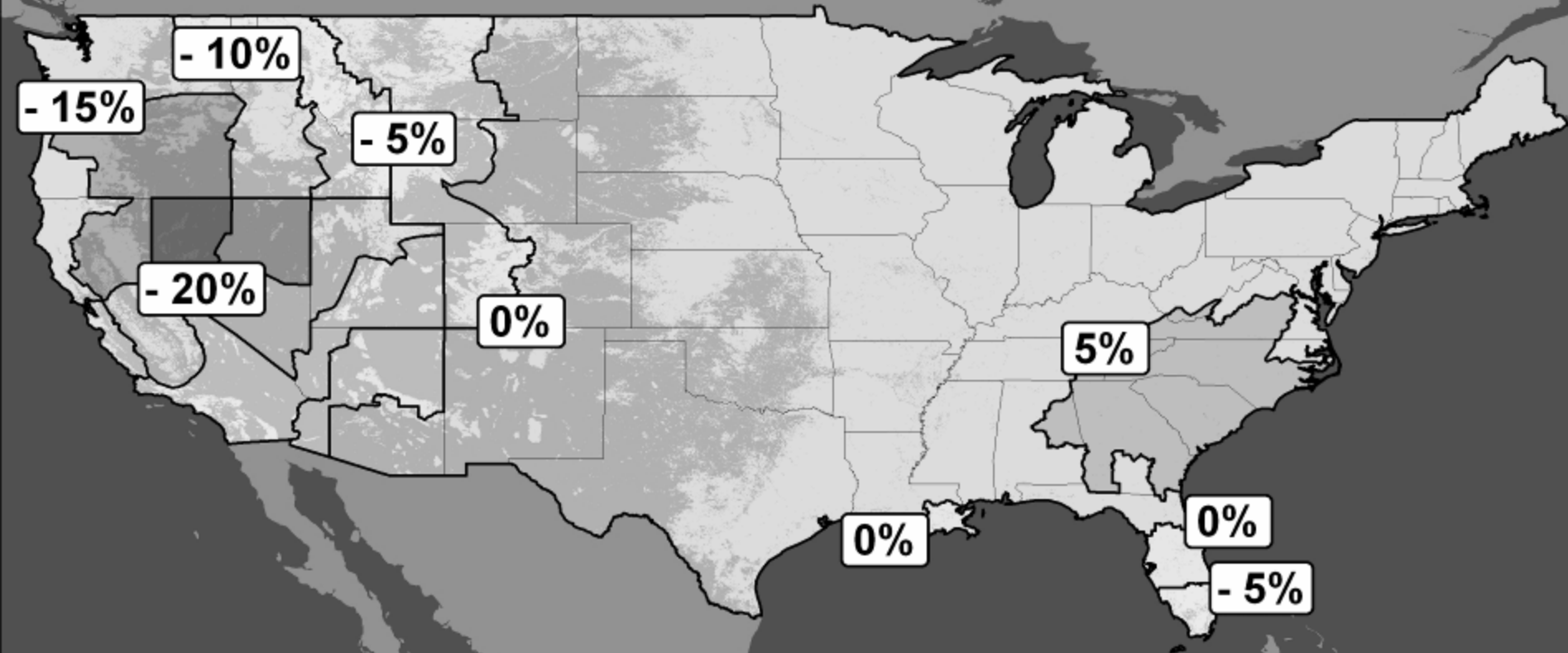
Data from Hoerling & Eischeid NOAA ESRL

Anomalies relative to 1971-2000

0 500 1000 1500 2000  
Kilometers

Relative to  
1971-2000

Scenario: A1b



## Projected JJA Precipitation Anomalies: 2046-2055

Drawn by JL Weiss

Data from Hoerling & Eischeid NOAA ESRL

Anomalies relative to 1971-2000

0 500 1000 1500 2000  
Kilometers

# Hotter





# Drier



# More insect infestations



# More fires



# Faster snow melt



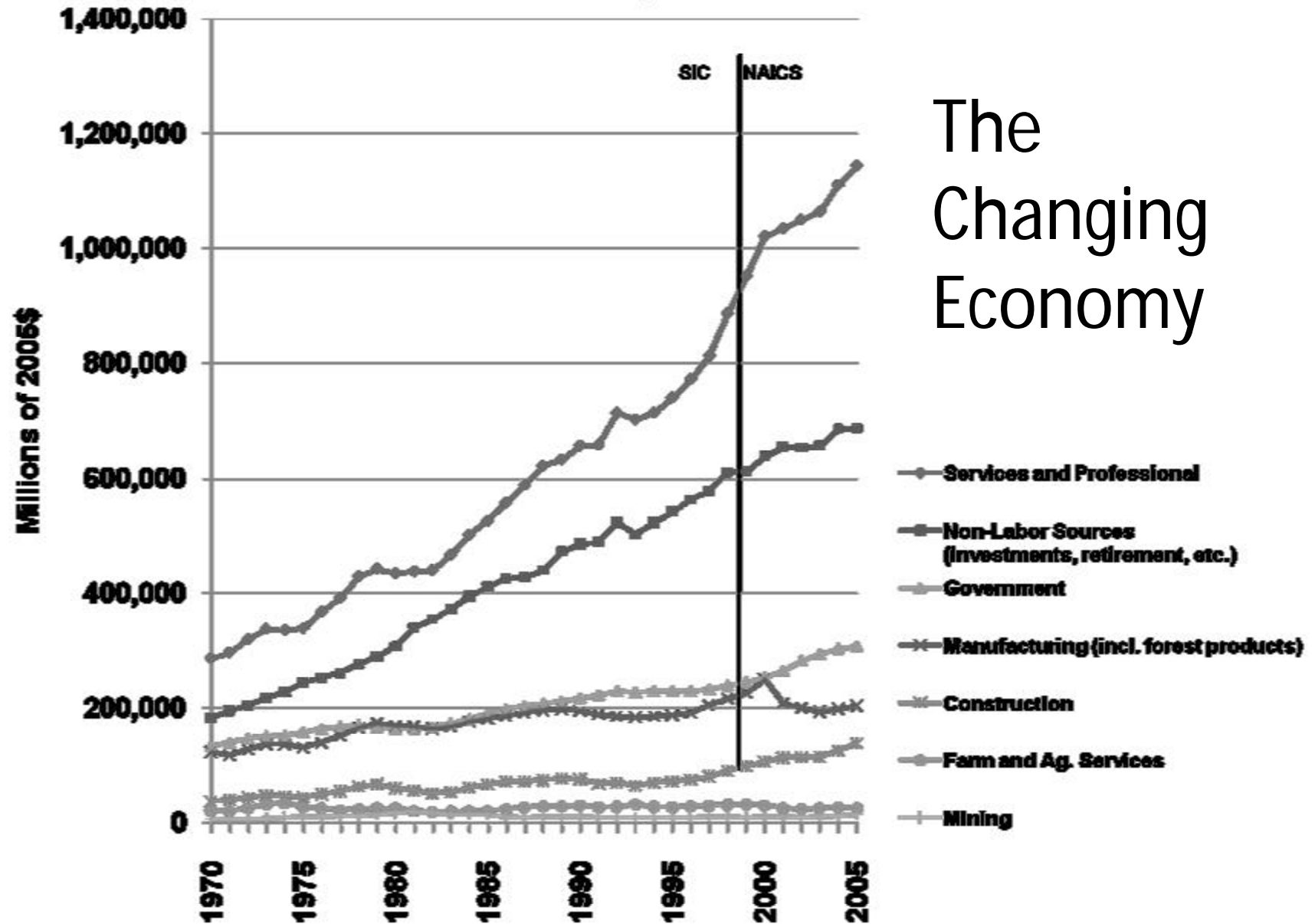
# More flooding



It's not just the climate that's  
changing in the Interior West!



**Income Sources in the West, 1970-2005**



The  
Changing  
Economy

SEARCH OUR SITE

 GO!


ORDER STATUS

 Your Job # GO!

[Change Your Order](#)

ONE CLICK PRICING & ORDERING

**Brochures**

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[8-1/2 x 14](#)  
[11 x 17](#)  
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[Business Cards](#)  
[Greeting Cards](#)  
[Samples](#)

**Newsletters**

[8-1/2 x 11](#)  
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[Samples](#)

**Stationery**

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[Samples](#)

**Catalogs/Booklets**

[5-1/2 x 8-1/2](#)  
[8-1/2 x 11](#)  
[Samples](#)

[Our Production Team](#)

[Our Management Team](#)

[Our Location](#)

[Customer Comments](#)

[Media Coverage](#)

[Our Partners](#)

## Employment Opportunities

Looking for a high-tech opportunity?

You could live here, in Silicon Valley....



Aerial photo of Silicon Valley.

Or here, in Paradise Valley....



Photo from one of our employee's front porch.

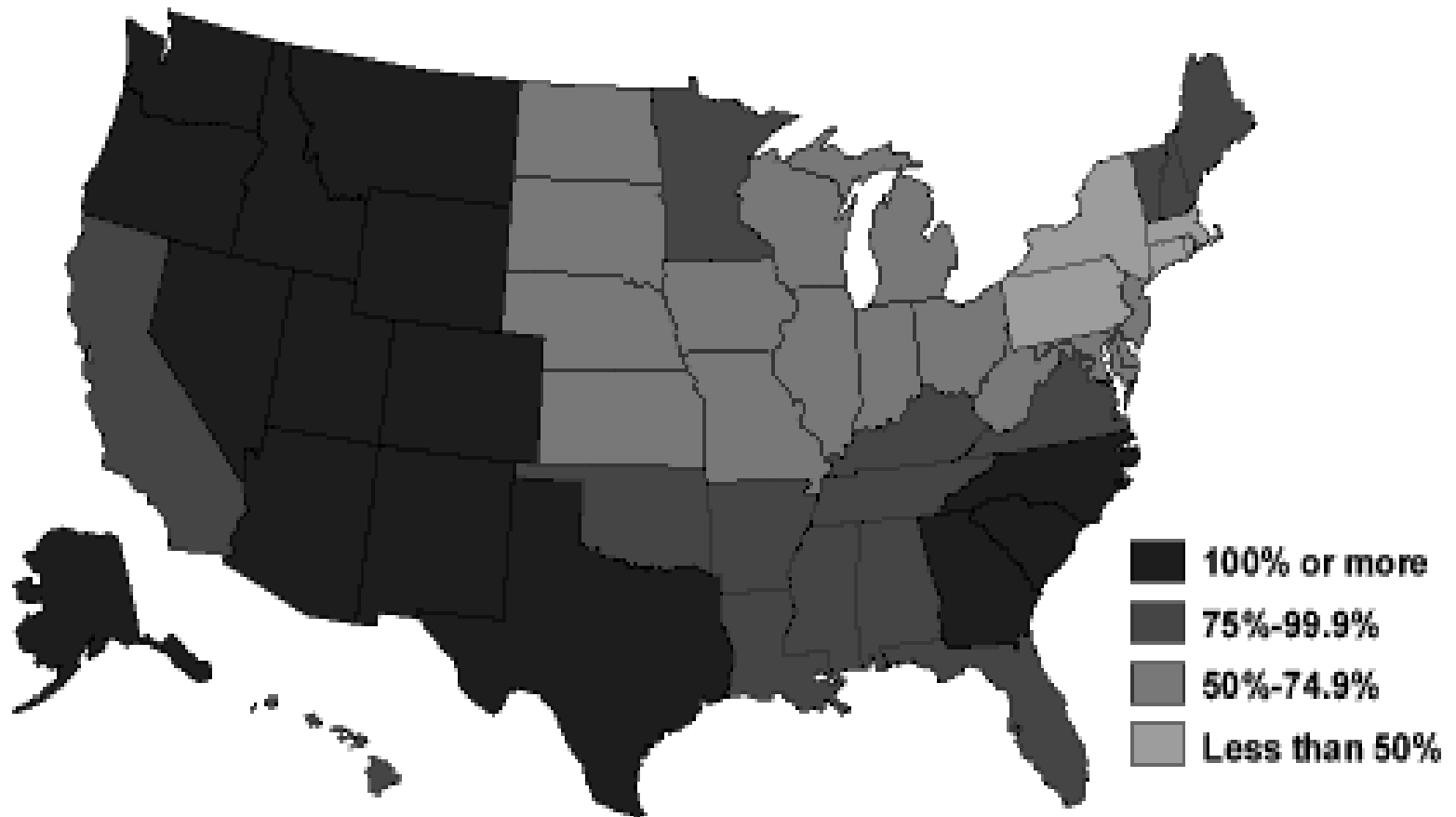
### Yes, you can live in beautiful Park County, Montana!

As the leader in online full-color printing services, PrintingForLess.com is growing fast. If you want to participate in creating a new niche within the \$58 billion commercial printing industry, and you thrive in a fast-paced, entrepreneurial environment where every employee plays a critical role, then a career at PrintingForLess.com is for



# Changing Demographics

## **Percent Change in the Population Age 65 and Older, by State, 2000 to 2020**

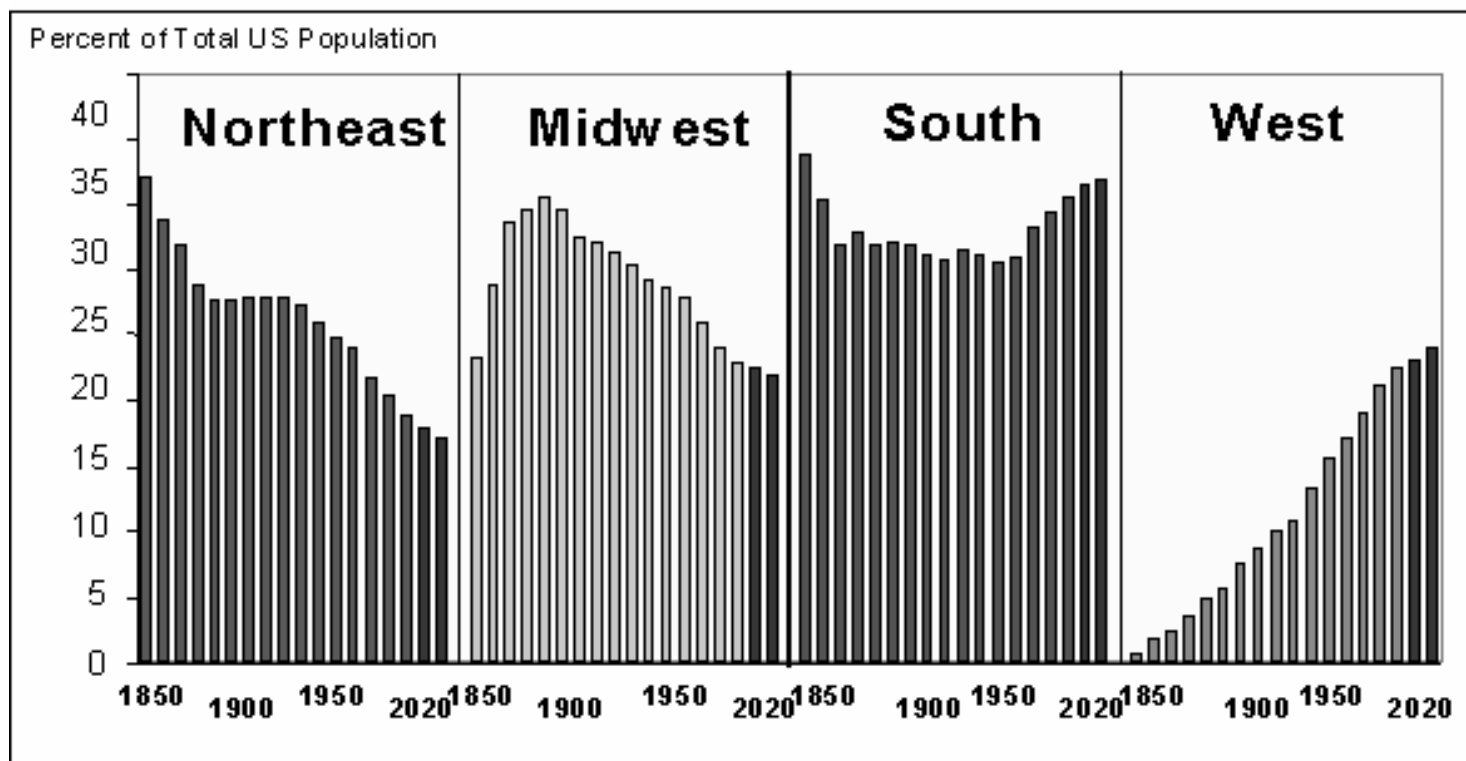


Source: Population Reference Bureau using Census Bureau, 2000 data

# Population Growth

**Figure 1**

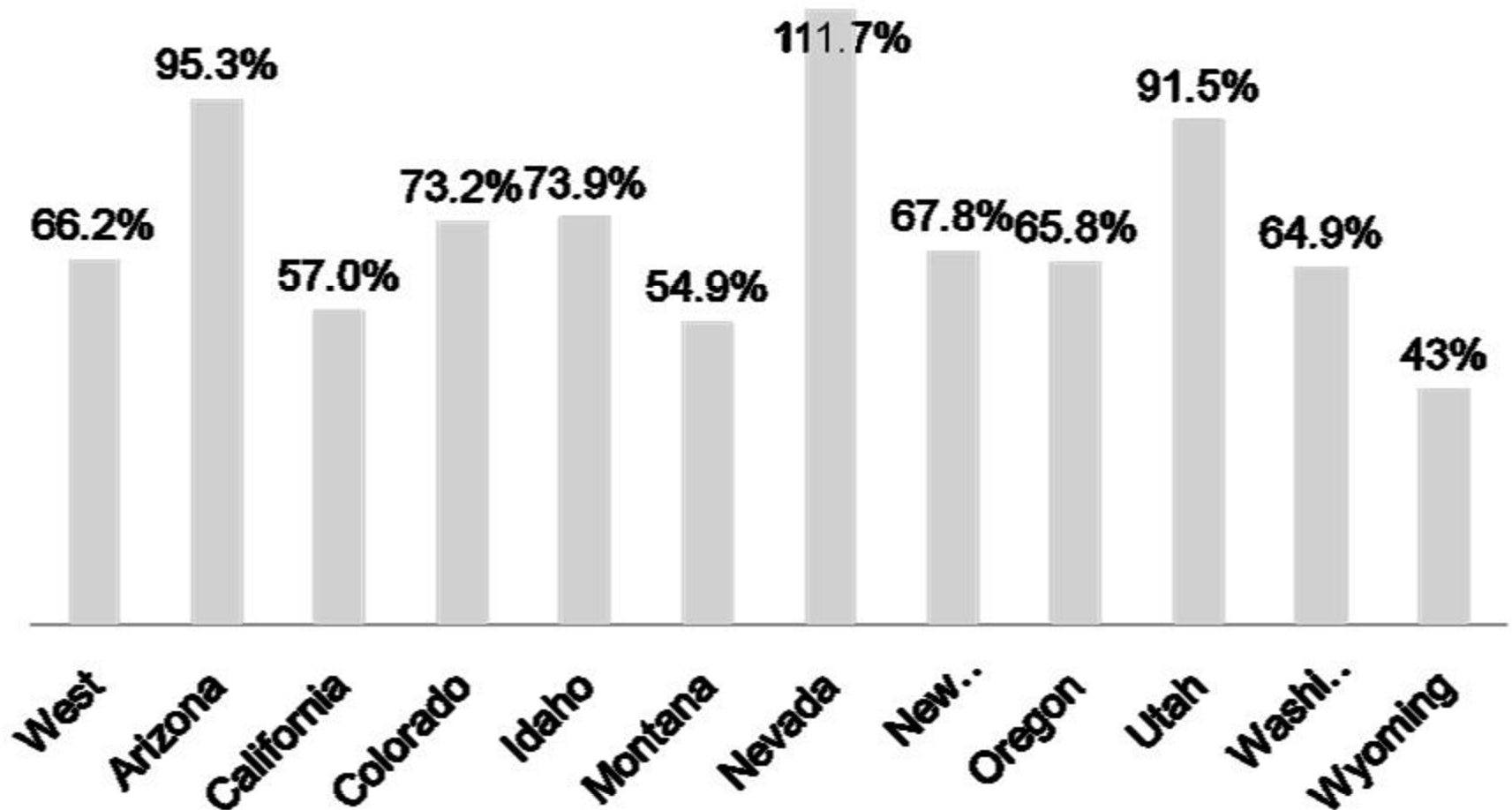
**The West Has Gained Share of U.S.  
Population Every Decade Since 1850**



Source: State of Montana, The Demography of the Changing West,  
<http://fwp.mt.gov/tmc/reports/demographics.html>.

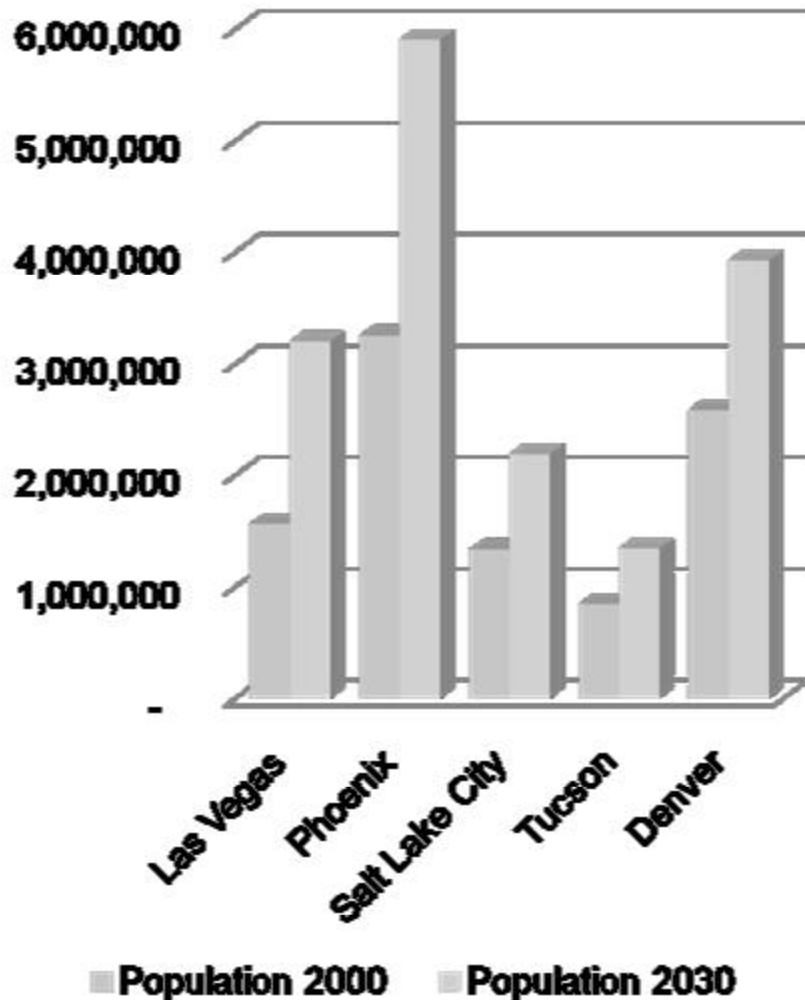
# Changing Land Use Patterns

## Percent Housing Units Needed by 2030 Built After 2000



Data source: Nelson 2004

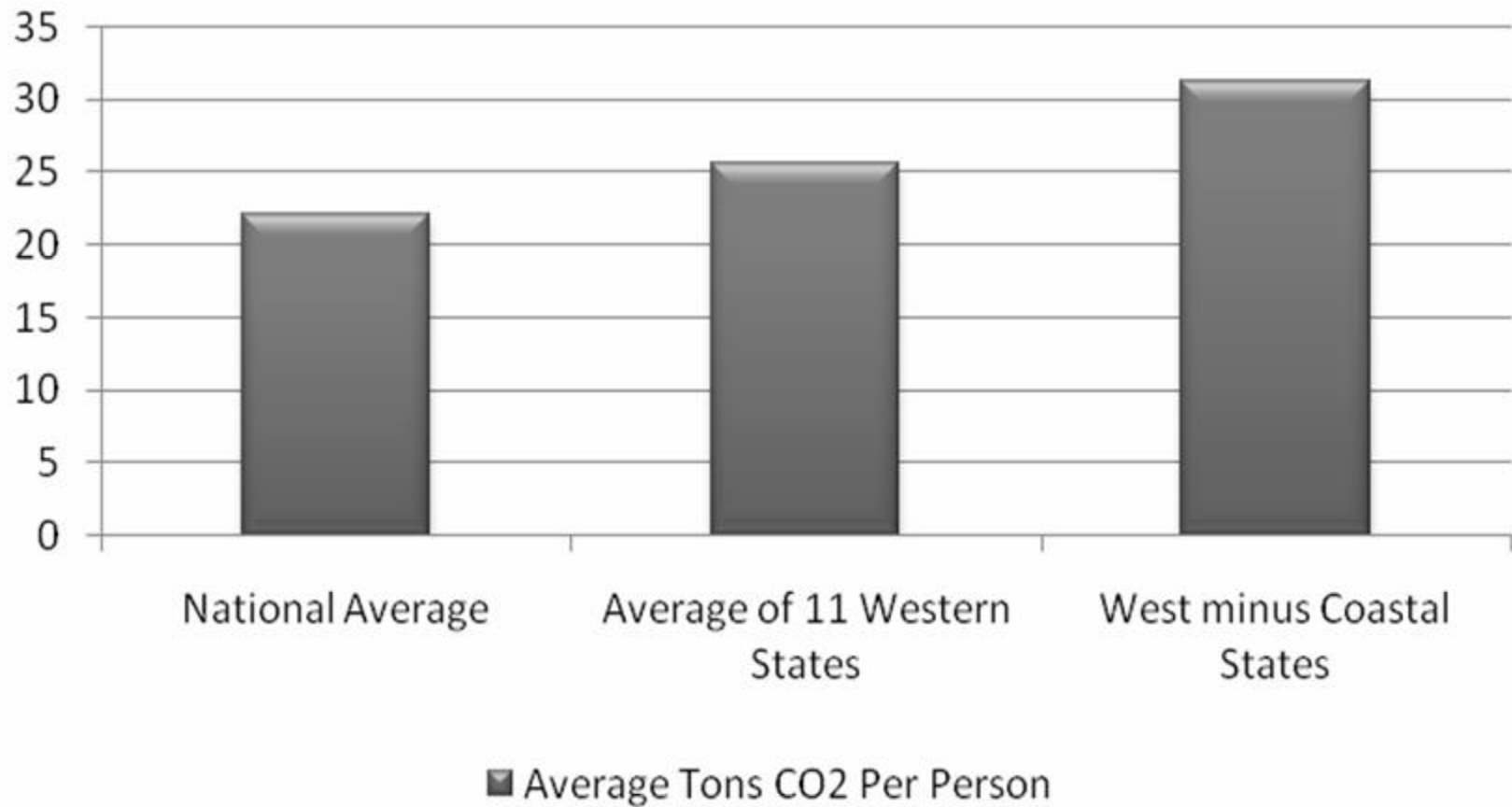
## Population Growth in Western Cities, 2000 to 2030



Metropolitan Area	New Housing Units Needed 2000-2030	Percent Housing Units Needed by 2030 Built After 2000
Las Vegas	810,000	123.5%
Phoenix	1,336,000	100.4%
Salt Lake City	378,000	82.9%
Tucson	286,000	77.9%
Denver	739,000	70.9%

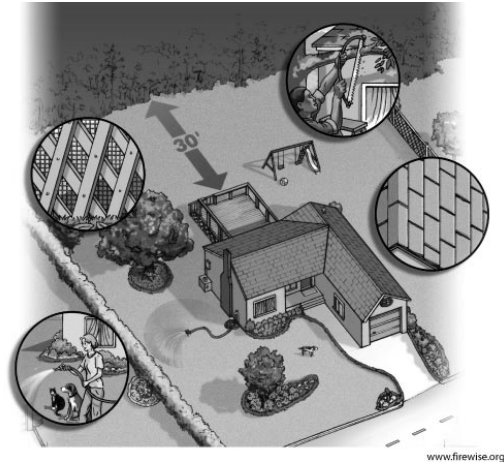
Data source: Nelson 2004

## Per Capita CO2 Emissions



Source: Derived from Climate Impacts Analysis Tools, World Resources Institute.

# What to do?



- **MITIGATION** – slowing the growth in greenhouse gas emissions.
- **ADAPTATION** – mitigating the impacts of unavoidable climate change

# Federal Policy on Climate Change



- Action awaits new President
- Cap and trade or tax?
- Green TEA?
- What will these policies mean for local land use planning?

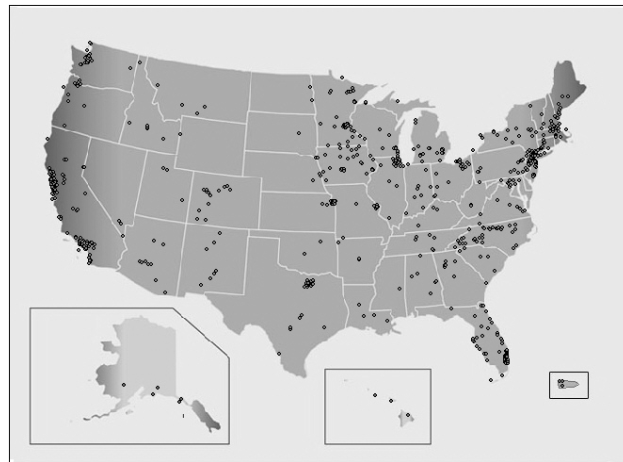
# State Policy on Climate Change



- Climate action plans
- Regional cap and trade targets
- Relationship to local land use planning?



# Local Government Policy on Climate Change



- US Conference of Mayors Climate Protection Agreement – 802 as of 2/29/08
- ICLEI – Local Governments for Sustainability – more than 700
- APA climate change policy guide
- Still the “cutting edge”