

# Water and the Colorado Economy



Commissioned by:  
Front Range Water Council

**Summit State of the River**

**May 12, 2010**

# Outline

Purpose

Background

Economics

Water

Economics & Water

Summary

# Front Range Water Council

“Advocating mutual interests, as transmountain diverters of water from Colorado’s West Slope to its East Slope, in water policy and water supply for the population of the Colorado Front Range.”

## ➤ Members

- Northern Colorado Water Conservancy District
- Southeastern Colorado Water Conservancy District
- Colorado Springs Utilities
- Aurora Water
- Pueblo Board of Water Works
- Denver Water
- Twin Lakes Reservoir and Canal Company

# Purpose

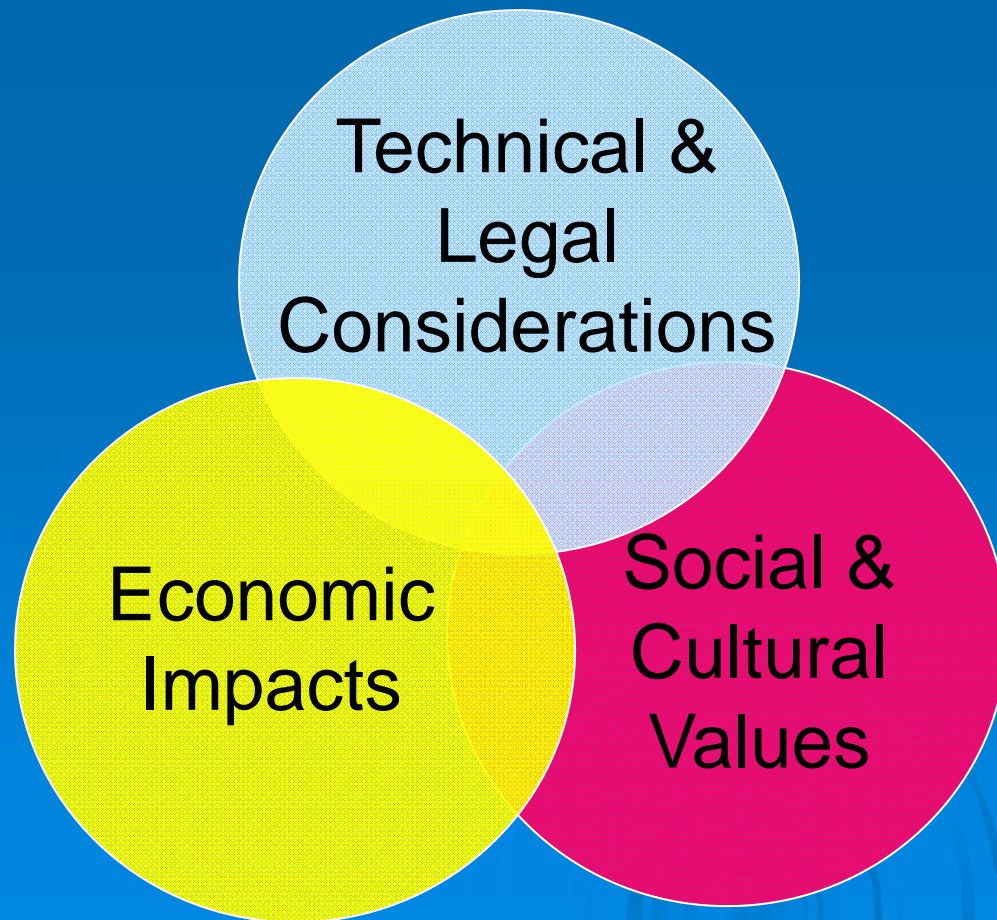
## ➤ Objectives:

- Illustrate Economic Value of Water
- Examine Economic Interdependence of Colorado Regions
- Determine Economic Contribution of Colorado's Regions to the State Economy

## ➤ Research Team:

- Summit Economics
- The Adams Group

# Water Balancing Act



- Study examines economic impacts.
- Study does not address social values, nor technical considerations.
- No comprehensive study exists of water value from all three perspectives.

# Colorado's National Economic Vitality Rankings out of 50 States

- **4<sup>th</sup> Most Preferred State to Live in**
  - Harris Poll
- **4<sup>th</sup> Happiest State in Nation**
  - University of Cambridge, Gallup Poll, 2008
- **2<sup>nd</sup> in Entrepreneurial Activity**
  - ITIF Index
- **3<sup>rd</sup> Highest Venture Capital per Capita**
  - Beacon Hill State Competitiveness

# Colorado's National Economic Vitality Rankings out of 50 States

- 4<sup>th</sup> Best State for Business
  - Forbes Magazine 2009
- 8<sup>th</sup> in High Tech Exports
  - AEA Cyberstates 2008
- 10<sup>th</sup> Most Fortune 500 Company Headquarters
  - Fortune Magazine

# Colorado's National Economic Vitality Rankings out of 50 States

- 4<sup>th</sup> Highest Research and Development Inputs
  - Milken Institute
- 8<sup>th</sup> in the Nation for Agricultural Outputs
  - Referring to Weld County, 2007 Census of Agriculture

# Population Projections for Colorado out to 2050

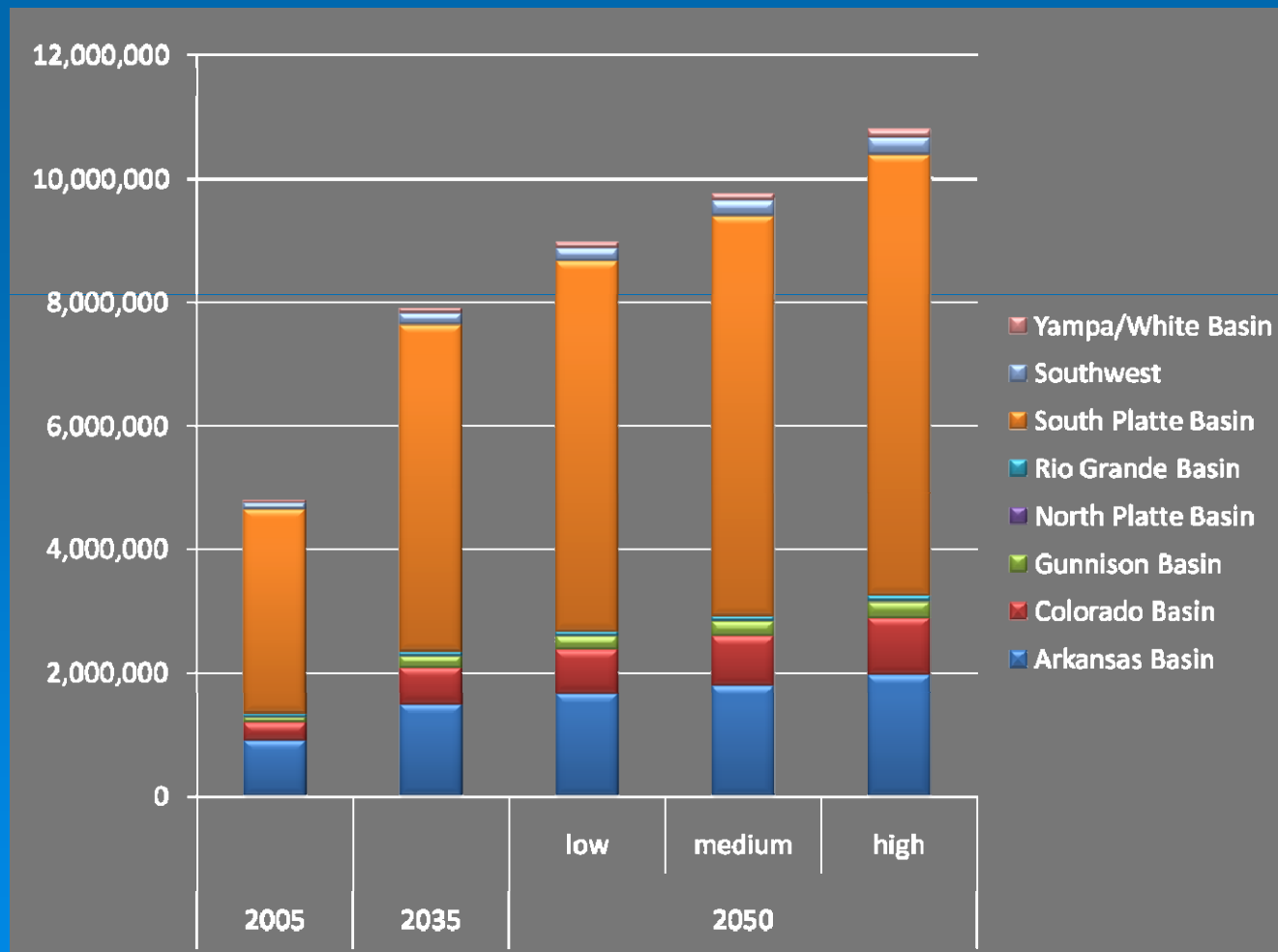


Figure 2. Population projections for Colorado out to 2050 from Colorado Department of Natural Resources

# State of Colorado Projected Water Demands, Supplies, and Gaps

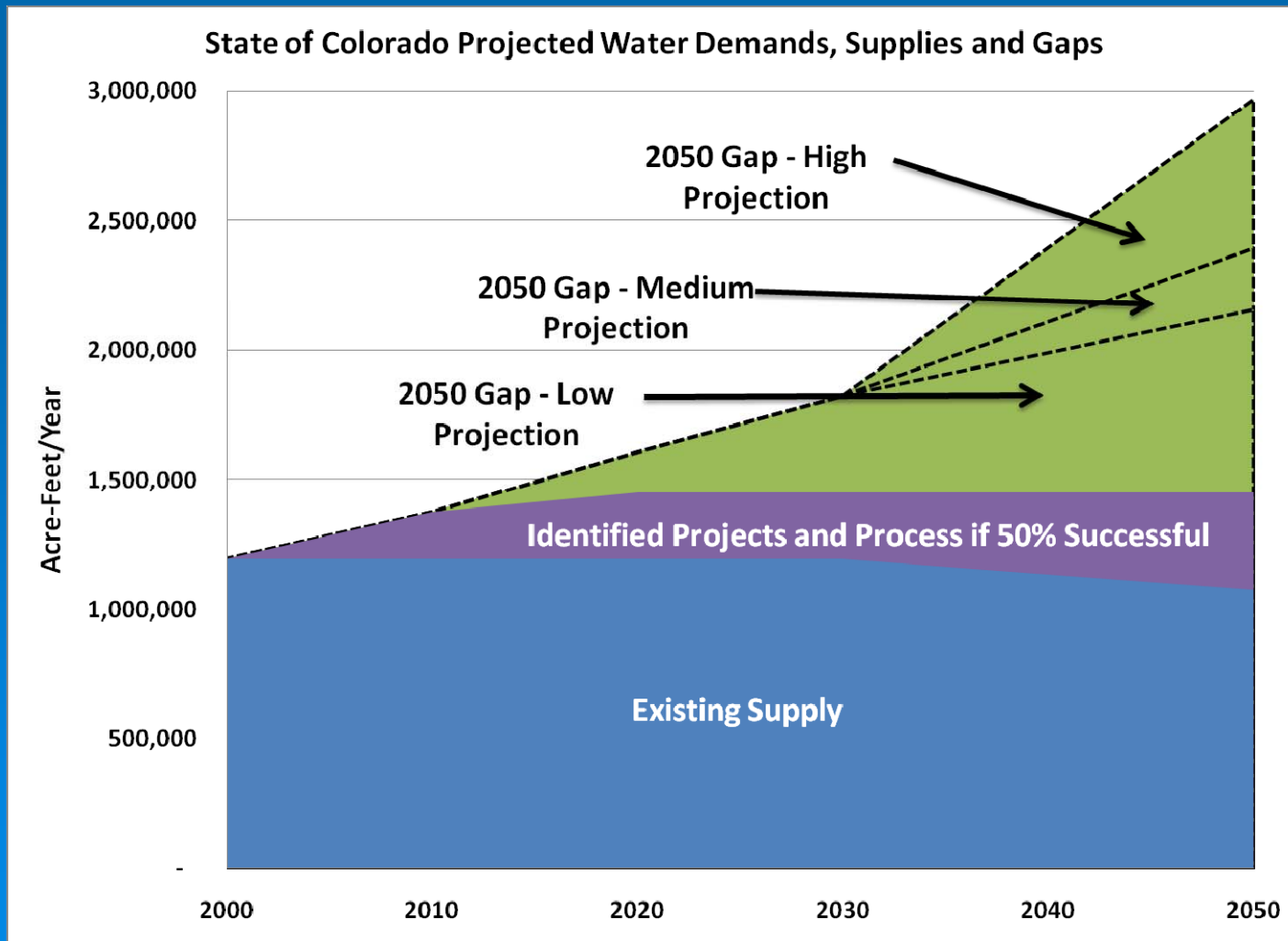


Figure 4. State of Colorado Projected Water Demands, Supplies, and Gaps from Colorado Department of Natural Resources

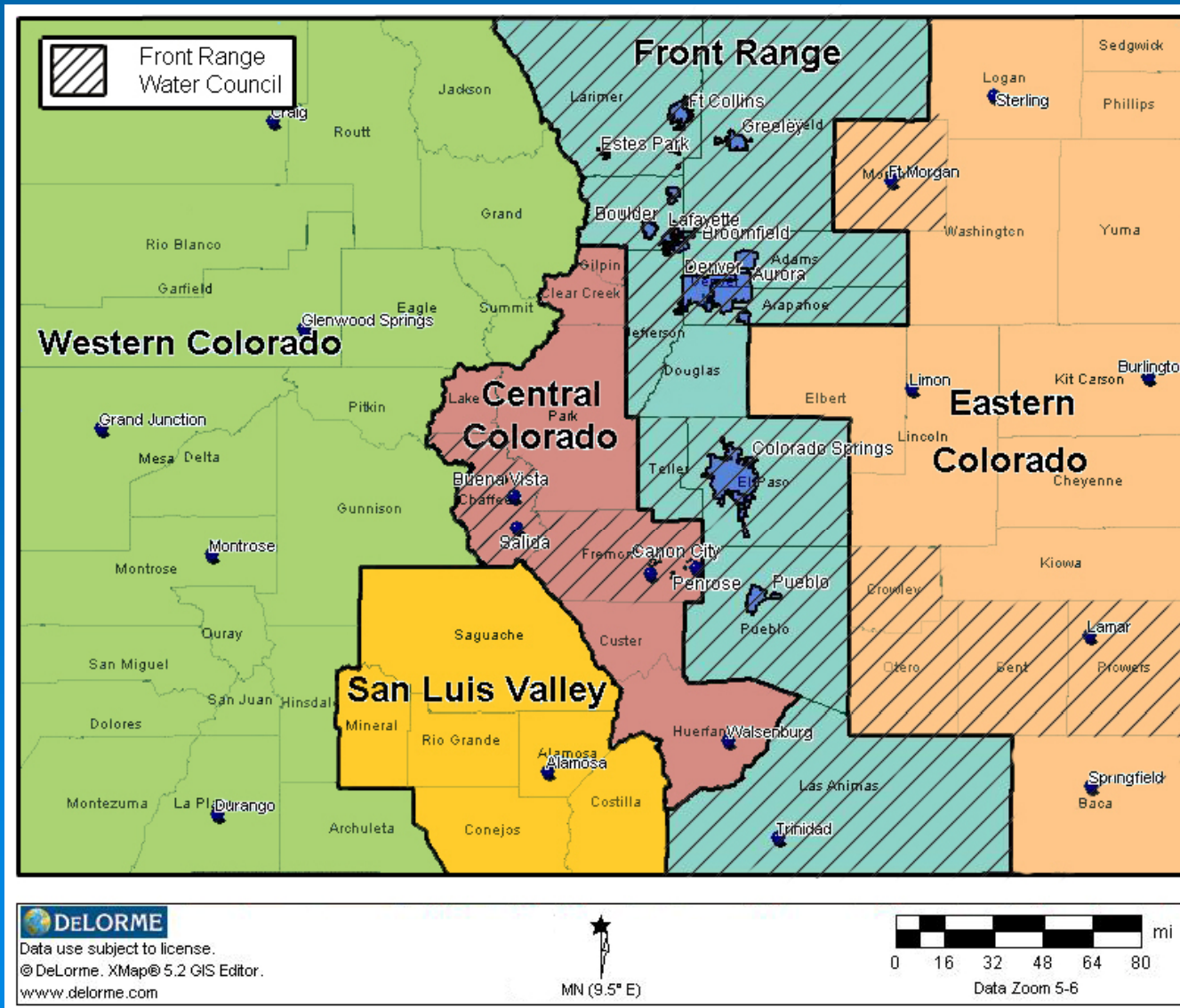
# Colorado's Economic Future

## The Central Question

Given this change and the State's role within the Regional and National economy...

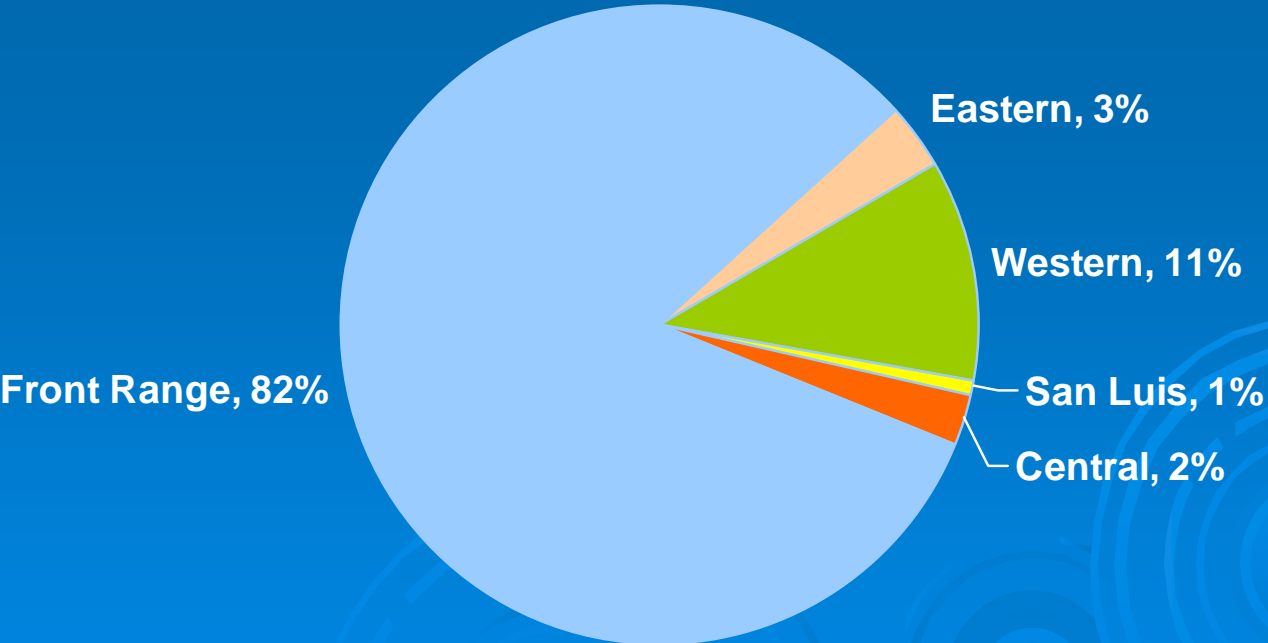
Will Colorado's approach to water support or hinder the State's future economic vitality?

# Colorado's five economic regions are diverse (urban, rural and mountain)



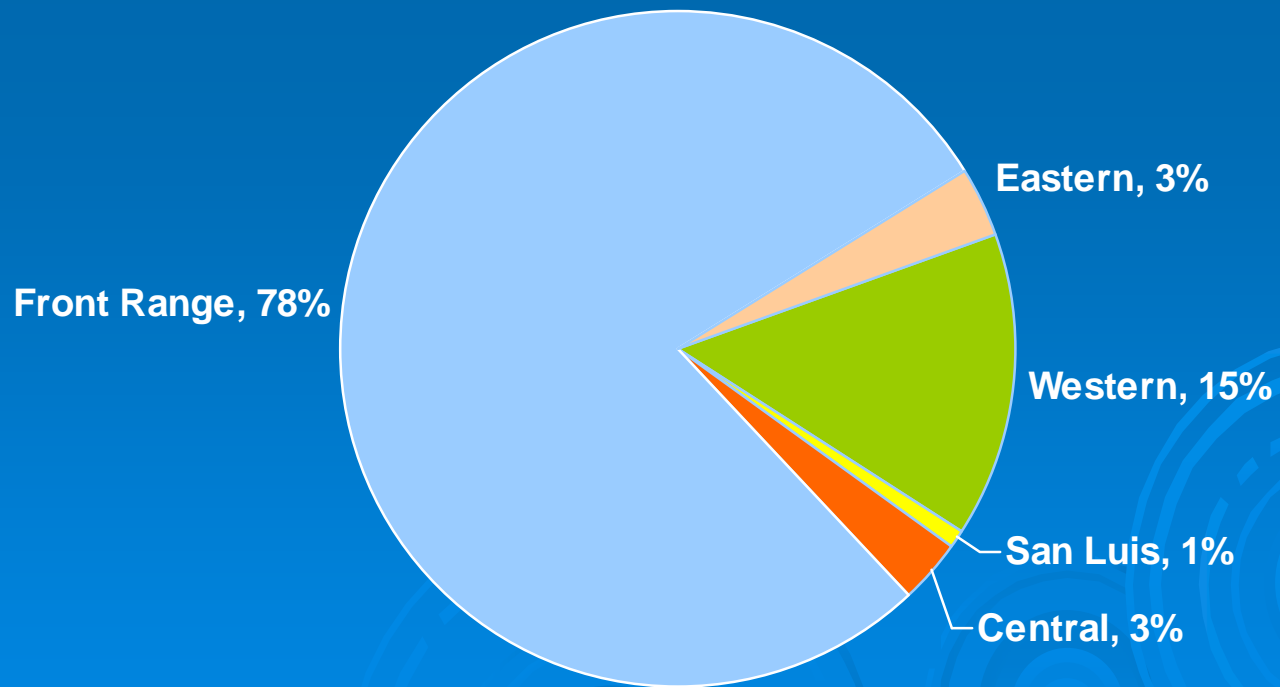
# Distribution of State's 4.9 Million Residents

## 2007 Population by Region



Source: Colorado State Demographer

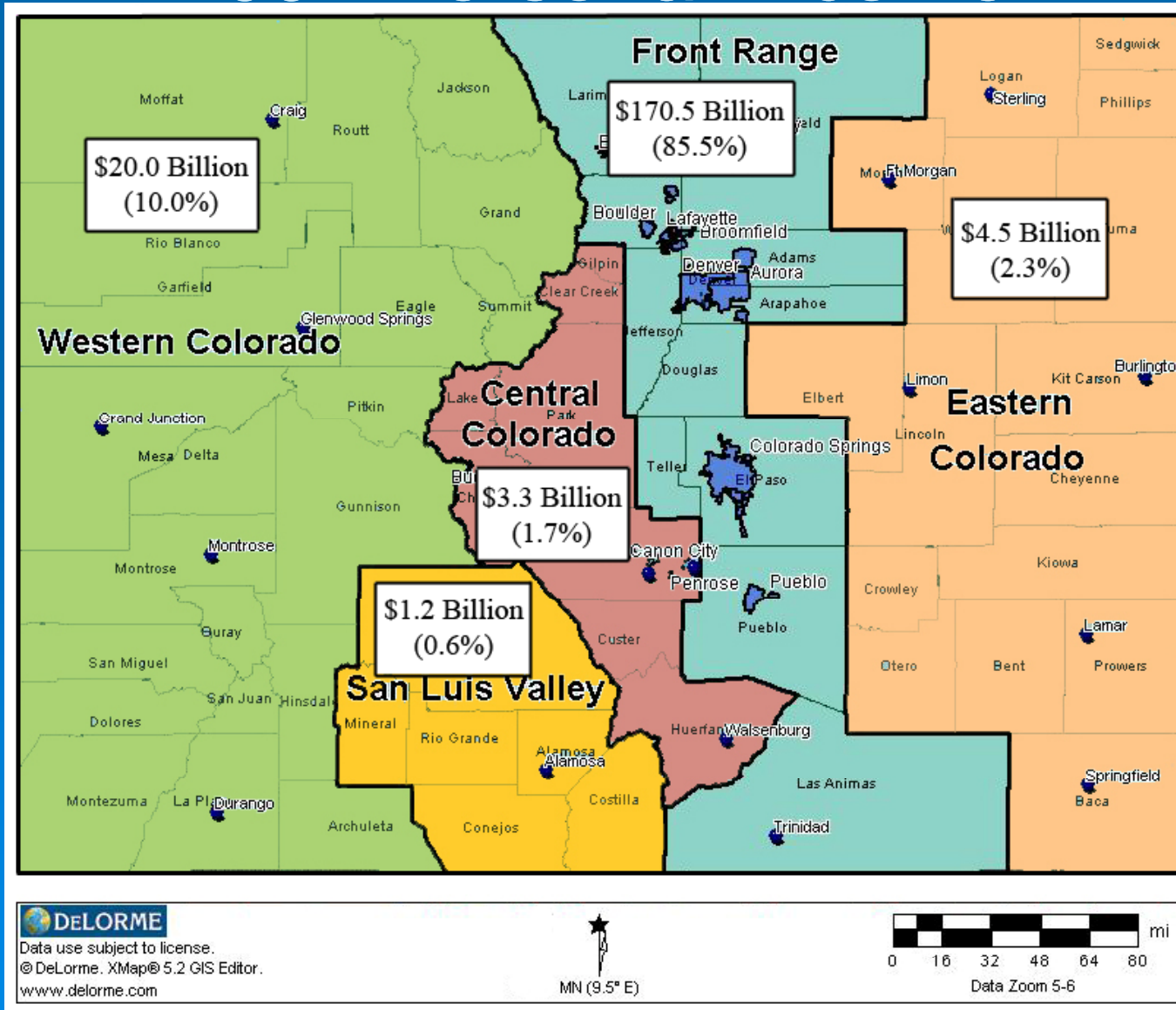
# Distribution of State's forecasted 10.1 million residents 2050 Population by Region



Source: Colorado State Demographer

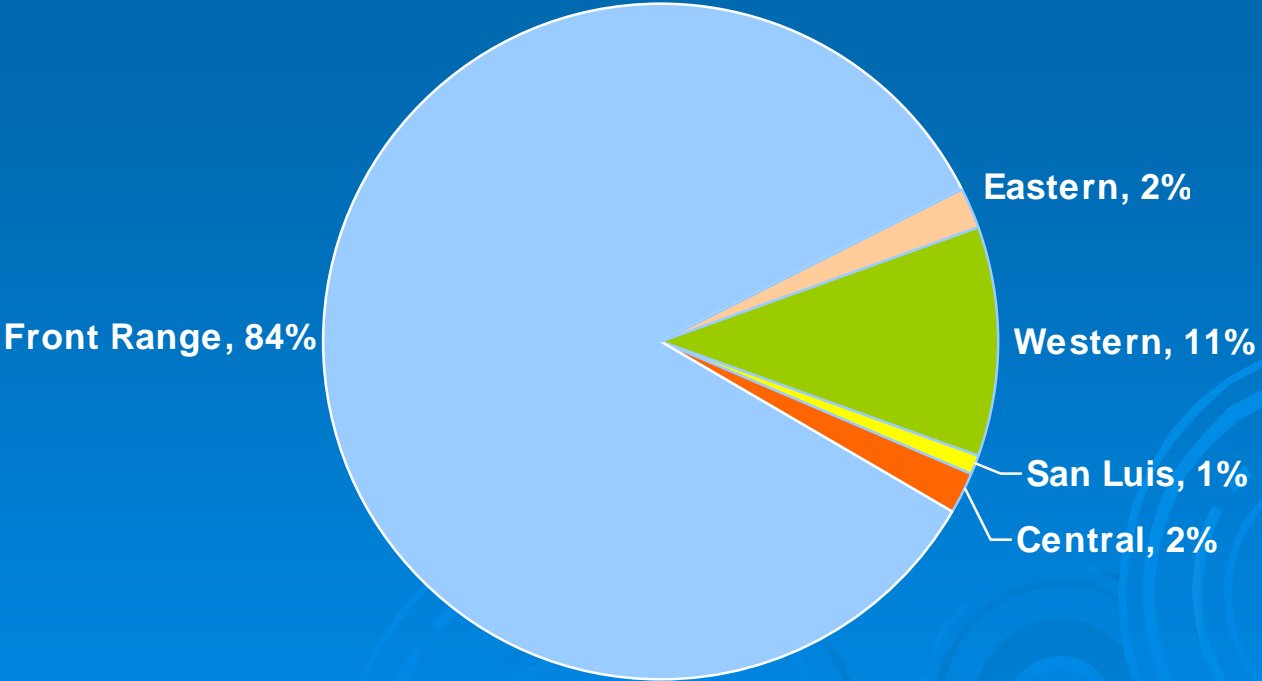
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# 2007 Personal Income



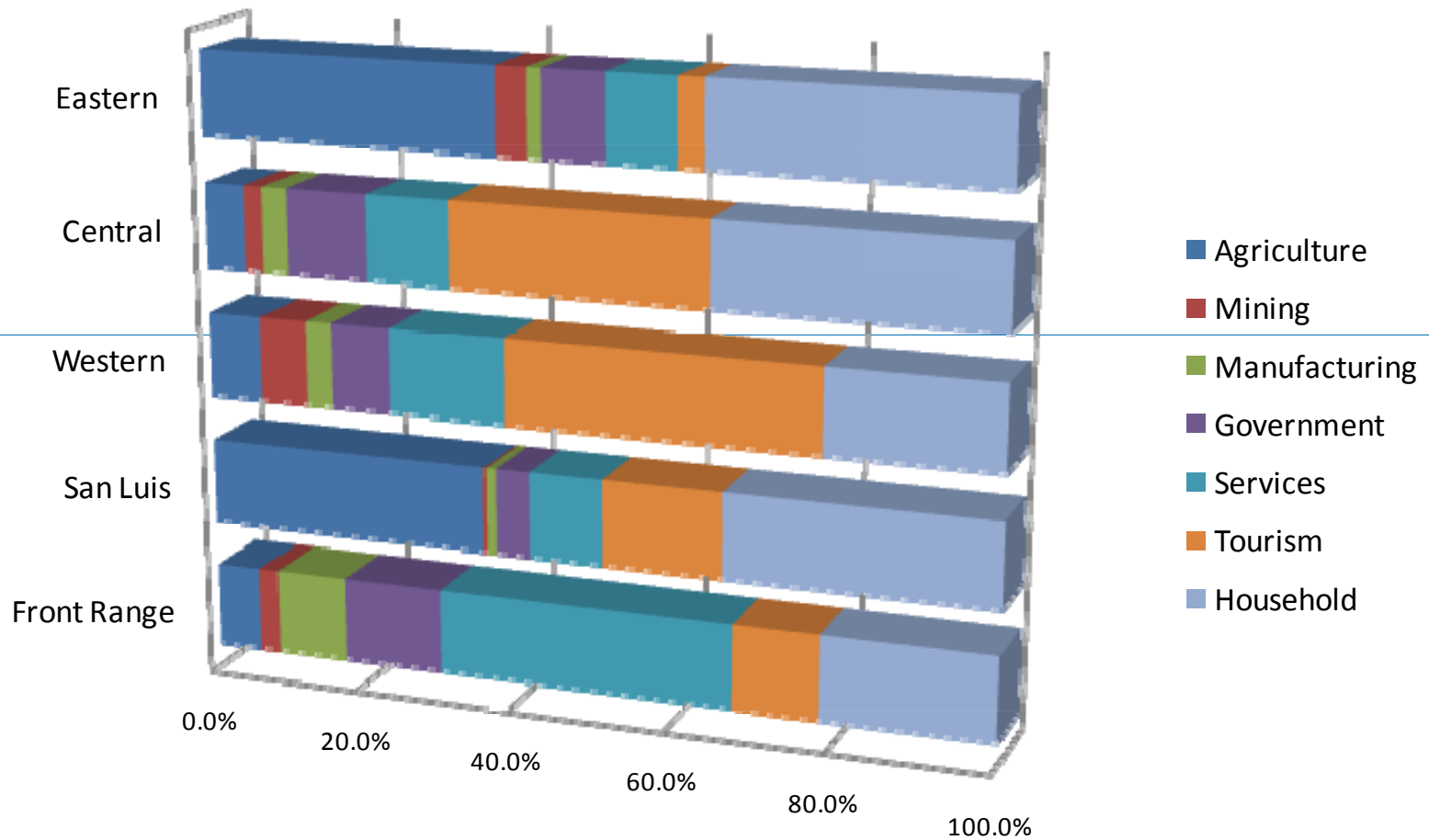
Source: Bureau of Economic Analysis Regional Economic Accounts, Table CA1-3 Personal Income Series

# State Sales & Personal Income Tax by Region



Source: 2007 Colorado Department of Revenue

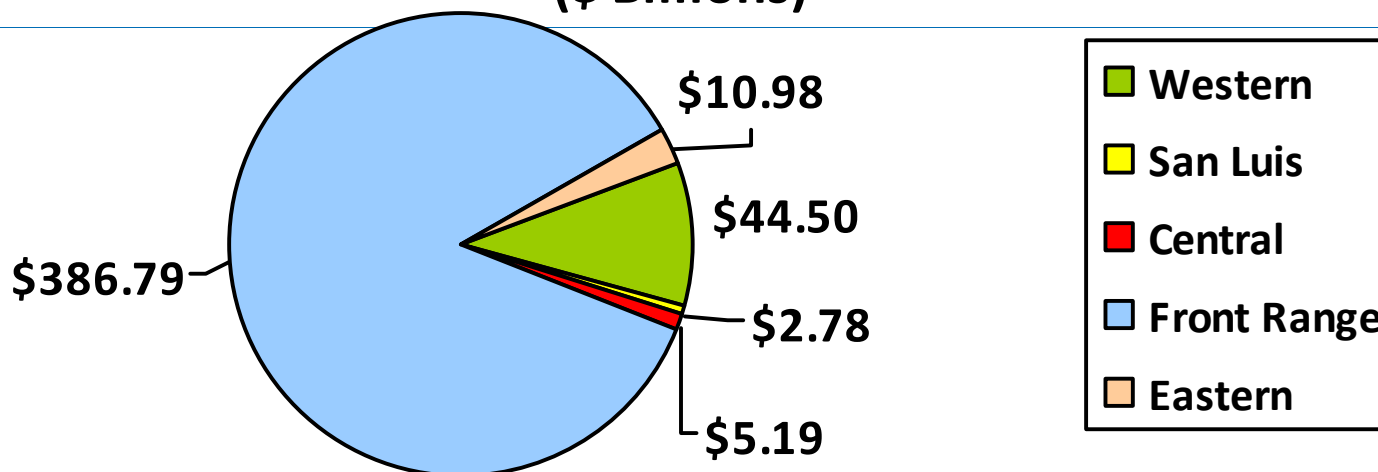
## Basic Industries Share of Total Basic by Region



Source: Colorado State Demographer

# Colorado's Sales

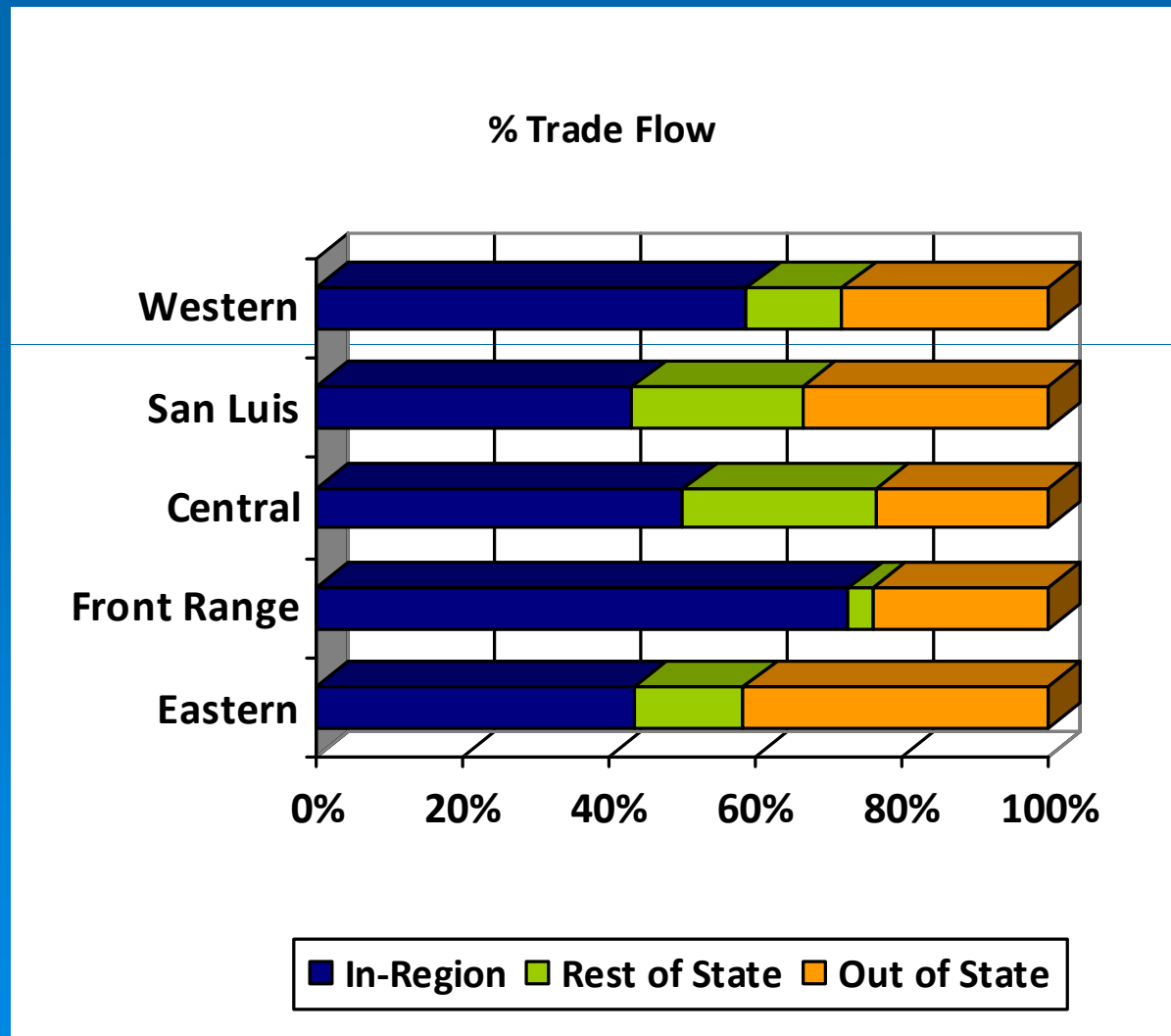
2007 Trade Flows by Region  
(\$ Billions)



# Tradelows – To Where?

- 70% stayed within the State
- 55% were within each Region
- 30% were exported to other States

# Economic Interdependence

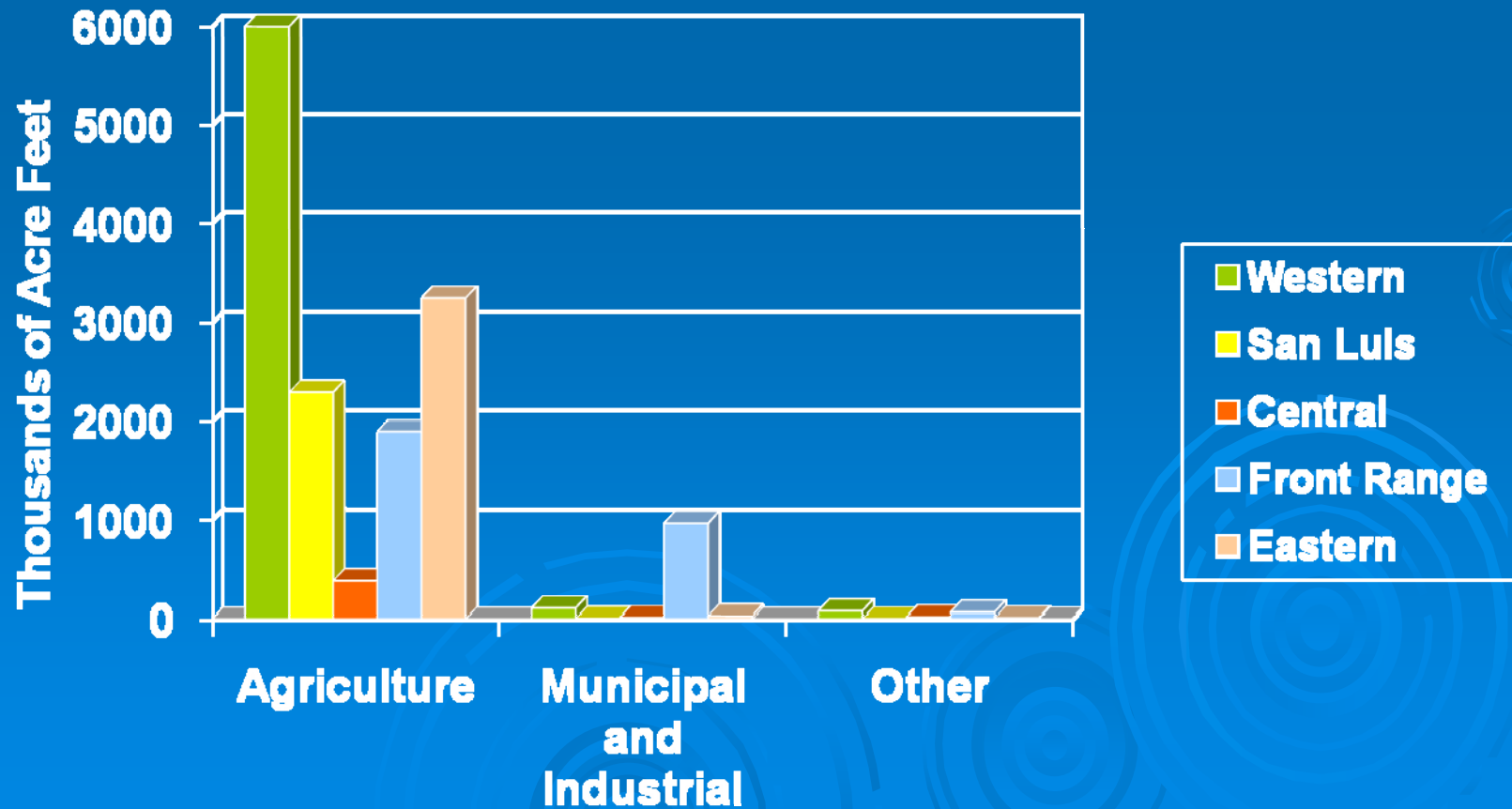


# Colorado's Future Economy

- Increasingly Global
- Outperforms the Nation
- High Skilled Labor
- Attracts capital
- Concentrated along the Front Range
- Is significantly interdependent

But, what about water?

# 2005 Colorado Water Withdrawals by Region



Source: 2005 United States Geological Survey Data, Summit/Adams

# Trans-basin Diversions

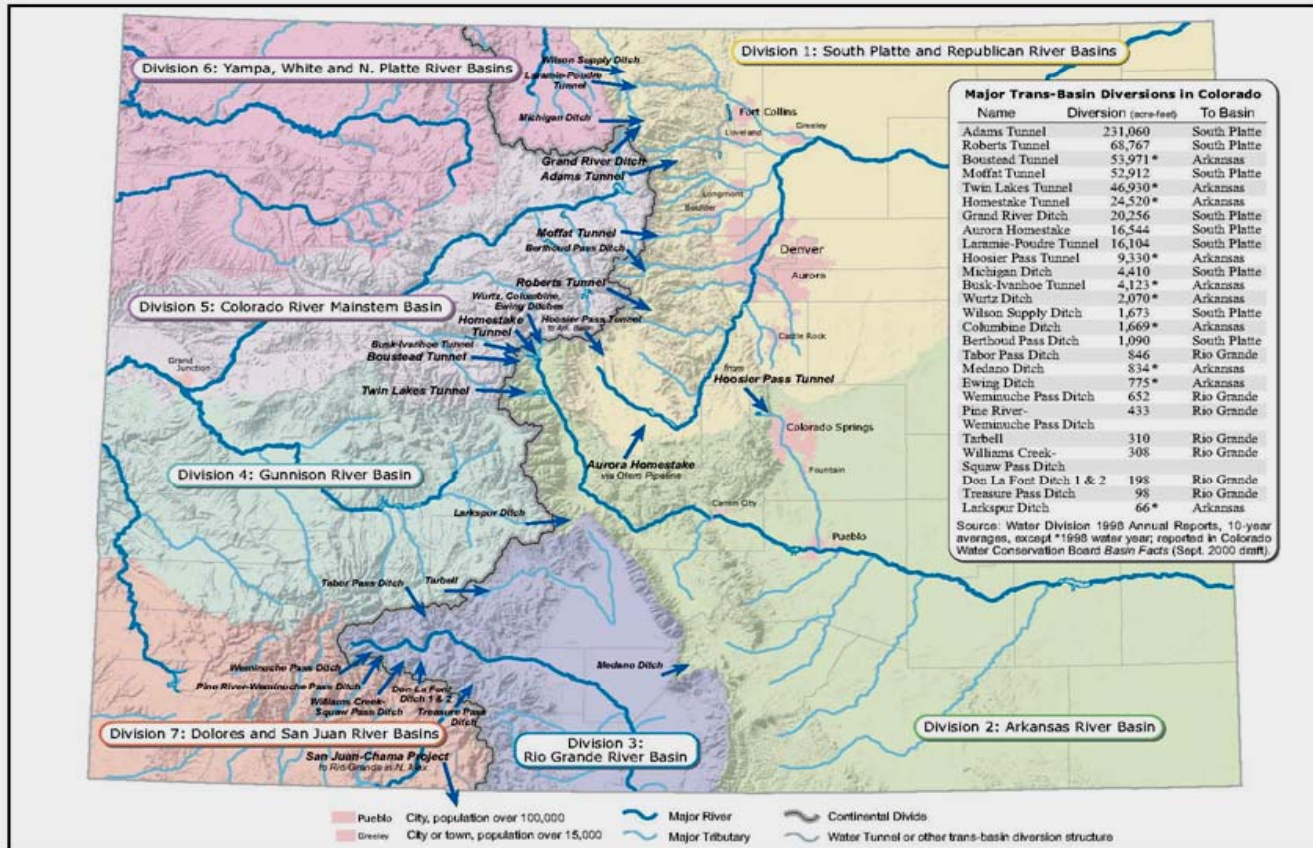
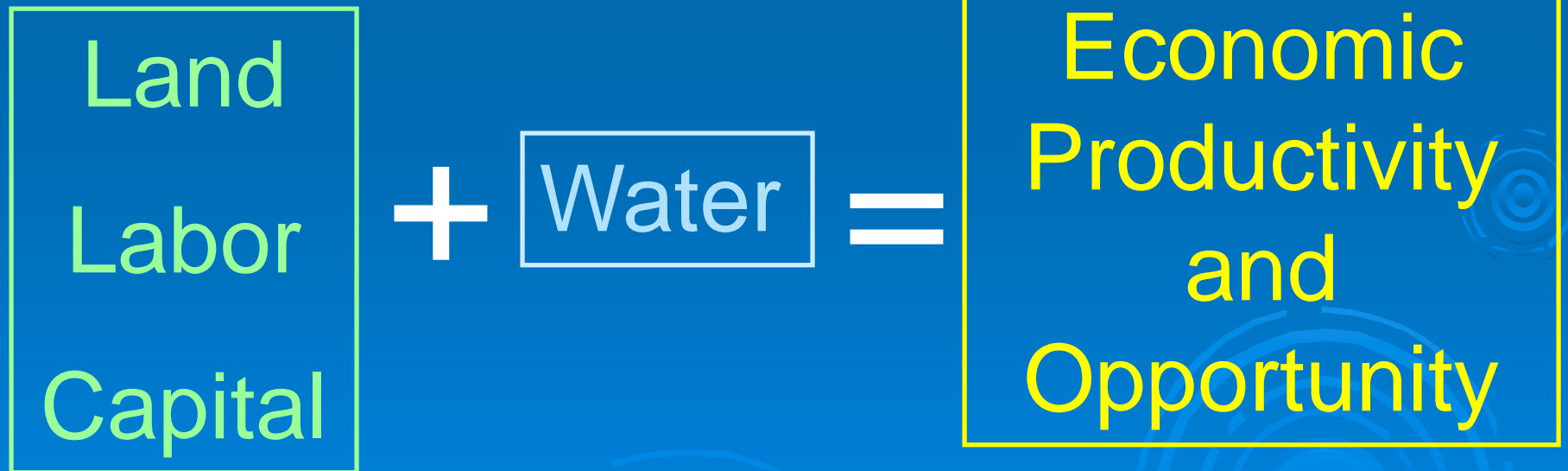


Figure 7. Major Trans-Basin Diversions

Sources: Colorado Division of Water Resources, Office of the State Engineer; Colorado Water Conservation Board; U.S. Bureau of Reclamation; U.S. Geological Survey. Map by Thomas Dickinson.

# Economics and Water



# Economics and Water

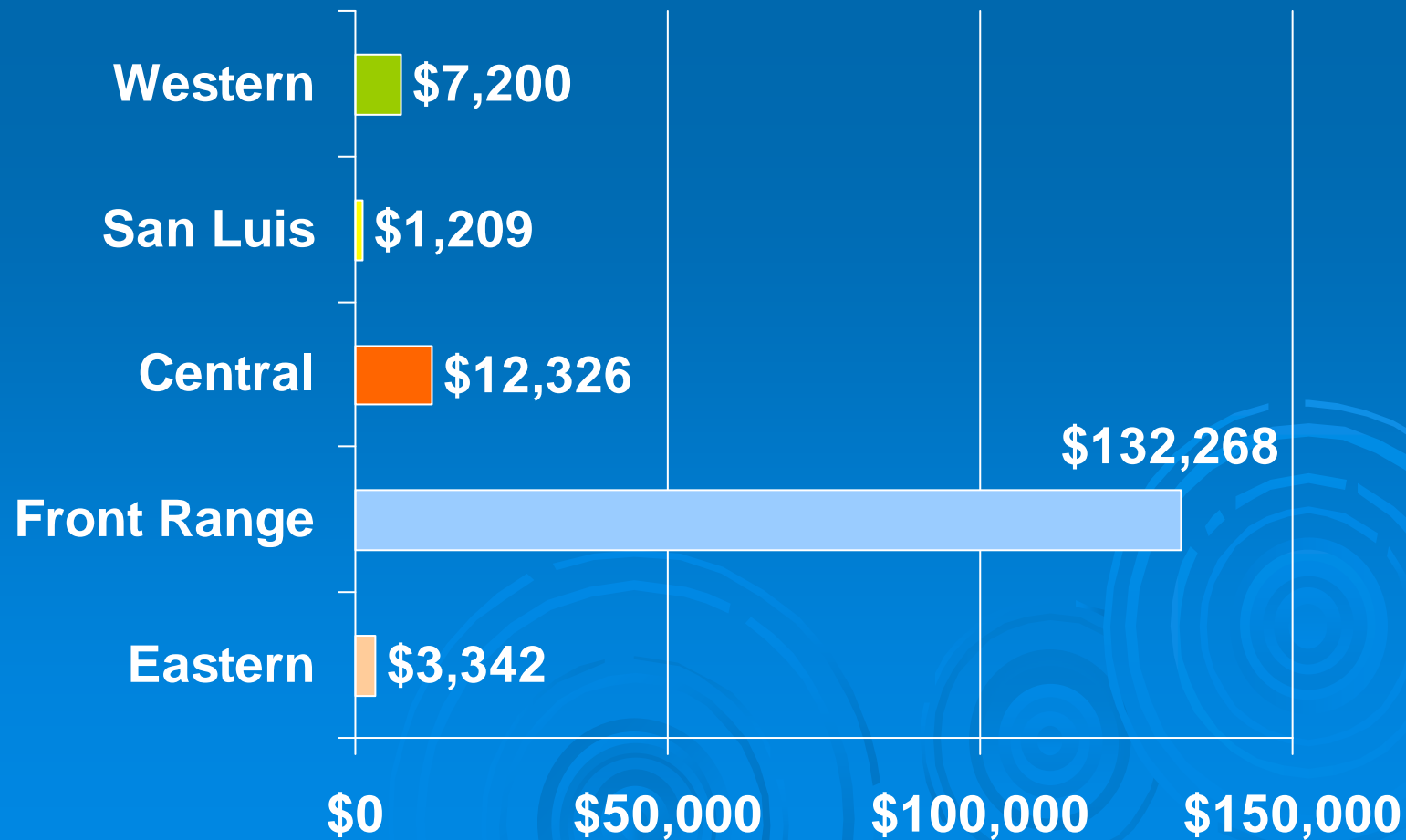
Total Regional Sales of  
Goods and Services (\$)

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Total Regional Water  
Withdrawals (AF)

= Equals Sales per  
Acre Foot of Water

# 2007 Sales of Goods and Services per Acre Foot of Total Water Withdrawn, by Region

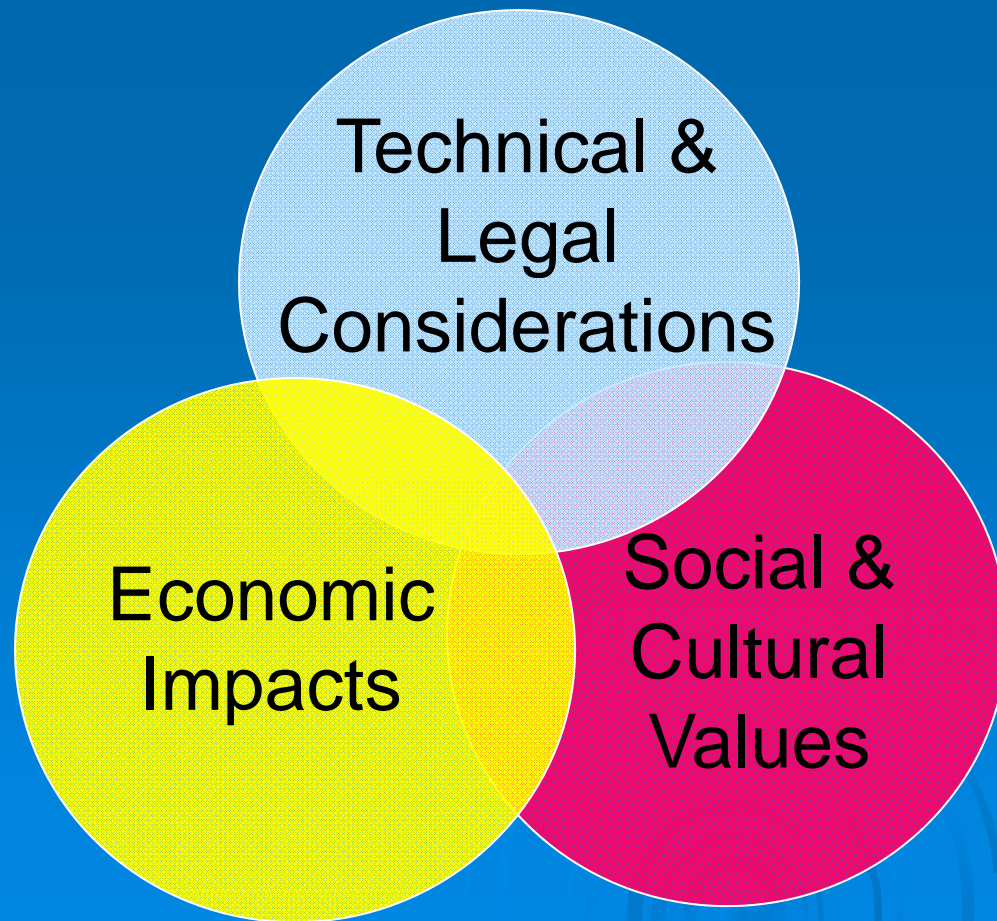


Sources: Implan Group and USGS, Summit/Adams

# Water and Colorado Economy Summary

- 80-86% of State's economy and tax revenue comes from Front Range
- 70% of economy as measured by sales stays in State with a high level of interdependence
- Of all Colorado water withdrawn today
  - 12.5% used by the Front Range for Agriculture
  - 6.5% used by the Front Range for M&I
  - 72% of water withdrawn by FRWC is from Colorado Basin
- Front Range generates \$132k for every acre foot of water
- State projects a formidable water supply gap

# Water Balancing Act



Economic impacts of water are not intended to minimize other factors, but must be considered in policy deliberations.

Failing to do so risks Colorado's competitive advantage in a global economy and the resulting well being of Colorado Citizens