

# **Aging Patterns and Impending Growth in Montana's Elderly**

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**What accounts for the uneven distribution of population across ages?**

**How do aging patterns vary between urban and rural areas?**

**How can this aging be expected to play out in future years?**

***Local Government Center Webinar on Wealth Transfer***  
**Montana State University**  
**September 5, 2012**

## Past and Projected Future Trends in Birth and Death Counts in Montana

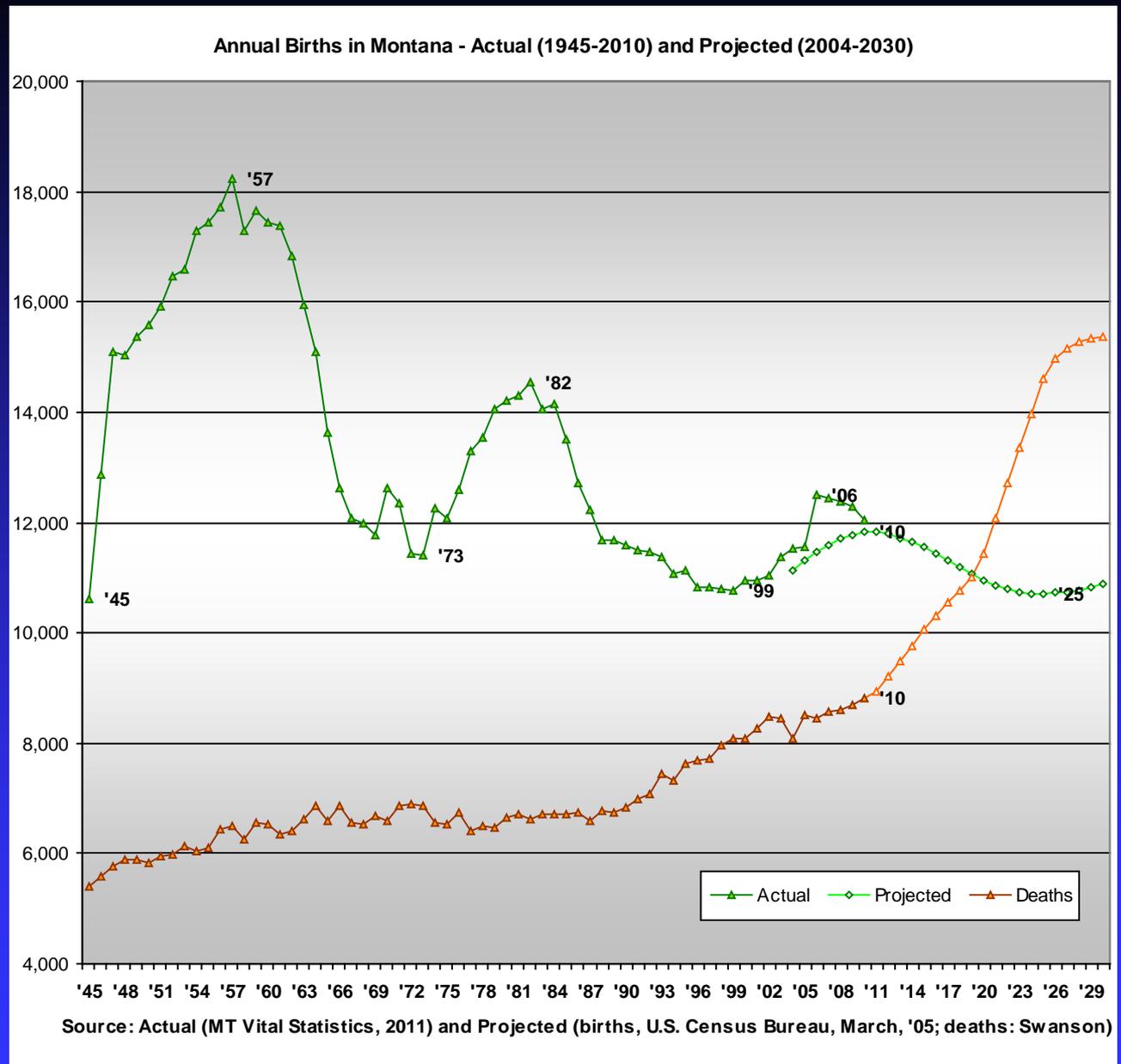
The chart shows actual births and deaths in Montana dating back to the mid-40s and up through the latest counts for 2010. Projections of births in the future are taken from projections made by the U.S. Census Bureau in 2005.

Projections for deaths are made by Swanson and are tied to estimated future populations persons 65 and older.

The number of persons 65 and older is expected to roughly double in size from 2005 to 2025 and this largely accounts for the projected increase in deaths each year.

The record year for births in occurred in 1957 during the peak for births of current “baby boomers” (born between 1947 and 1964). The oldest “boomer” today is about 64 or 65, so in each year going forward there will be increasing numbers surpassing 65 years of age.

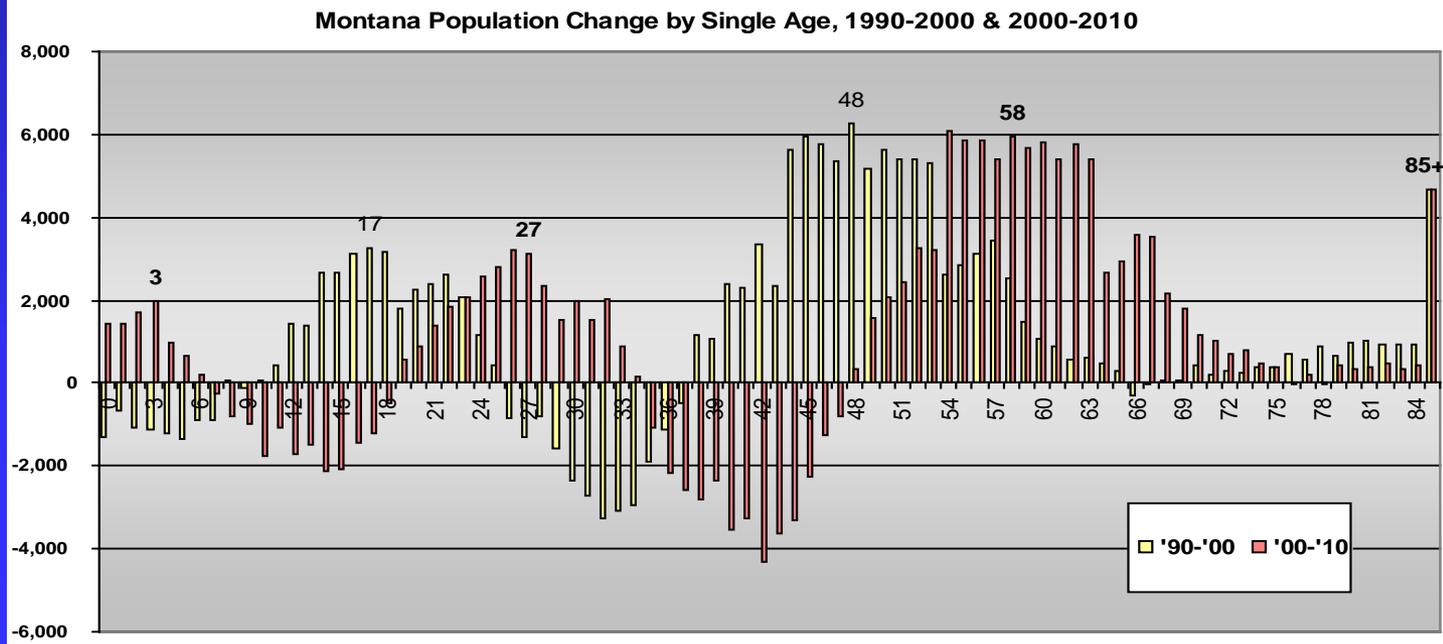
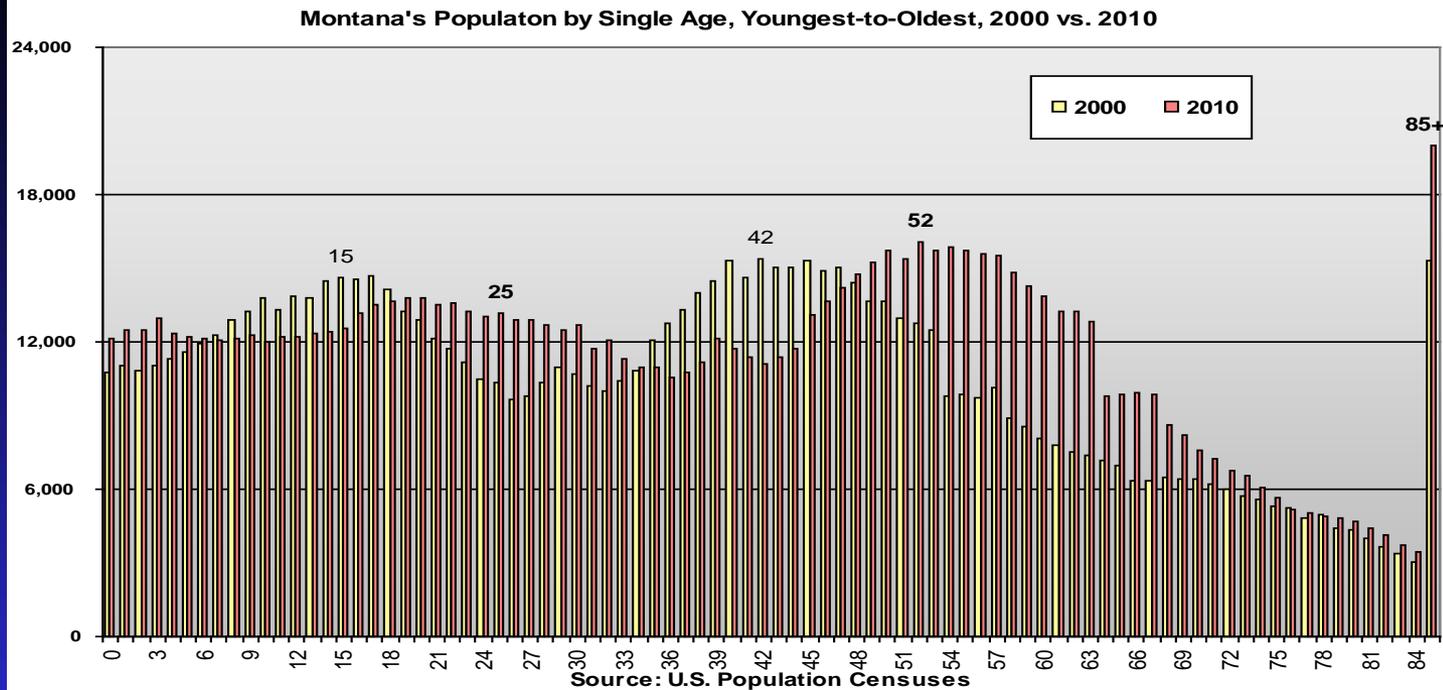
The rise in births from the mid-’70s to mid-’ 80s are kids of boomers (Echo). And the more recent rise are the kids of the kids of boomers



In future years, birth rates will fall the most in areas with declining and more quickly aging populations. These areas will also have faster rising death rates.

# Population Aging in Montana

The top chart below shows the population of Montana at the time of the 2000 and 2010 Censuses arrayed by the number of persons at each age, from youngest to oldest. The state's overall population grew from 902,195 to 989,415 during this period; an increase 87,220 or 9.7%. Growth the previous decade of the '90s was 12.8% and growth projected for 2010 to 2020 is around 8% (Swanson, Apr., 2012). Growth is slowing in part because the population is aging and this can be seen below. The lower chart then looks at change in population by age.

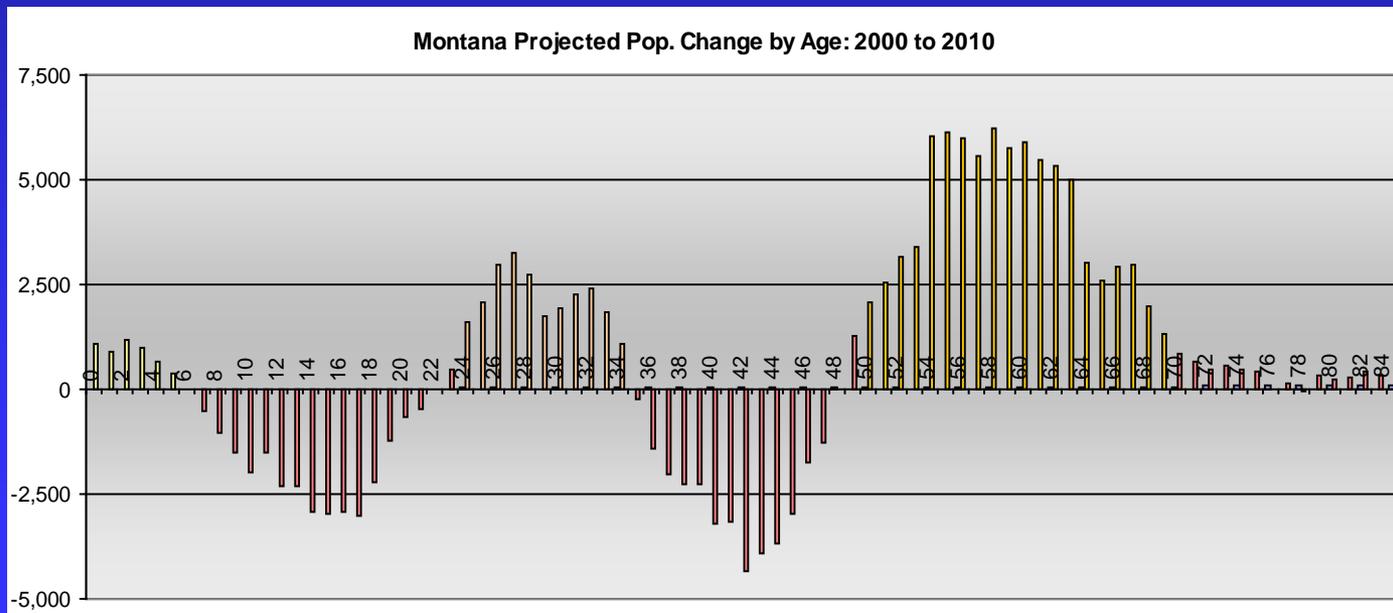
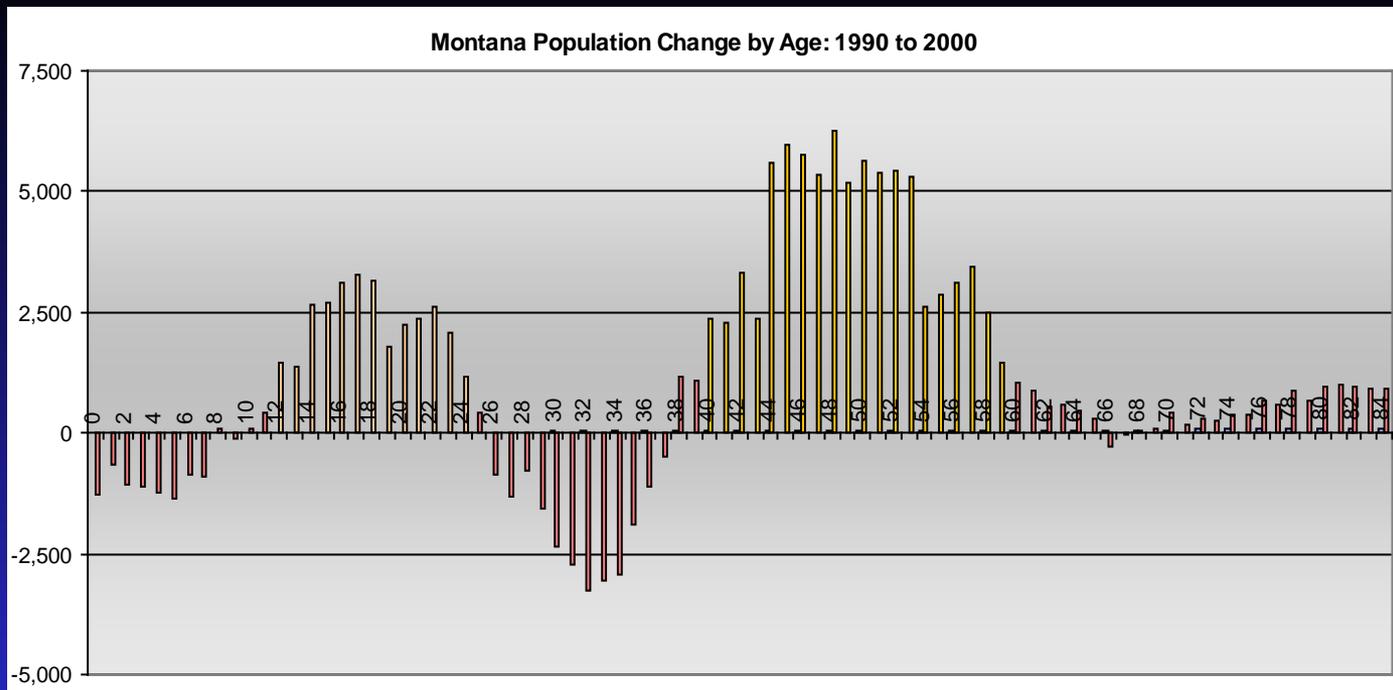


## Projected Shifts in the Population of Montana by Age

The upper chart shows how population changed in Montana by single age from youngest to oldest between 1990 and 2000. The lower chart shows how population is projected to change by the U.S. Census Bureau (March, 2005, projections) between 2000 and 2010.

The growth in population that was concentrated among persons between their early 40s and late 50s in the '90s is projected to be concentrated between persons in their early 50s to late 60s in the current decade.

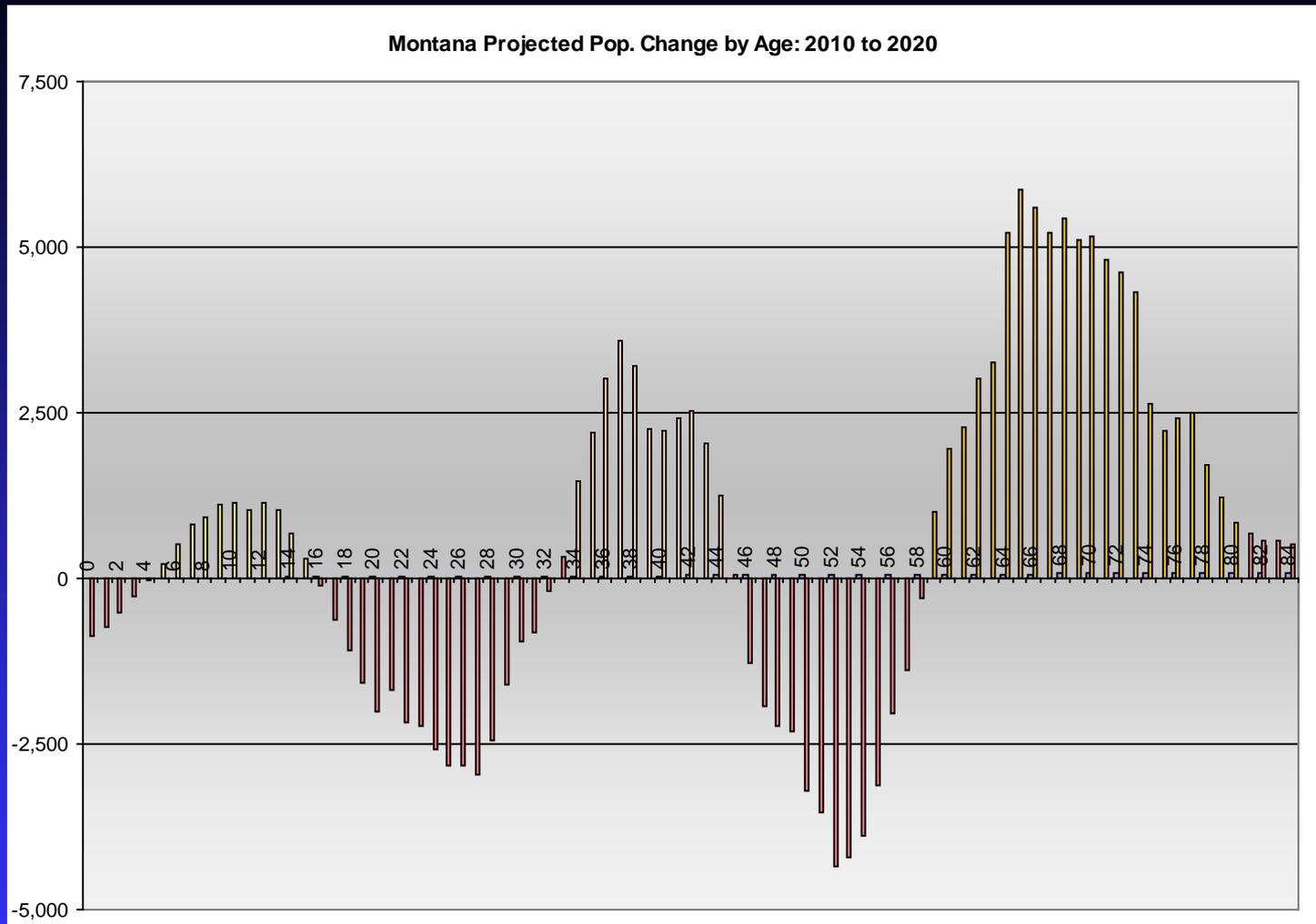
The echo population also will continue to age, shifting growth to persons between their early 20s and mid-30s. And during the current decade the "echo-echo" population will come into being, reflected in the recent increase in births.



## Projected Population Growth by Age in the Next Decade – 2010 to 2020

The chart at the right shows how Montana's population is projected to change by age between 2010 and 2020. During the next decade growth in the state's population will shift to persons in their early 60s to late 70s and Montana is in fact projected to have one of the largest populations 65 and older as a percent of its total by 2020.

The echo group or the children of boomers is shown in growth among persons from their early 30s to mid 40s. However, this echo group is projected by the Census Bureau to be much smaller than the boomer group. In turn, the "echo-echo" group is projected to be much smaller than the echo group.



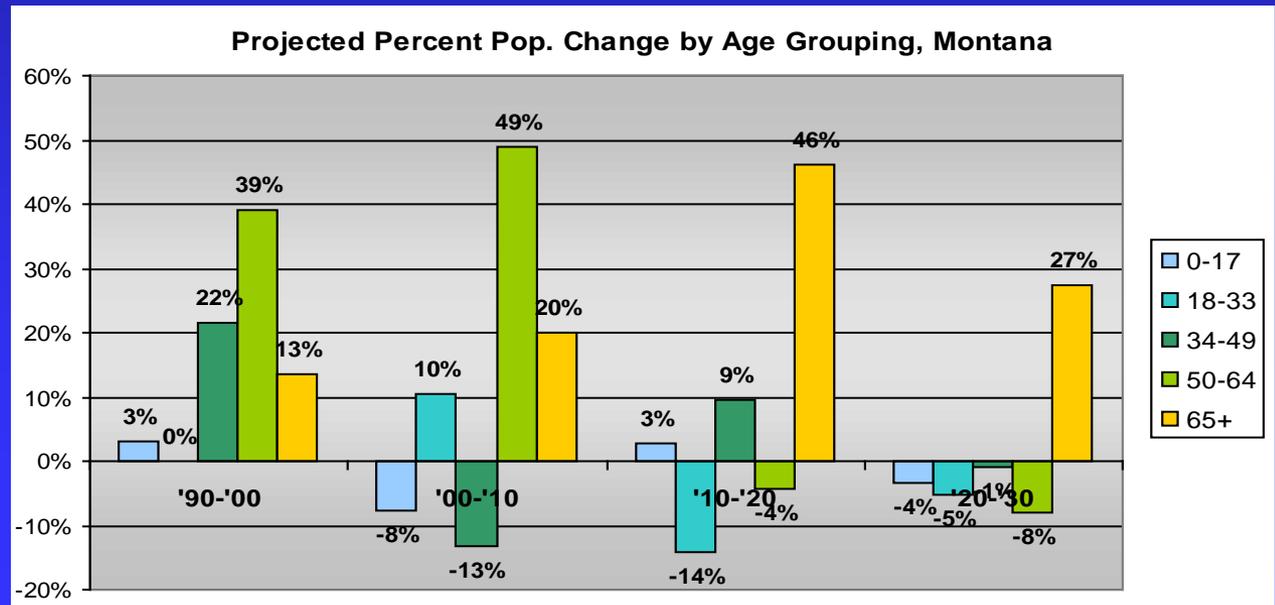
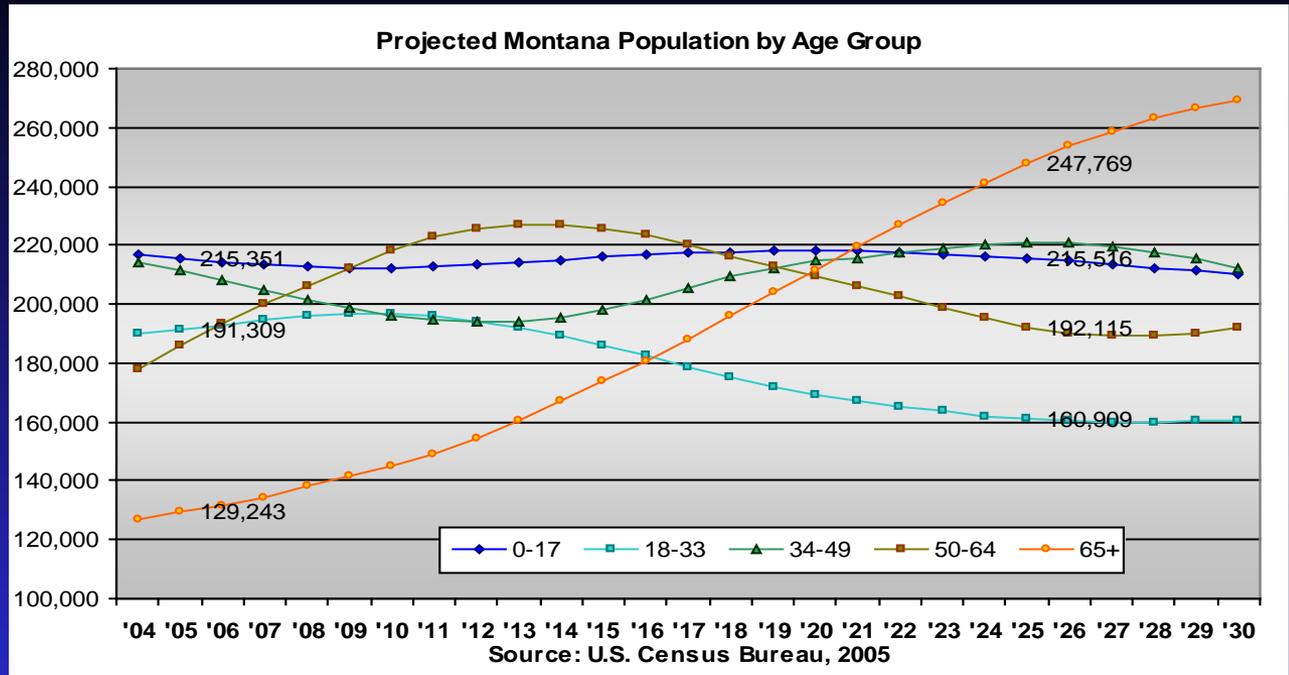
As we look out in front of us, we can see that population growth will continue to manifest itself in ripples and waves, with each successive wave of growth smaller than its immediate predecessor. This pattern of growth has significant implications. The fastest growth will occur among seniors and health care demand will continue to rise and housing needs will change. The number of persons at will move up and down at ages where college students are primarily drawn, as well as for high schools and elementary schools. The labor force of Montana will very likely shrink in size in the future as more and more persons leave the workforce for retirement and there are not enough persons entering the workforce to replace them.

# Future Population Change in Montana by Age Group

Projected aging of Montana's population over the next 20 years can be viewed by examining how the population is expected to change by age grouping. The upper chart shows the population under 18 (high school and younger), the population 18 to 33 (young post-high school adults and those at ages of family formation and childrearing), the population 34 to 49 (young and middle-age adults), the population 50 to 64 (older adults at pre-retirement ages), and the population 65 and older.

The older adult working age population between 50 and 64, which saw massive growth in the '90s will also see very high growth in the current period before beginning a decline. And the 65 and older population, which grew by only 13% in the '90s, will grow by 20%, 46%, and 27% in the subsequent three decades.

As a result of these age shifts, Montana will have one of the largest populations over 65 of any state in the country in future years.

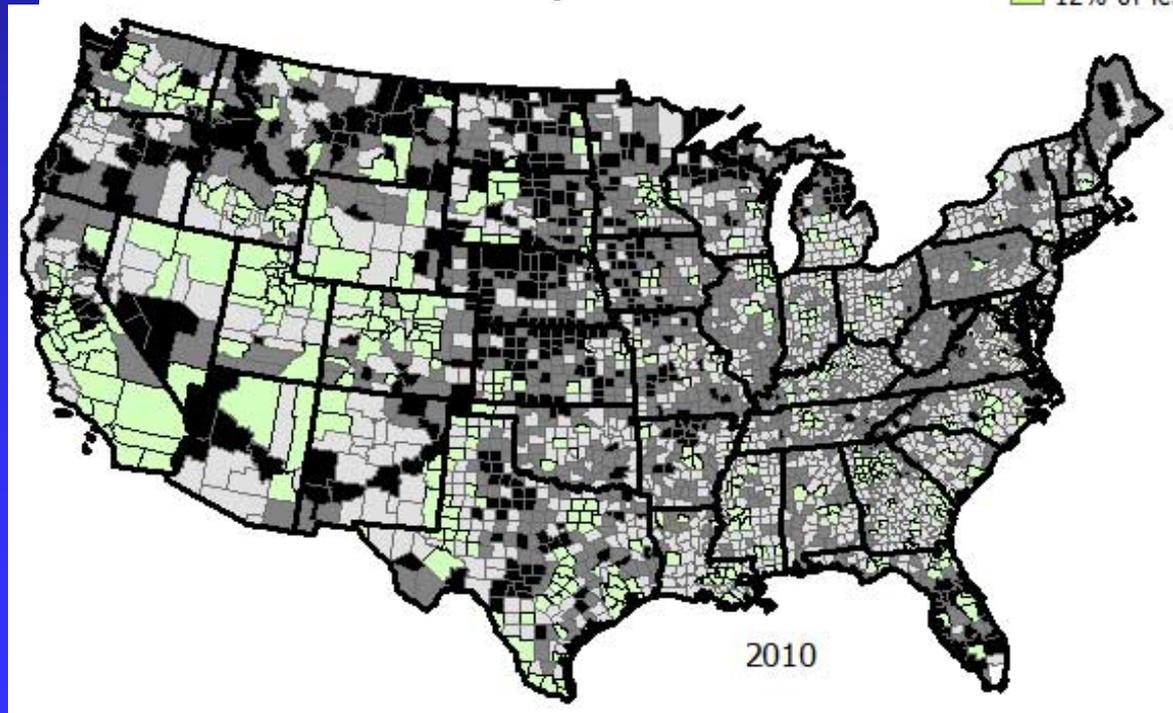
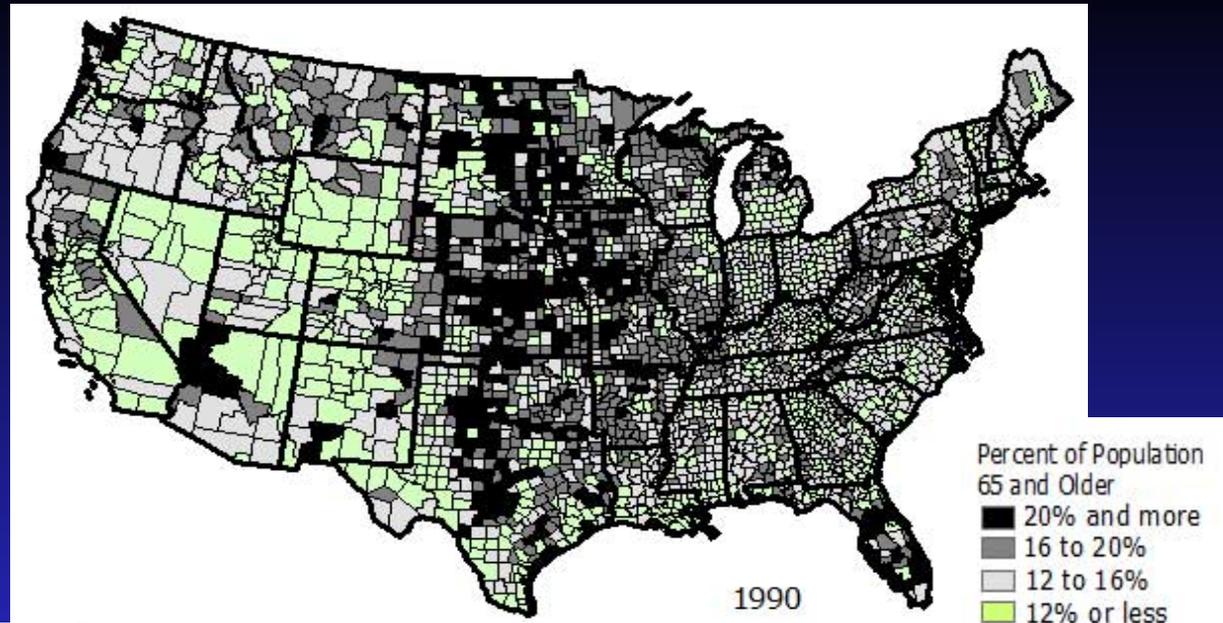


## Regional Patterns of Population Aging in the U.S. – 65 and Over Population as a share of the total

The 65 and older population in Montana was 13.3% of the total in 1990, 13.4% in 2000, and 14.8% in 2010. By 2020 this will rise to 20% and to nearly 24% by 2025.

Some areas are growing older more rapidly and this aging process will accelerate over the next 20 years as more and more “boomers” move past 65 years of age.

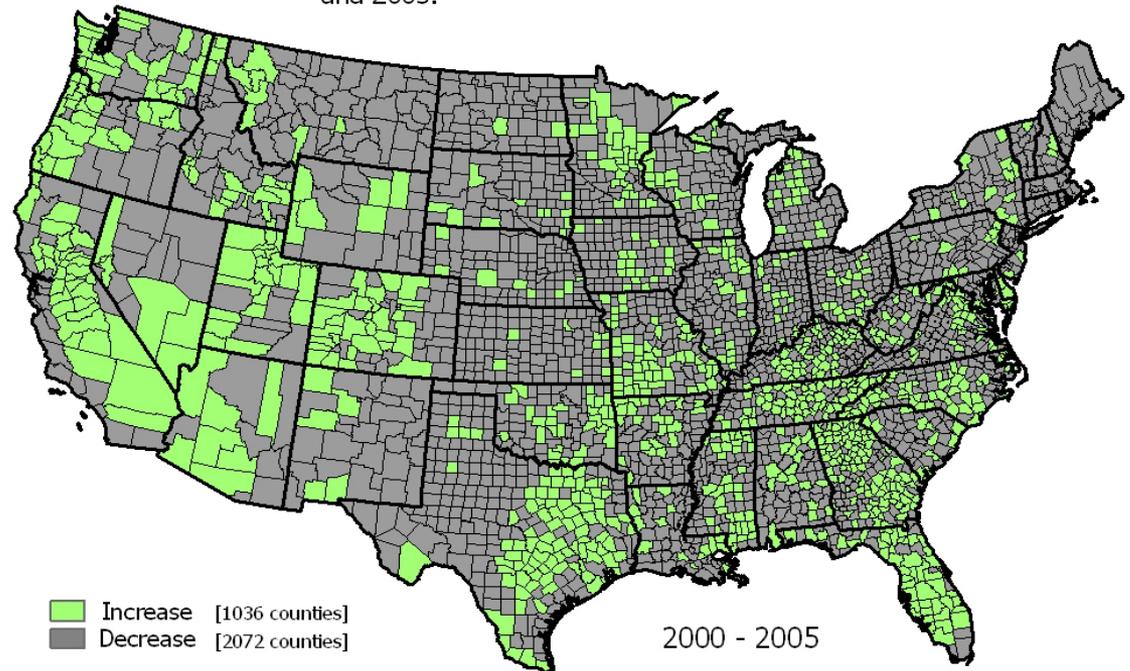
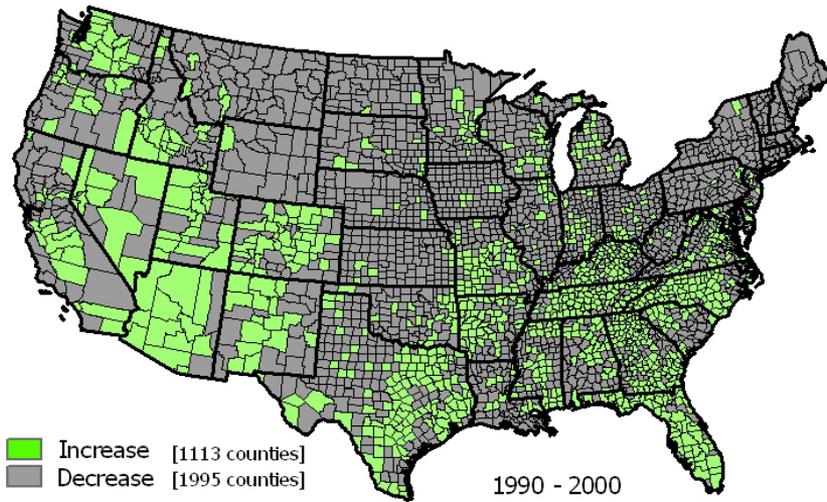
Population aging will slow the growth in the labor force.  
[Note: data used in the maps are from the 1990 and 2010 Population Censuses]



## Area of Growth or Decline in the Young Adult Population

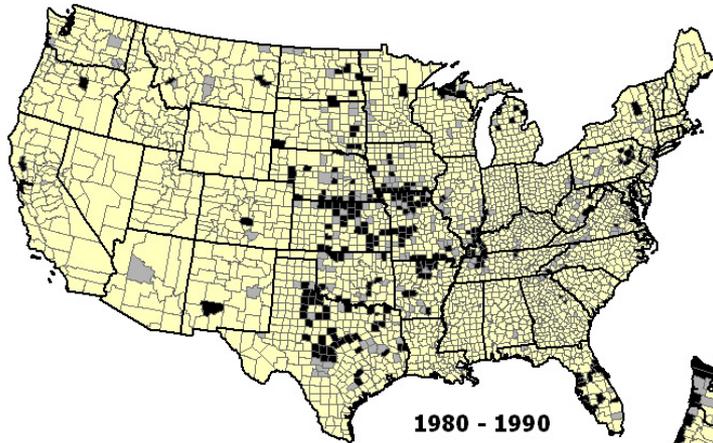
Much of the population growth in the U.S. since 1990 has been among baby boomers and their children. At the time of the 2000 Census, baby boomers were at ages between 37 and 53 and in January of 2006 the front edge of boomers turned 60 years of age. The maps show areas where the much smaller age group coming after baby boomers - young adults between 25 and 39 - is actually increasing in size.

During the '90s, 1,113 counties had increases in their population of young adults while 1,995 had decreases. The number of counties with decreases expanded to 2,072 between 2000 and 2005.



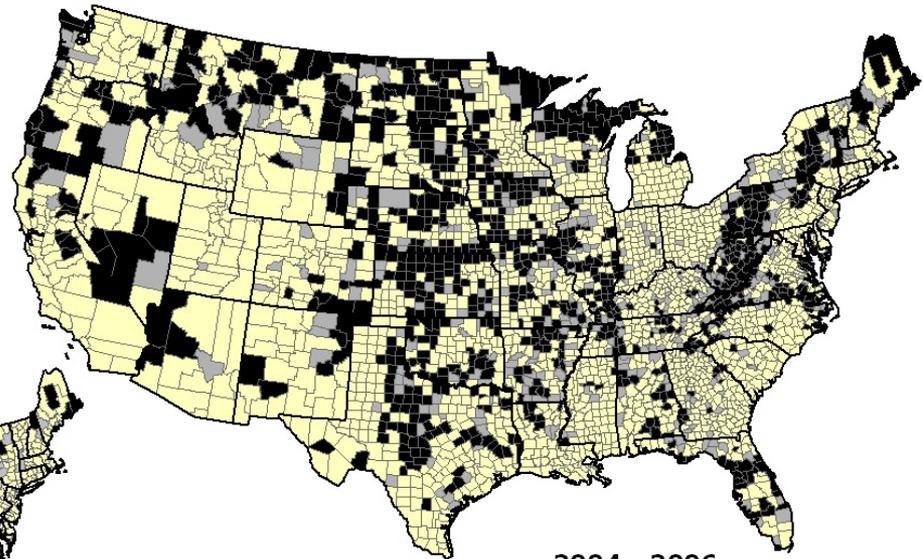
## Shifts in Area Birth and Death Rates

As the population of an area becomes older, birth rates tend to fall as death rates rise. Population growth through what is called "natural change" is simply area births minus deaths for a given time period. The maps show areas where deaths have begun to out-number births in some areas (shown in black) and areas where deaths have risen to as high as 90 to 100% of births (gray). Areas shown in yellow are ones where births still greatly out-number deaths. This shifting dynamic tied to an aging population will play a greater role in the future in many areas with slow-growing or declining populations.

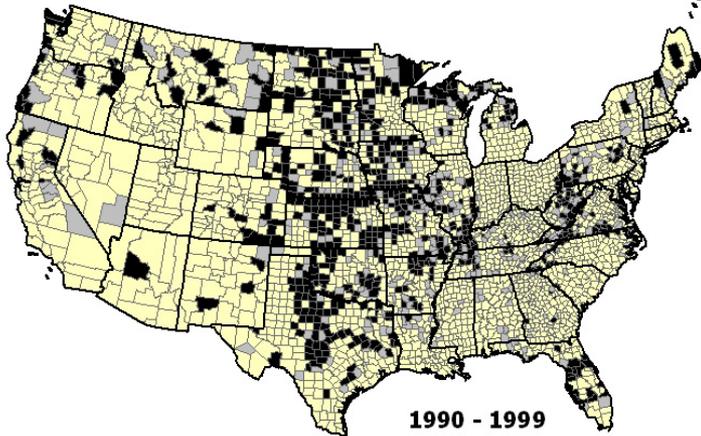


1980 - 1990

- Areas where deaths exceed births
- Areas where deaths are 90 to 100% of births
- Areas where deaths are less than 90% of births

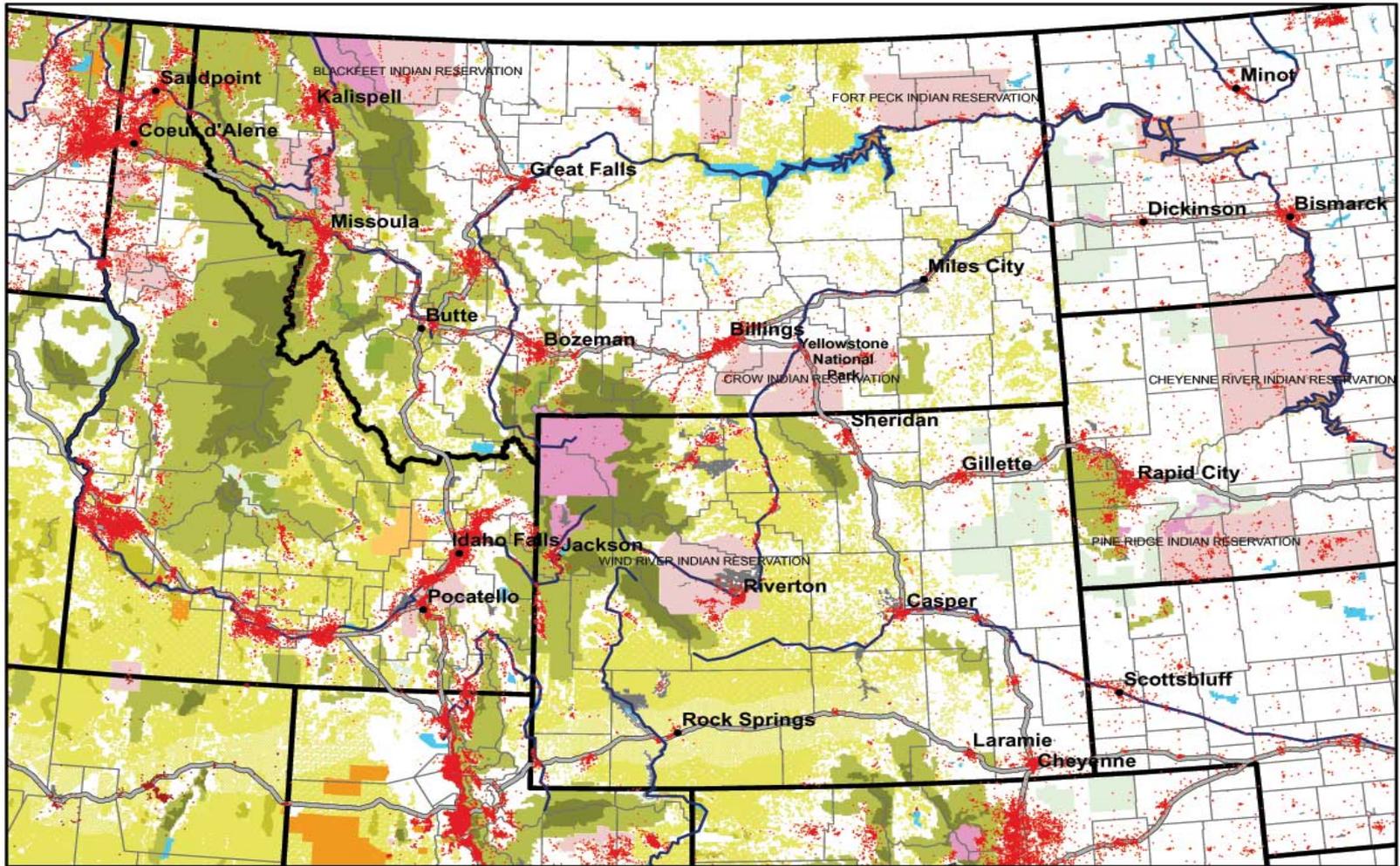


2004 - 2006



1990 - 1999

# Features of the Larger Region



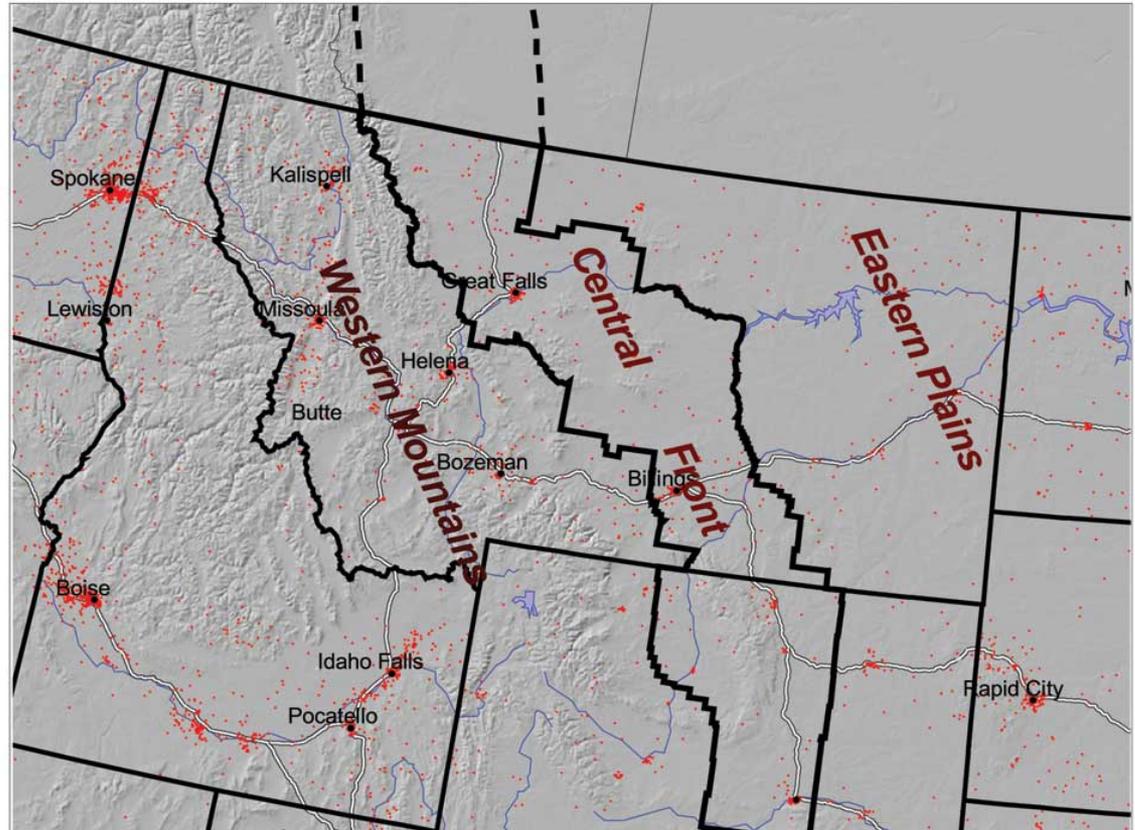
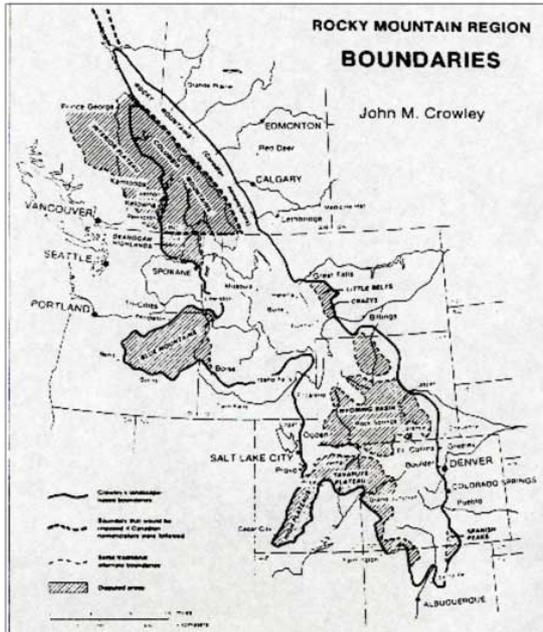
● = 30 people

- |   |   |
|---|---|
|  National Park (NPS)             |  Department of Defense (DOD)     |
|  National Forest Service (NFS)   |  Fish and Wildlife Service (FWS) |
|  Forest Service Wilderness (FSW) |  Bureau of Land Management (BLM) |
|  Department of Energy (DOE)      |  Bureau of Indian Affairs (BIA)  |



## Montana West-to-East "Three Regions"

Montana is a very large state in geographic terms - the nation's fourth largest. In many ways, the state actually cuts across three different regions in going from west to east - the "Western Mountain" region, the "Central Front", and the "Eastern Plains". The "Western Mountain" region in the west has 22 counties and the eastern boundary of these largely follows the eastern edge of the Rocky Mountains. The map below shows the general boundaries of various major and minor ranges of the Rockies. The map at the right shows how Montana's counties fit within these three regions.



The eastern boundary of the western mountain region begins in the north at the eastern edge of Glacier National Park and then generally follows the eastern front of the Rockies south and southeast, jutting out around the Absaroka Range and Beartooth Highway area in Carbon County, before extending into Wyoming. The "bookends" for this region in Montana are the two magnificent national parks - Glacier and Yellowstone. Nestled up against the front is Montana's Central Front region. In this region, the mountains are generally viewable to the west. In going further east, the landscape flattens, extending into the large and expansive Plains of eastern Montana and the Dakotas. 22 of Montana's counties are in the Western Mountains, 15 are in the Central Front, and 19 are in the Eastern Plains.



# Area Population Distribution in Montana and the Larger Region: 2010

This map shows population mapped at the Census “block” level using 2010 Census data. In 2010 approximately 78% of Montanans lived within 50 miles of the state’s seven largest cities or urban centers, up from 73% in 2000.

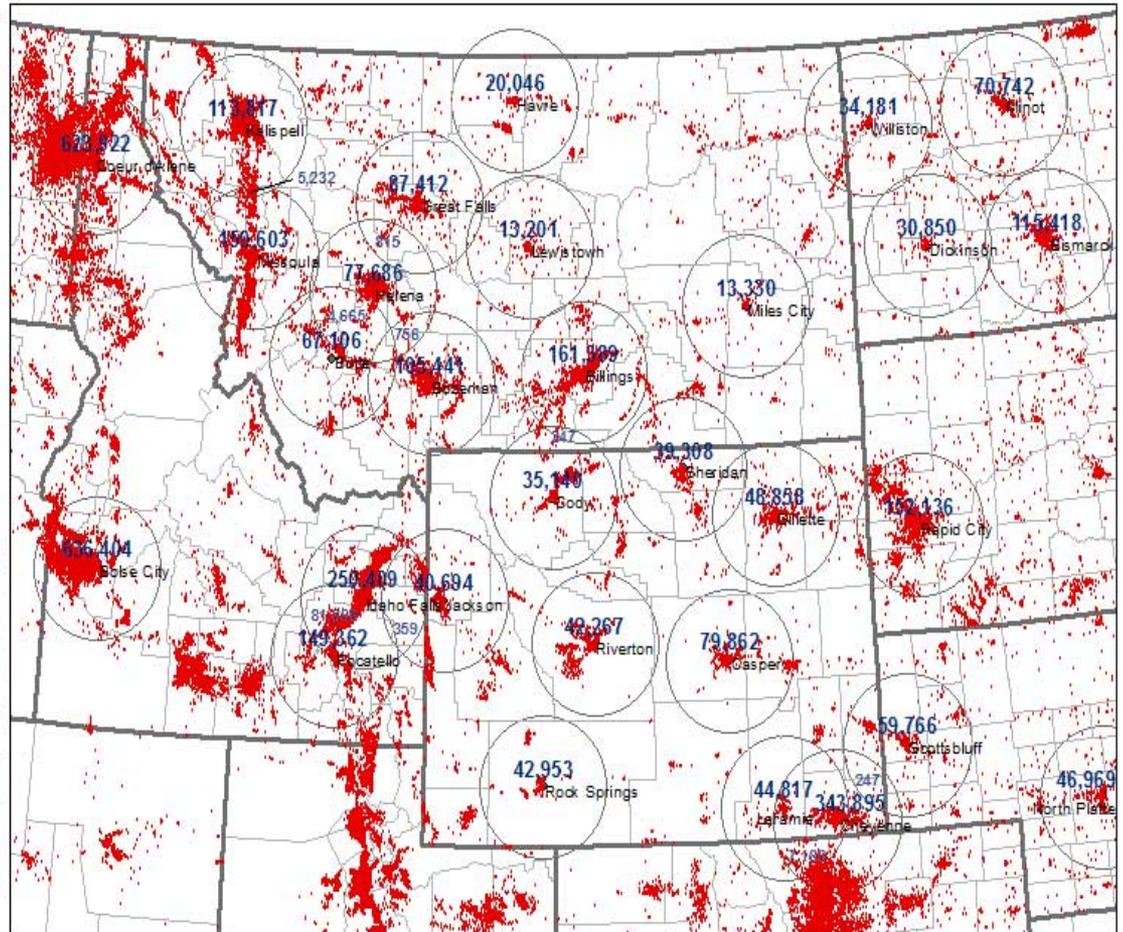
Going forward, population growth will continue to be concentrated near these centers and economic and employment growth in Montana will be increasingly “urban in character.”

## 2010 Population Distribution and Concentration in the Larger Region

The map shows population distribution in the larger FIB region at the time of the 2010 Census. Each dot represents 25 people and dots are mapped at the Census block level (small areas at the sub-county level). The purpose of the illustration is to identify population concentrations around major cities in the region. The map shows the number of people residing within 50 miles of each city.

50-mile zone Populations (2010)

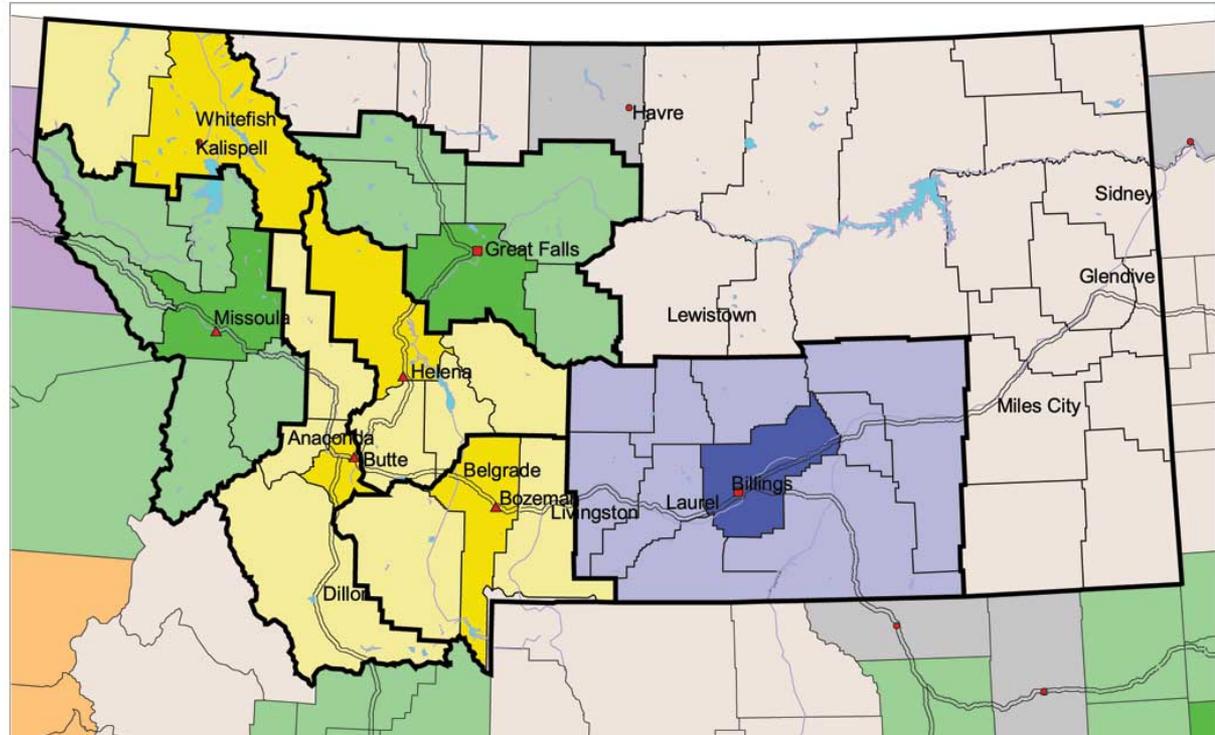
#1 Cheyenne	343,895
#2 Idaho Falls	250,409
#3 Billings	161,389
#4 Missoula	159,603
#5 Rapid City	152,136
#6 Pocatello	149,362
#7 Kalispell-Whitefish	113,817
#8 Bozeman	105,441
#9 Great Falls	87,412
#10 Casper	79,862
#11 Helena	77,686
#12 Butte	67,106
#13 Scottsbluff	59,766
#14 Gillette	48,858
#15 Laramie	44,817
#16 Rock Springs	42,953
#17 Riverton-Lander	42,267
#18 Jackson	40,694
#19 Sheridan	39,308
#20 Cody	35,140
#21 Williston	34,181
#22 Dickinson	30,850
#23 Havre	20,046
#24 Miles City	13,330
#25 Lewistown	13,201



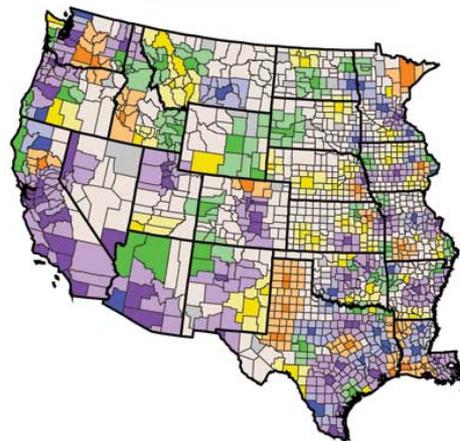
Within or nearby the two-state region, Cheyenne has the largest population within this zone. However, most are in Colorado and the Fort Collins area. Idaho Falls has over 200,000 people within its 50-mile zone, but this extends into Pocatello, which also is a regional center. Billings, Missoula, and Rapid City are the region’s three dominant centers, measured in this way.

## Montana Urban-to-Rural Regional Population Centers, Closely-linked Surrounding Counties, and Isolated Rural Areas

The map at the right shows how Montana counties are classified under the READ urban-to-rural classification system. This system identifies and classifies regional population center counties by size, color-coded from very large centers to small regional centers with county-wide populations of only 30,000 to 60,000 (dark yellow). Montana has no truly large population centers, but has seven small and large regional centers including Billings (Yellowstone county), Missoula (Missoula county), Great Falls (Cascade), Helena (Lewis & Clark), Bozeman (Gallatin), Butte (Silver Bow), and Kalispell-Whitefish (Flathead).



There are 27 counties shown in light yellow, light green, and light blue that are nearby and "closely-linked" to the seven regional population center counties. The 22 remaining counties are smaller in population with no major cities and are classified as "isolated rural" counties (shown in gray). Most of Montana's population resides in the state's seven regional center counties and nearby counties, that are closely-linked to these regional centers.



### Read Multi-County Core-Based Regions

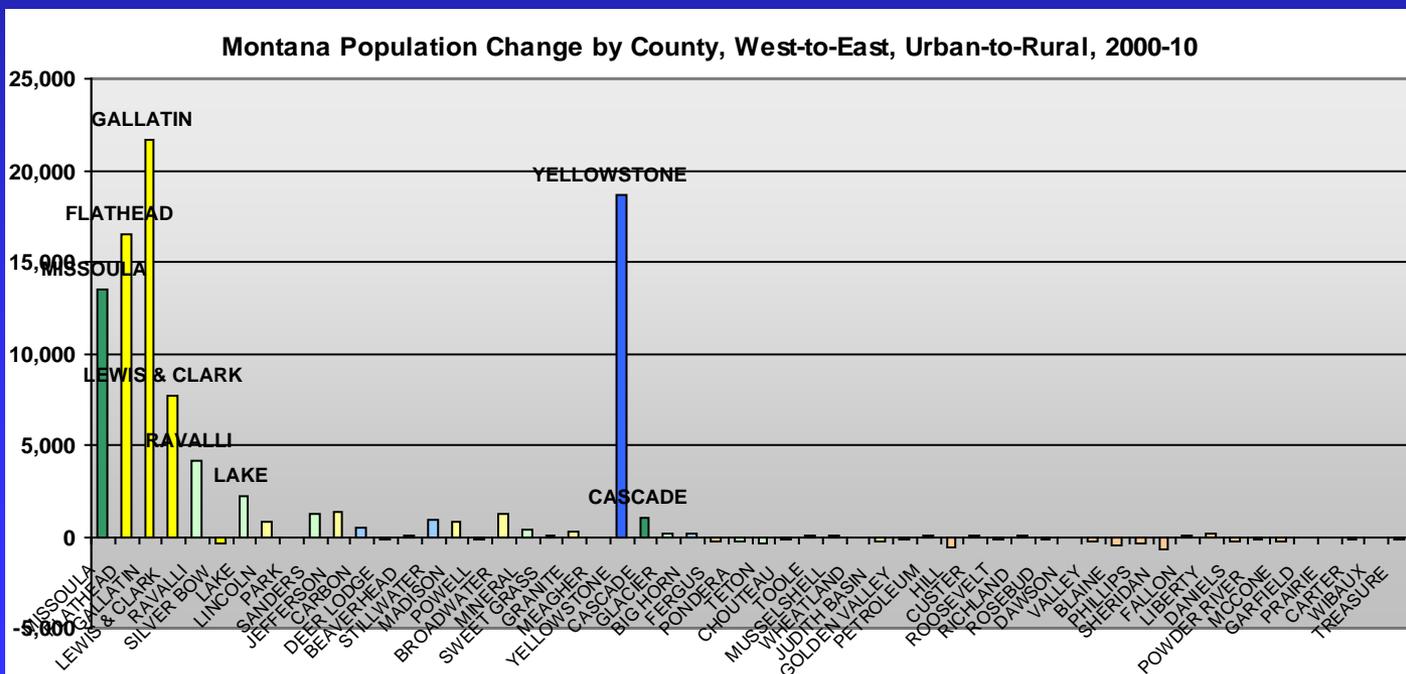
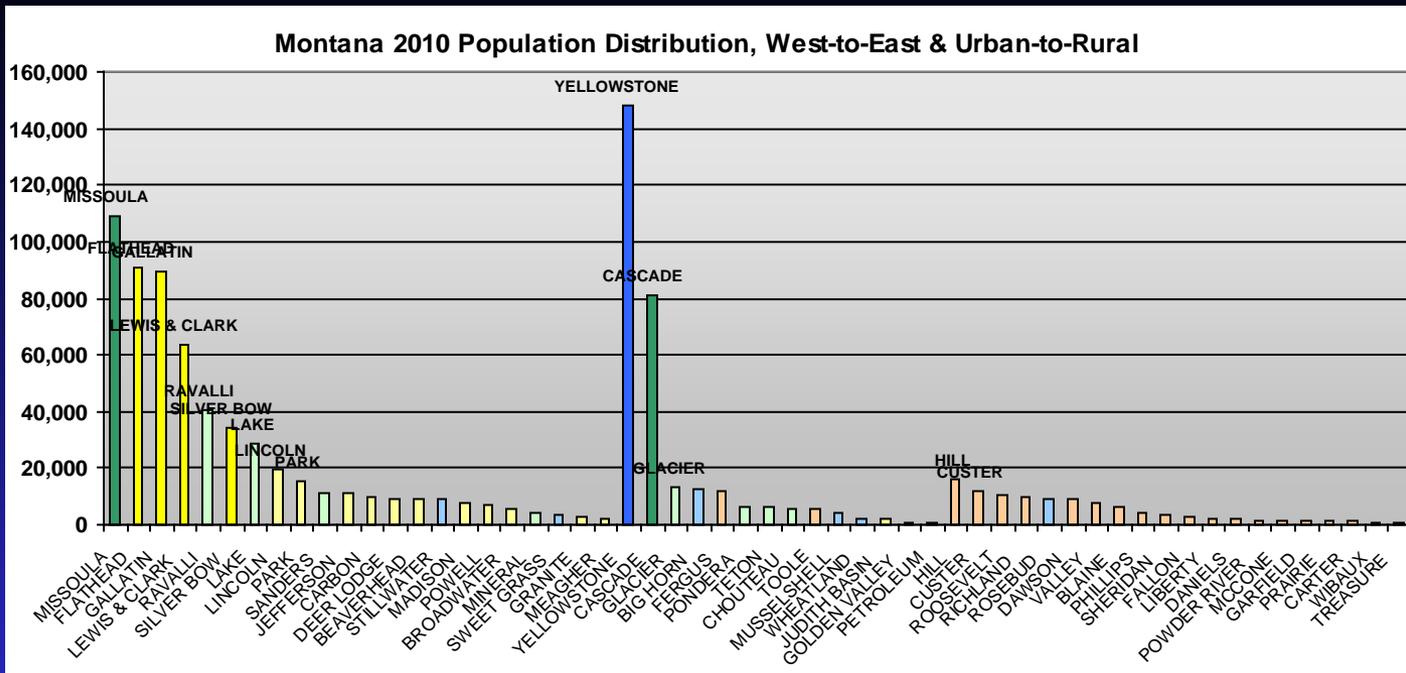
- 3rd "Tier" Metro Cores of 100,000 to 160,000
- ...adjacent and closely linked counties
- Large Regional Trade Centers, 60,000 to 100,000
- ...adjacent and closely linked counties
- Small Regional Trade Centers, 30,000 to 60,000 ~
- ...adjacent and closely linked counties
- Isolated Rural Centers (Counties under 35,000 with places of 10,000 to 20,000 pop.)
- Small Isolated Rural Counties Under 35,000 with no place of 10,000 pop.

# Montana's 2010 Pop Distribution, West-to-East

The top chart shows the total population of each county in 2010, with western counties to the left, central front counties in the center, and eastern plains counties at the right.

Montana's seven urban counties are color-coded in dark blue (Yellowstone), dark green (Missoula and Cascade), and dark yellow (Flathead, Gallatin, Lewis & Clark, and Silver Bow). The lower chart then shows how population changed in Montana from 2000 to 2010.

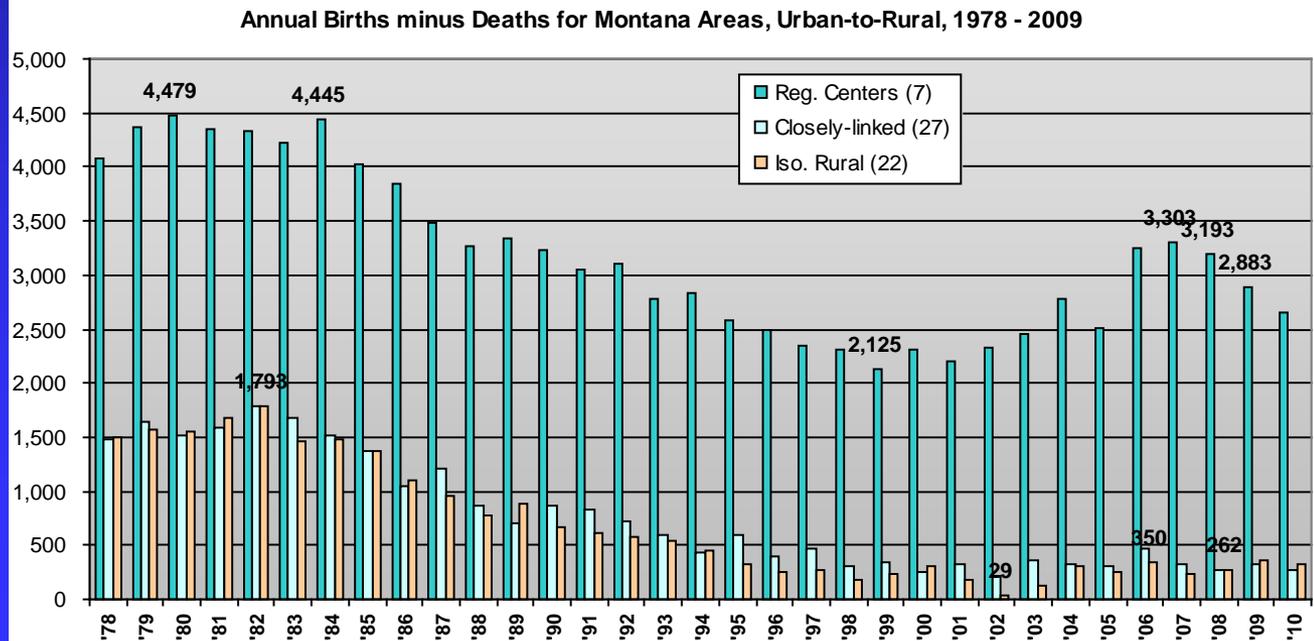
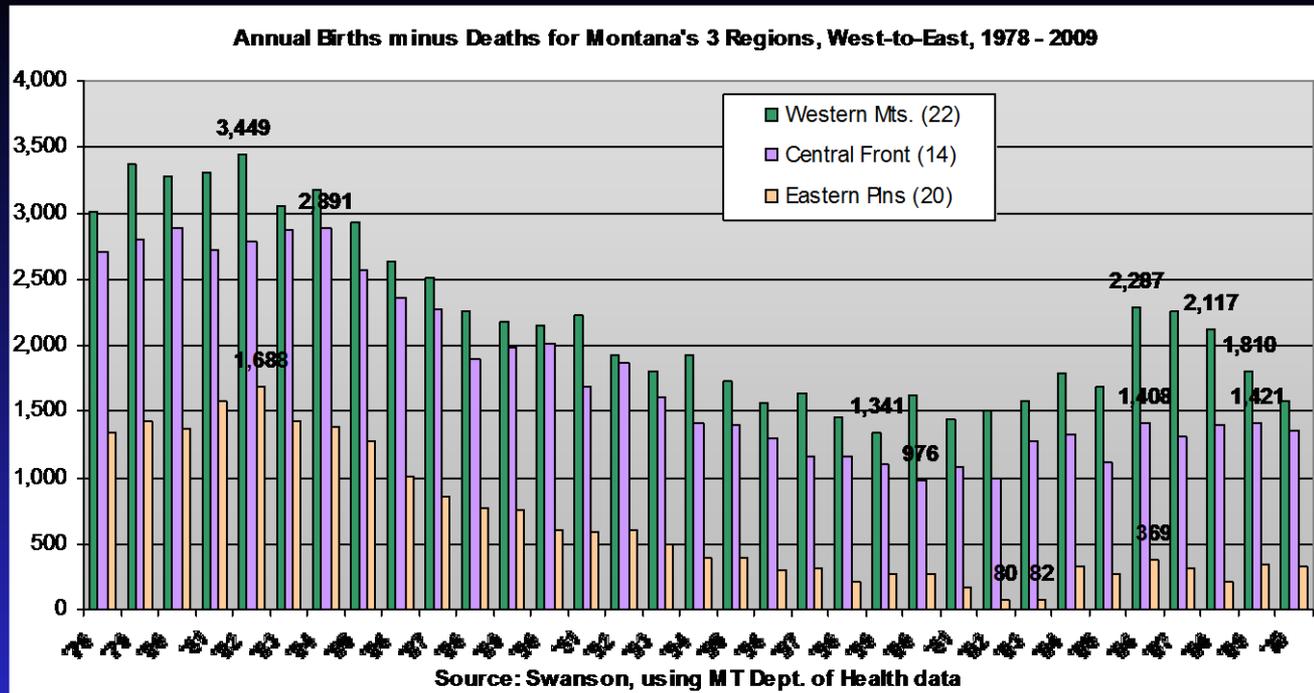
Population growth is concentrated in western Montana and in and nearby the state's urban centers. More and more of Montana's economy is "urban" in character and could not exist absent these growing centers.



## Natural Population Change in Montana Overtime – West-to-East and Urban-to-Rural

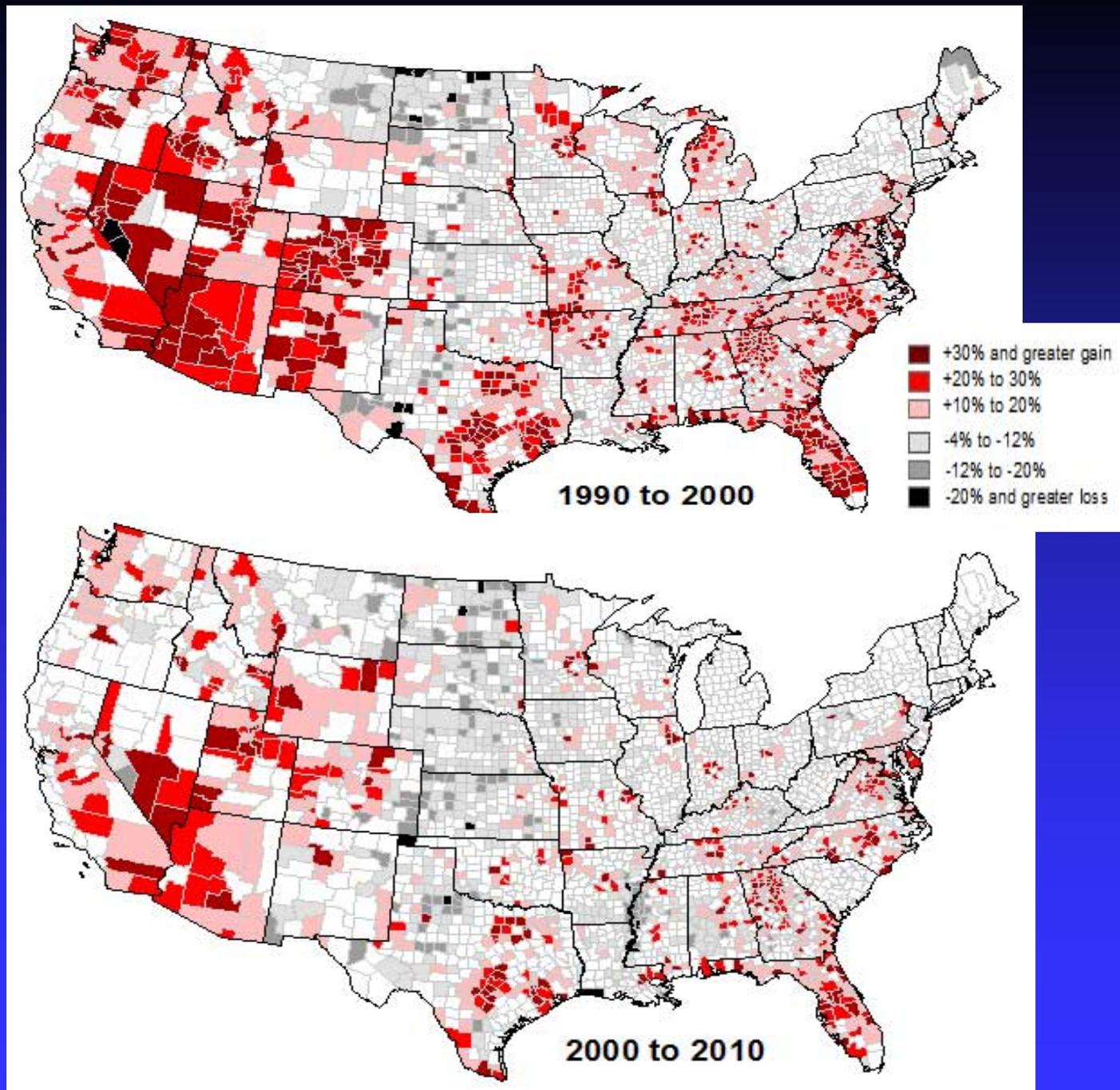
The upper chart shows natural change or births minus deaths for the three primary regions of Montana – Western Mountains, Central Front, and Eastern Plains. The lower chart shows natural change for three areas of Montana, based upon urban and rural characteristics.

Natural population growth is clearly concentrated in the western and central front areas of Montana. But this growth is even more concentrated in the state's more populated areas. The seven regional center counties in Montana account for most of the state's population growth through natural change.



## Areas of Rapid Population Growth or Decline

The maps show the larger patterns of population growth in the last two decades. Growth in Montana is heavily focused in the west, but growth in the larger region has slowed in the more recent decade and concentrated.

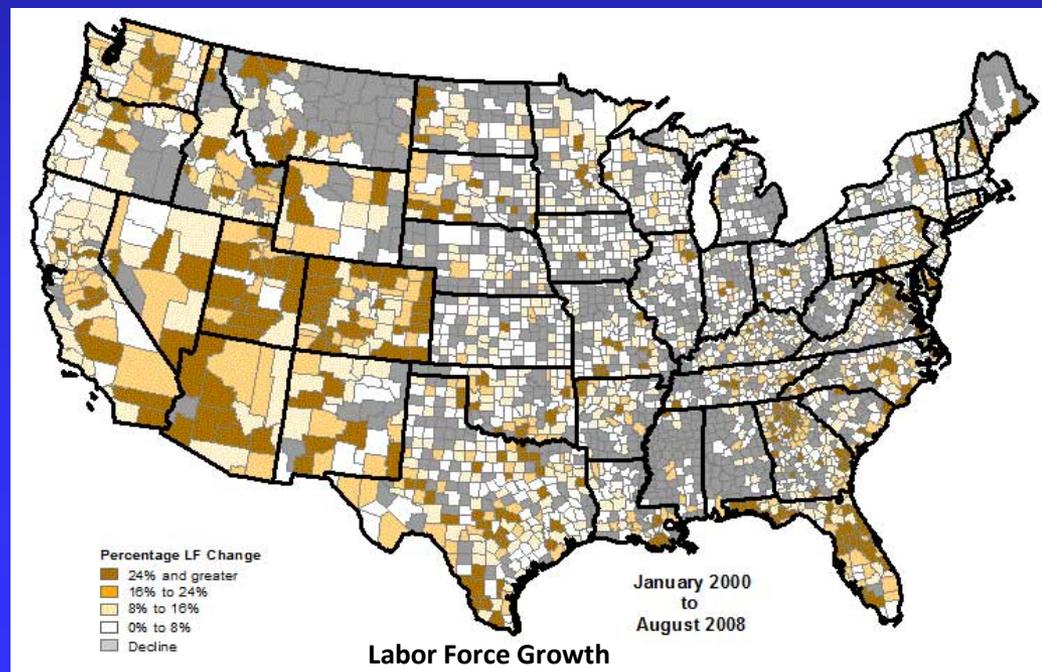
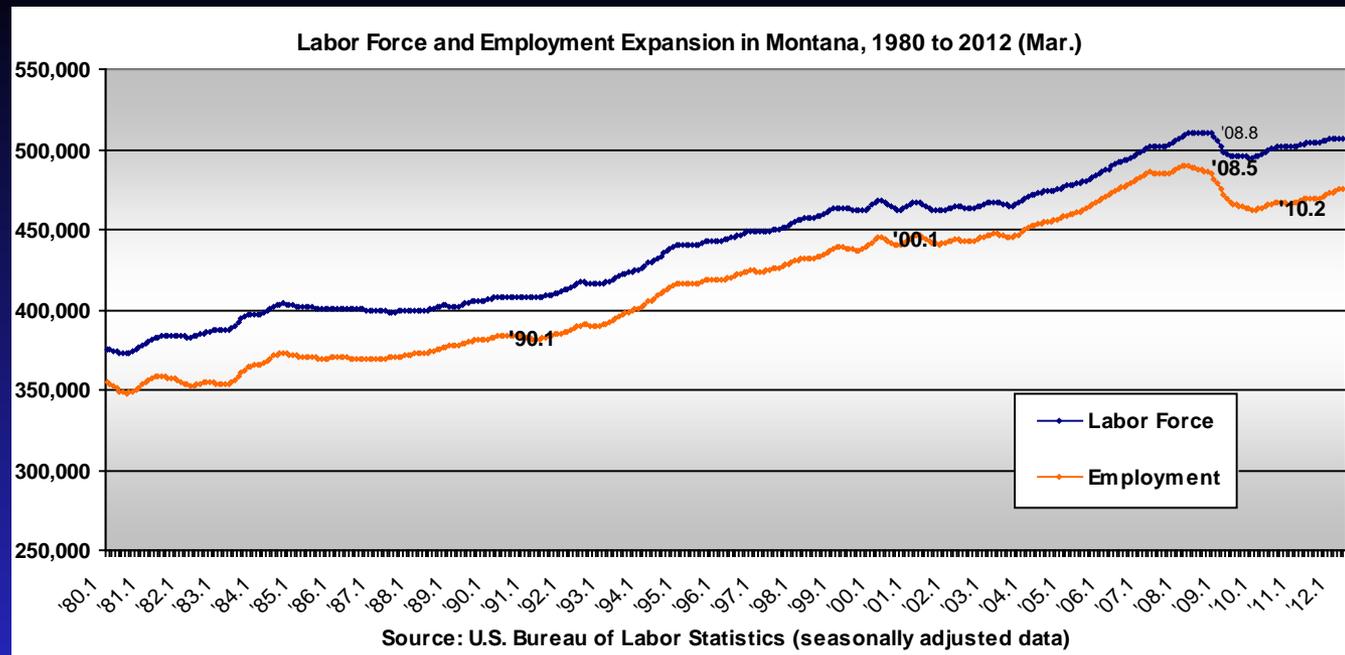


## Labor Force & Employment in Montana since the early '80s

Montana experienced almost unparalleled economic expansion for most of the last two decades leading up to the recent national recession and slowdown. This growth accommodated as well as spurred steady growth in the state's labor force.

The upper chart shows monthly estimates for the labor force in Montana dating back to January of 1980 and extending through March, 2012. The number employed each month also is shown. The gap between these lines is the number unemployed.

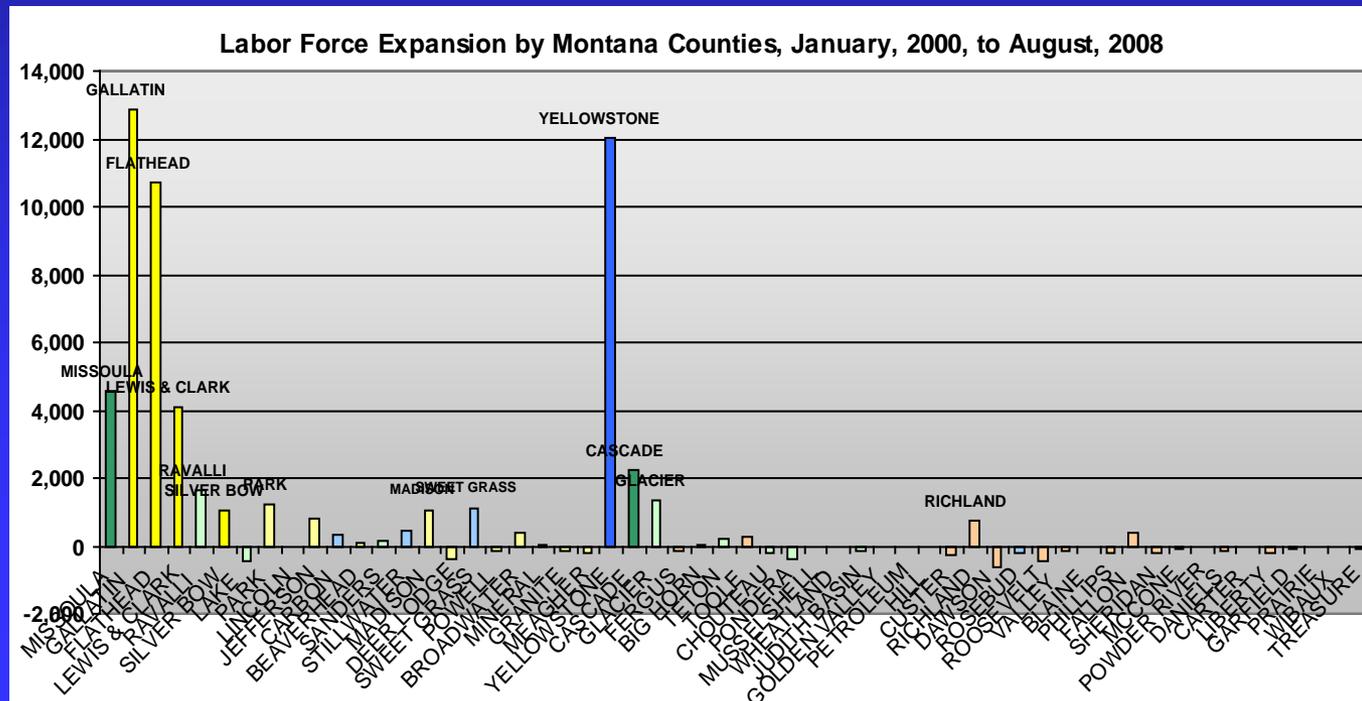
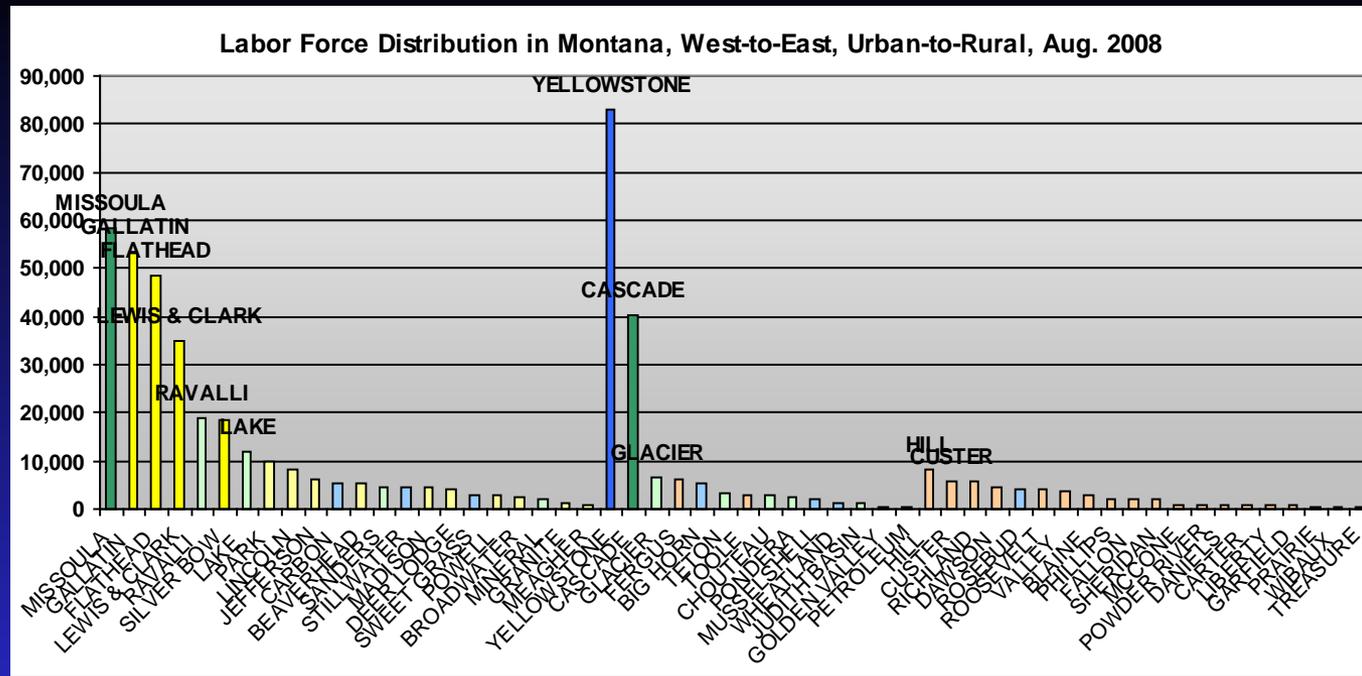
From 2000 to October of 2008, before the slowdown, Montana's labor force grew by 44,000 workers, an increase of about 9.4% in less than eight years. Not all areas have growing labor forces, as shown in the map below.



# Labor Force Distribution in Montana, West-to-East and Urban-to-Rural

The upper chart shows how the labor force was distributed across Montana prior to declines in the labor force and employment brought on by the economic downturn. Counties are arrayed in the chart from left (western counties) to right (eastern counties), with counties in the central front in the middle. Within each of these three groupings, counties are also arrayed from urban (most populated counties and counties nearby them) to rural (less populated and isolated).

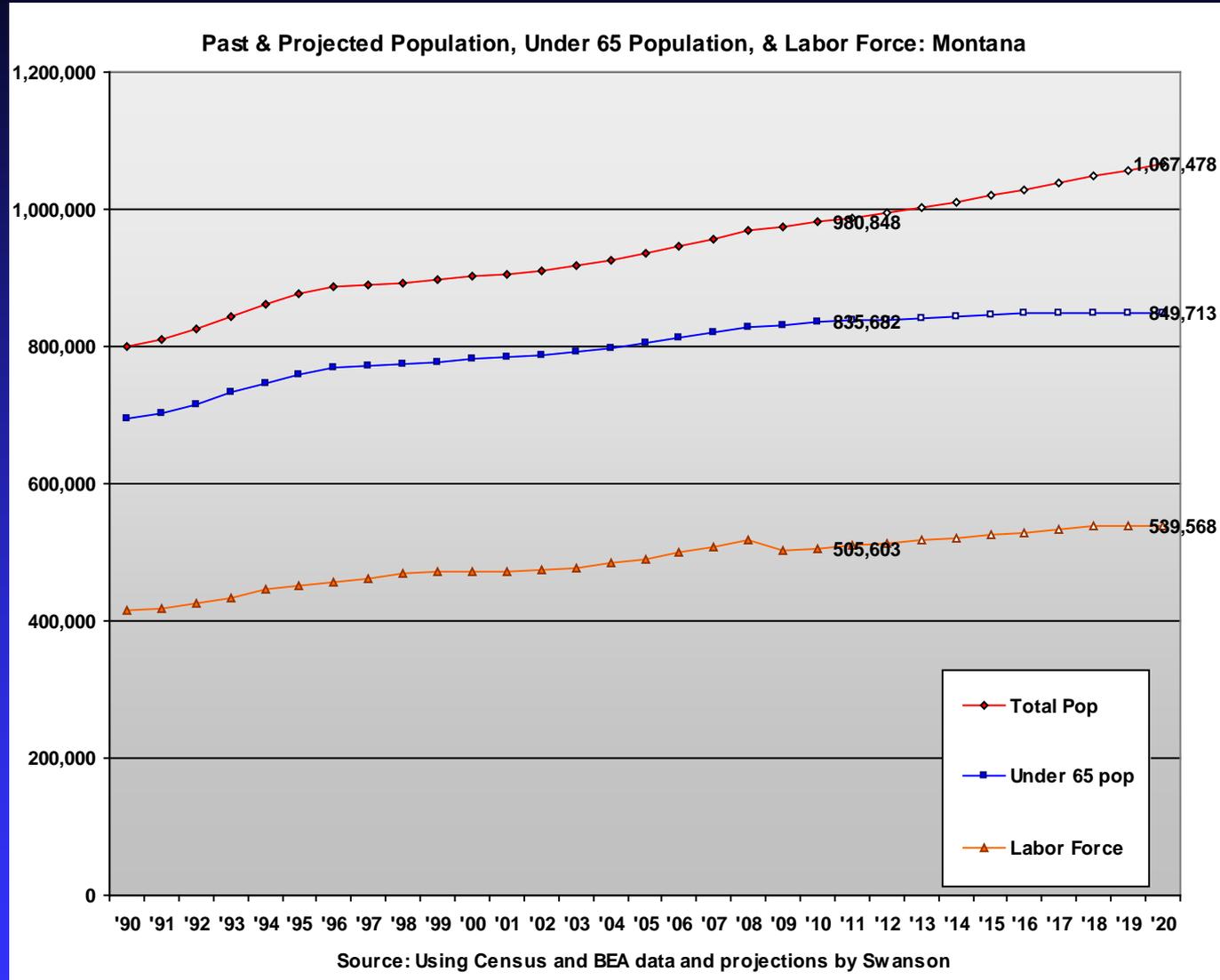
The lower chart shows how the labor force grew across these regional county groupings from January of 2000 to August of 2008. In this recent period of economic growth in Montana, labor force expansion has been heavily nearby the urban centers.



## Past & Projected Population and Labor Force Levels in Montana

The chart shows Montana's population from 1990 to 2011 and as projected for 2012 through 2020. The population grew roughly 2% a year in the early-to-mid '90s, then fell to less than 1% a year growth from 1997 to 2003. It grew at 1% a year from 2004 to 2008 then fell below 1% in 2009, 2010, and 2011, the latest estimate.

Future growth, developed from county-level projections, is estimated at under 1% a year through 2020. Between 2010 and 2020 the 65 and older population of Montana will rise from about 15% to 20%, and continue to 23 to 24% by 2025. The ratio between Montana's labor force and the population under 65 was consistently about 60% through the '90s up until more recently, where it rose to 61%. This will rise to about 64% by 2020, reflecting additions to the work force by older adults working beyond 65.



## **Future Population Aging in Montana**

**Between 2010 and 2020 the 65 and older population of Montana will rise from about 15% to 20%, and continue to increase to 23 to 24% by 2025.**

**There will be a 50% increase in the number of persons in Montana that are 65 and older between 2010 and 2020 and this growth will continue through the next decade as well.**

**Some areas will age much more rapidly than others, particularly more rural areas that have been losing population gradually over time.**

**Figure 4**

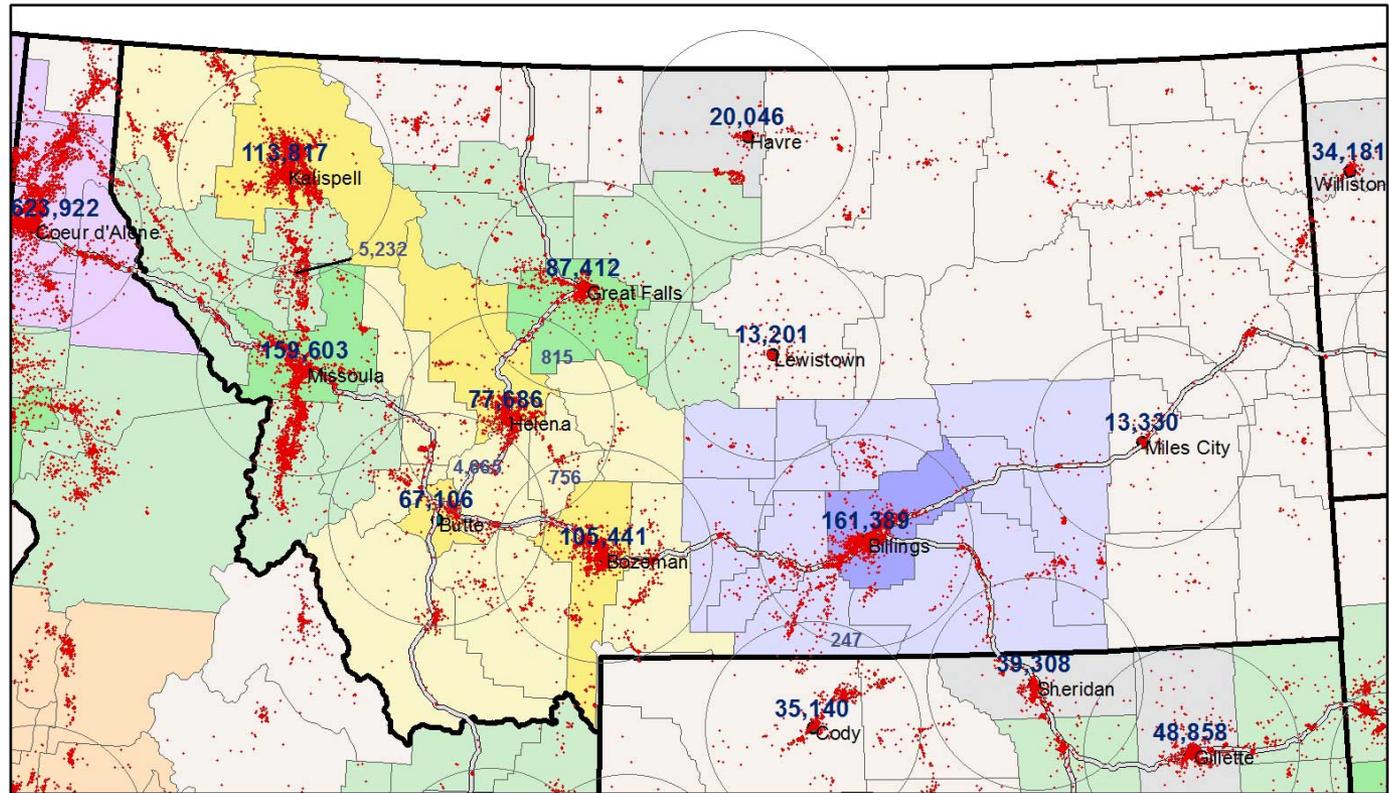
## Population Distribution in Montana and County Urban-to-Rural Types

The map shows population distribution in Montana, with each red dot representing 25 persons, mapped at the Census block level, using 2010 data.

Counties with the largest populations – regional center counties – are shown in dark blue, dark green, and dark yellow. Counties nearby these are in lighter colors. More isolated and rural counties are shown in light gray.

50-mile rings are drawn around major population centers and the populations residing inside these rings.

In 2010 nearly 80% of the state's entire population lived within 50 miles of its seven largest cities.



● = 25 persons

### Read Multi-County Core-Based Regions ^

- Major Metro Cores, 250,000+ Pop.  
...adjacent and closely linked counties
- 2nd "Tier" Metro Cores of 160,000 to 250,000  
...adjacent and closely linked counties
- 3rd "Tier" Metro Cores of 100,000 to 160,000  
...adjacent and closely linked counties
- Large Regional Trade Centers, 60,000 to 100,000  
...adjacent and closely linked counties
- Small Regional Trade Centers, 30,000 to 60,000 ~  
...adjacent and closely linked counties
- Isolated Rural Centers (Counties under 35,000 with places 10,000 to 20,000 pop.)
- Small Isolated Rural Counties Under 35,000 with no place of 10,000 pop.

\* Classifications reflect populations in the 1990 Census of Population.

^ "Core" counties contain the dominant population center(s) of a region. Adjacent and nearby counties are assigned to these based upon their relative locations, the size and dominance of core counties, and visual inspection of major highways.

~ "Core" counties greater than 30,000 population also having incorporated places greater than 20,000 (1990 Census)

