Wyoming Workforce Annual Report: 2010

By:

Doug Leonard, Principal Economist

Wyoming Department of Employment, Research & Planning

For:

2010 Governor's Summit on Workforce Solutions

Casper, WY

June 17, 2010

Annual Report: 2010

- Part one of a two-part presentation
- Places the work R&P is doing under ARRA in context
- Demonstrates the dynamic nature of the state's economy

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Annual Report: 2010

- Unemployment through the years
- How has Wyoming traditionally used labor?
- Looking ahead: 2008-2018 employment growth and expected changes

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Unemployment Through the Years

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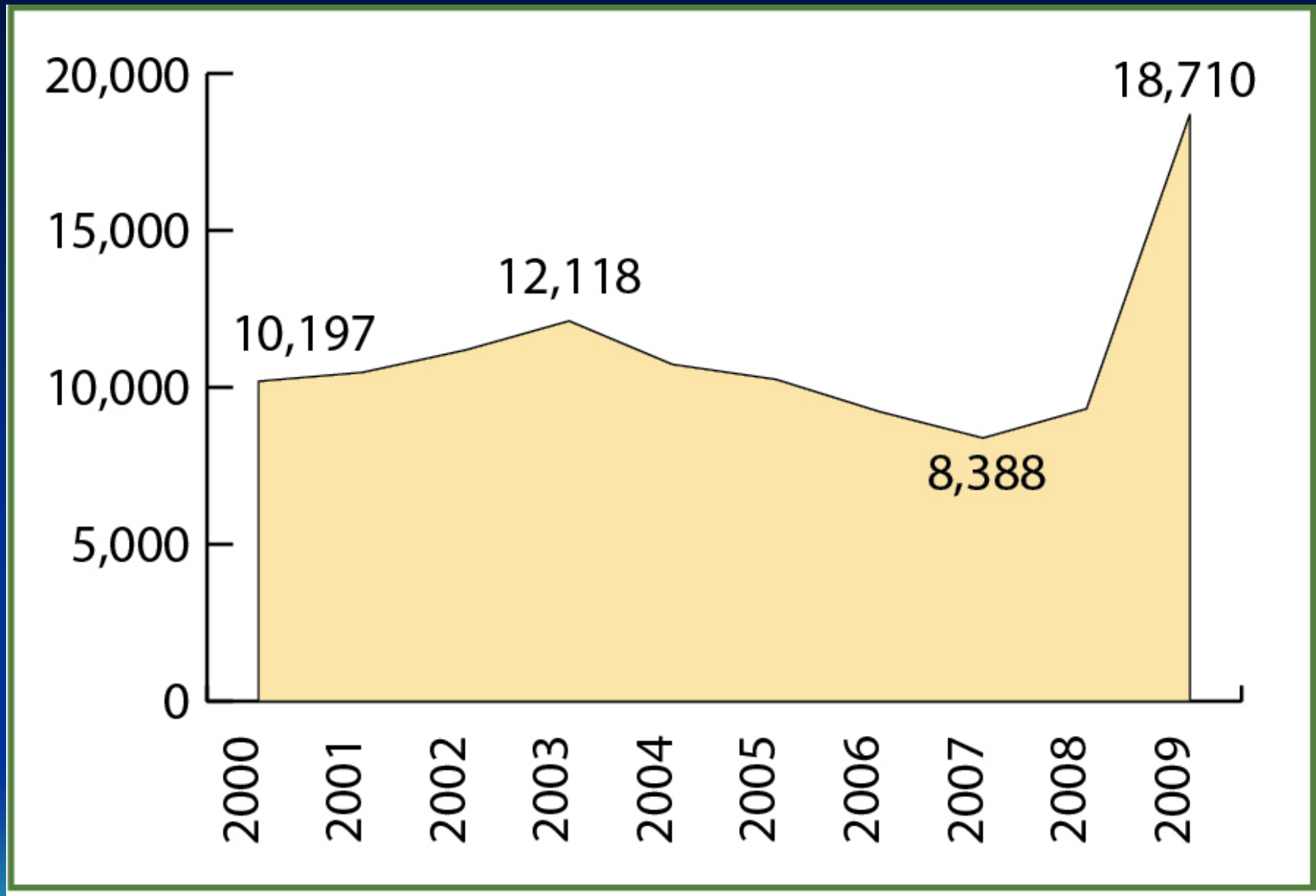

Figure 1: Wyoming Unemployed Population, 2000 to 2009

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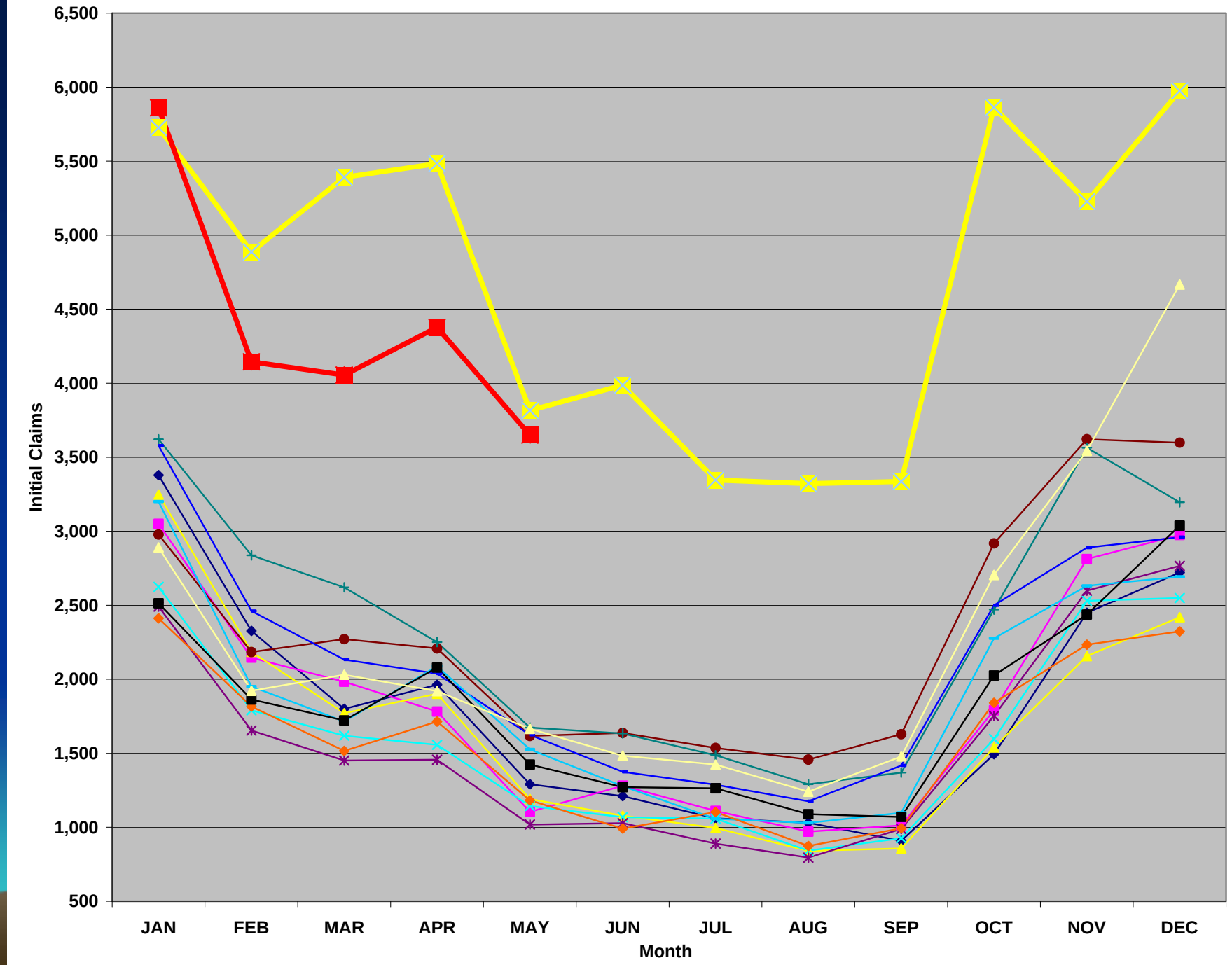
Normalized Initial Unemployment Claims: 1997 - 2010



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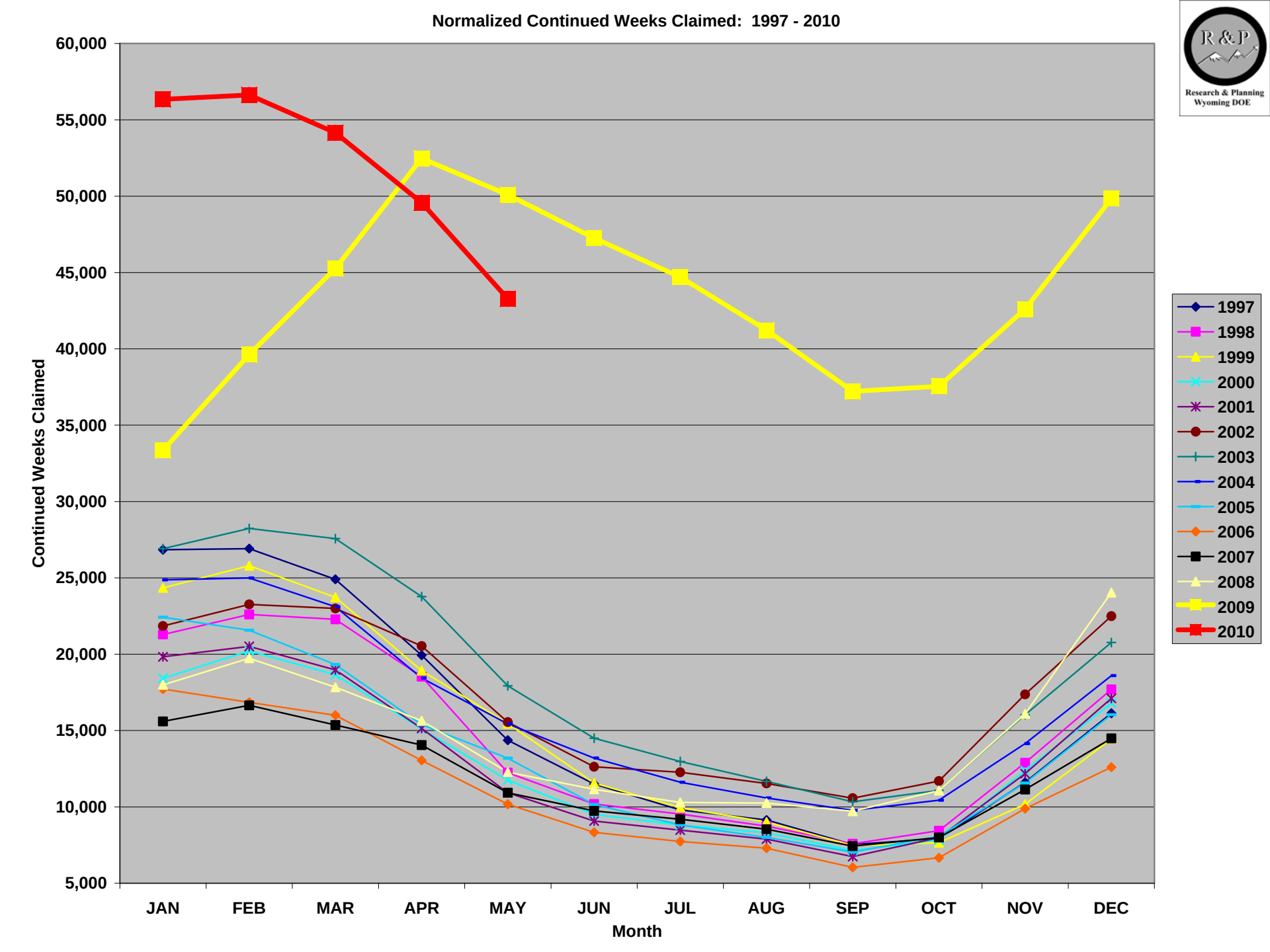
Normalized Continued Weeks Claimed: 1997 - 2010
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Continued Weeks Claimed
60,000
55,000
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Month
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010

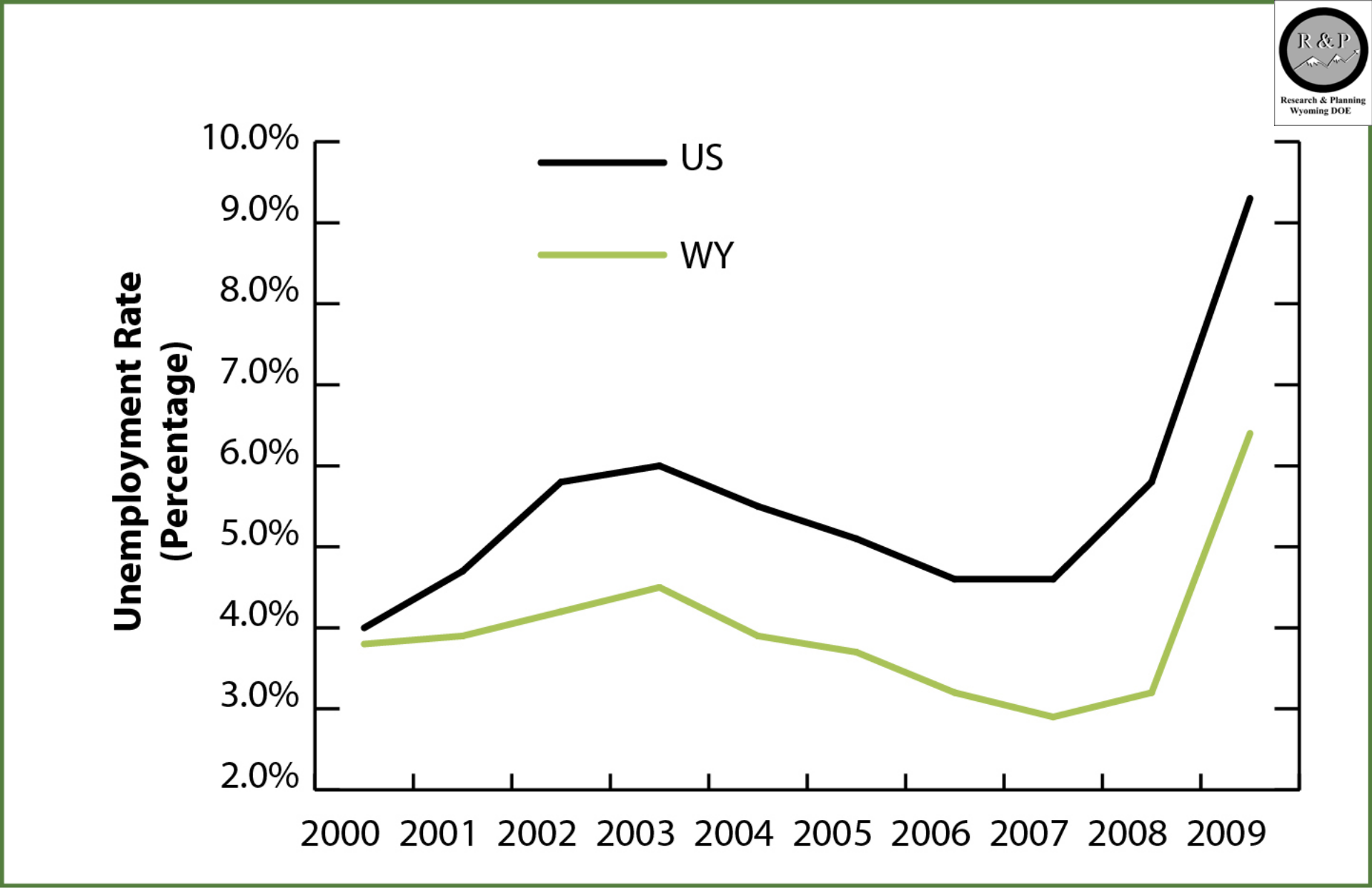


Figure 2: Seasonally Adjusted Unemployment Rate for Wyoming and the United States, 2000 to 2009

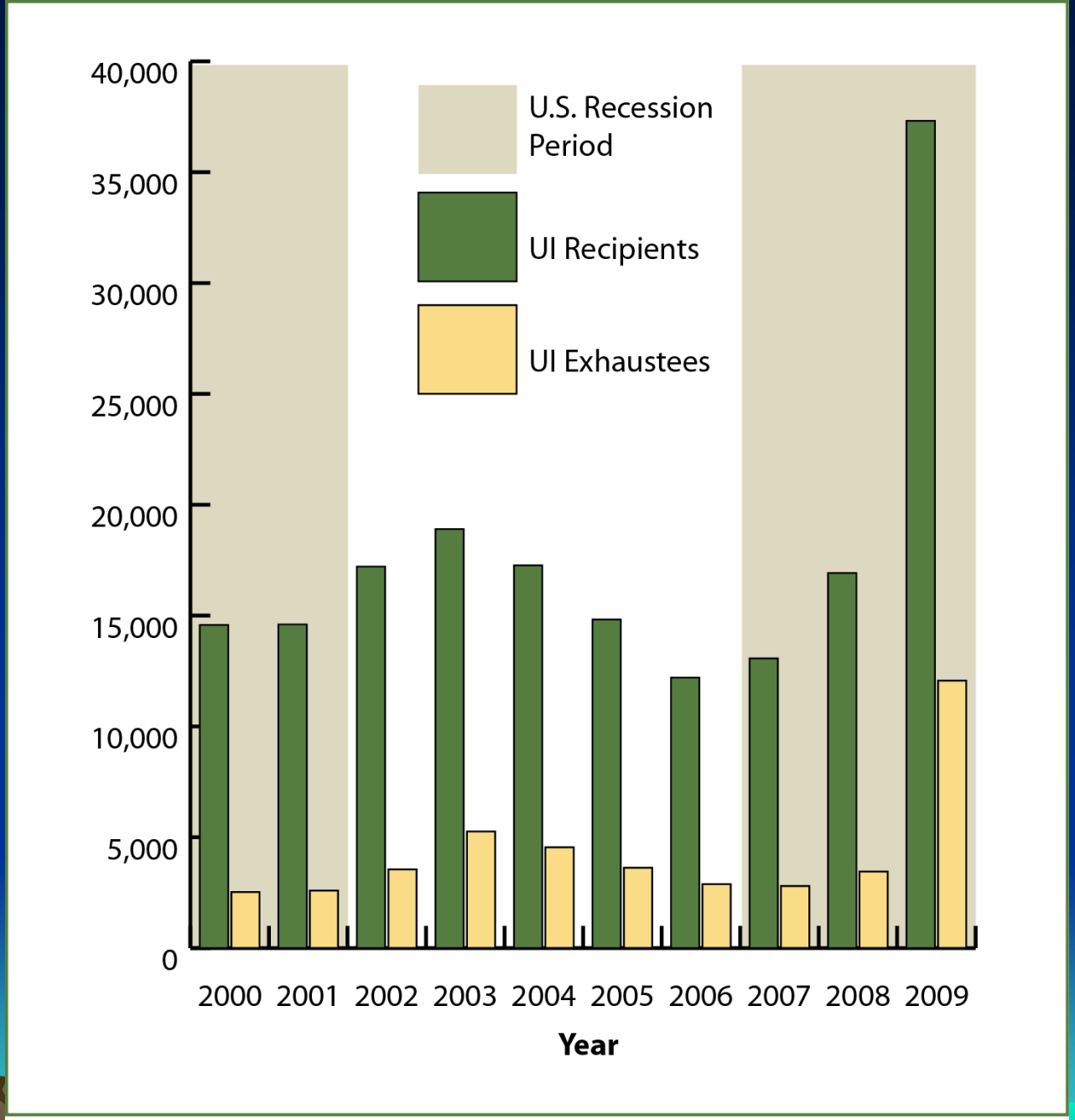


Figure 3: **Unemployment Insurance (UI) Benefit Recipients and Exhaustees in Wyoming, 2000 to 2009**

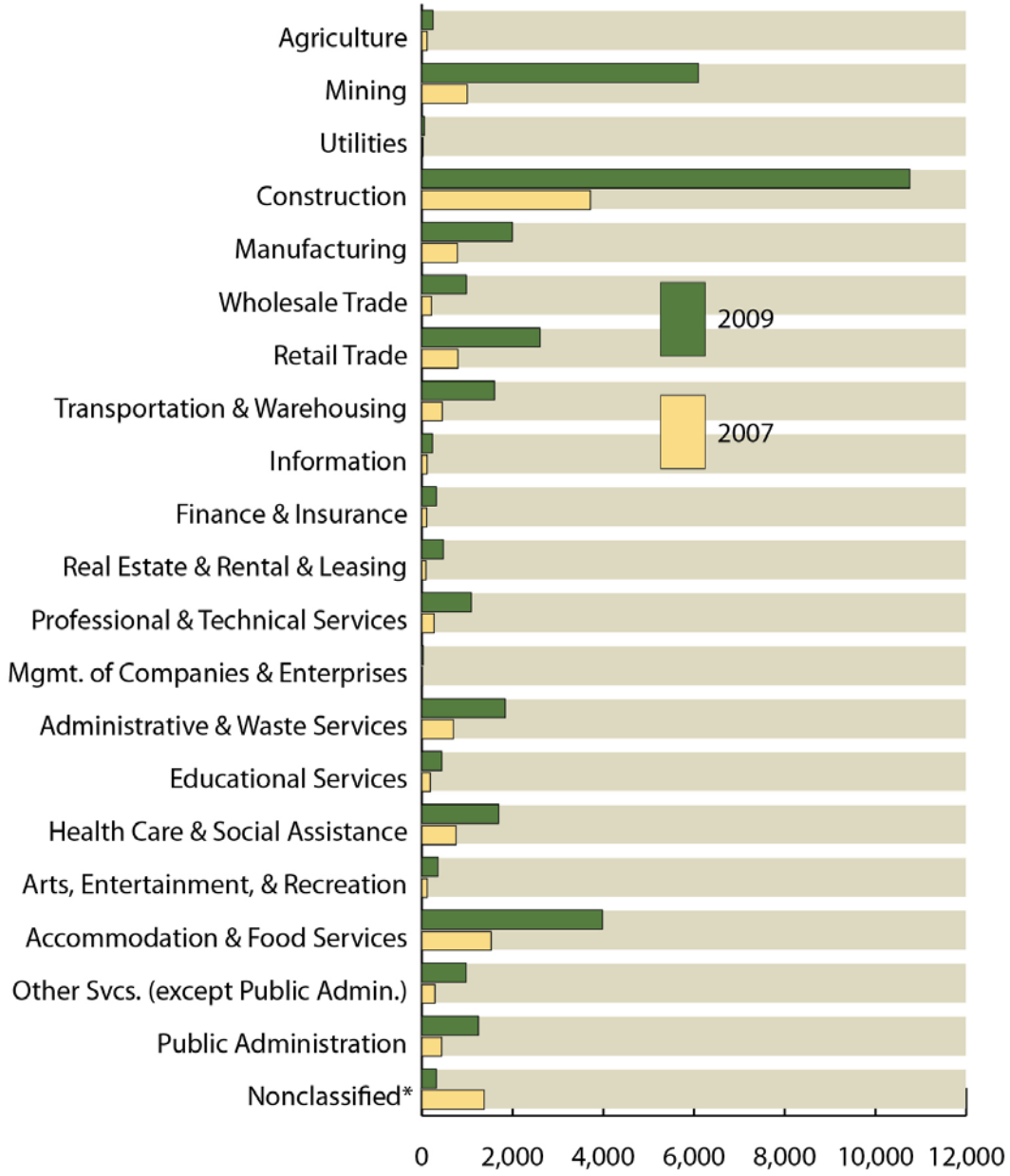
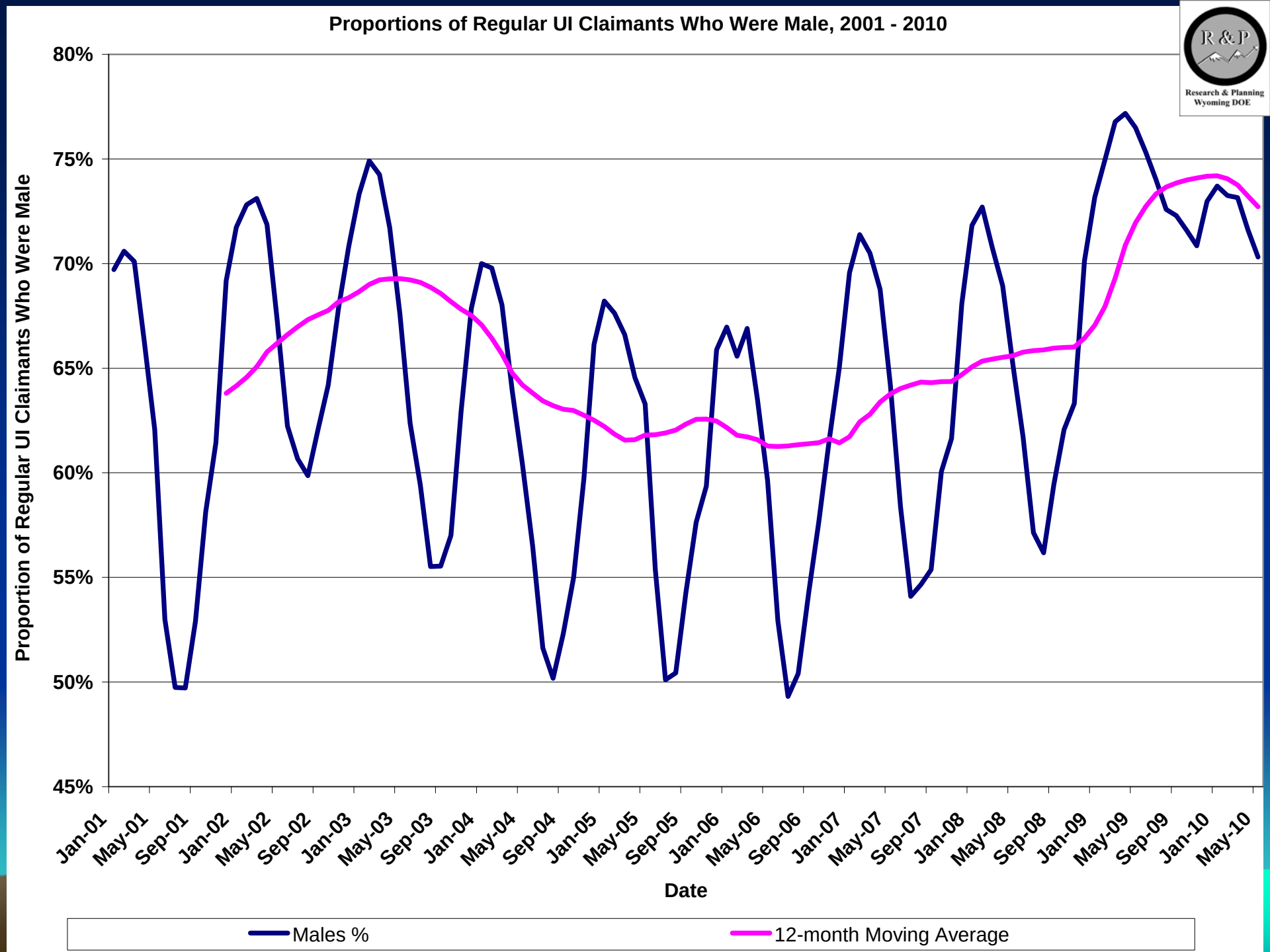


Figure 4: **Unemployment Insurance Recipients in Wyoming by Industry Supersector, 2007 and 2009**


Proportions of Regular UI Claimants Who Were Male, 2001 - 2010
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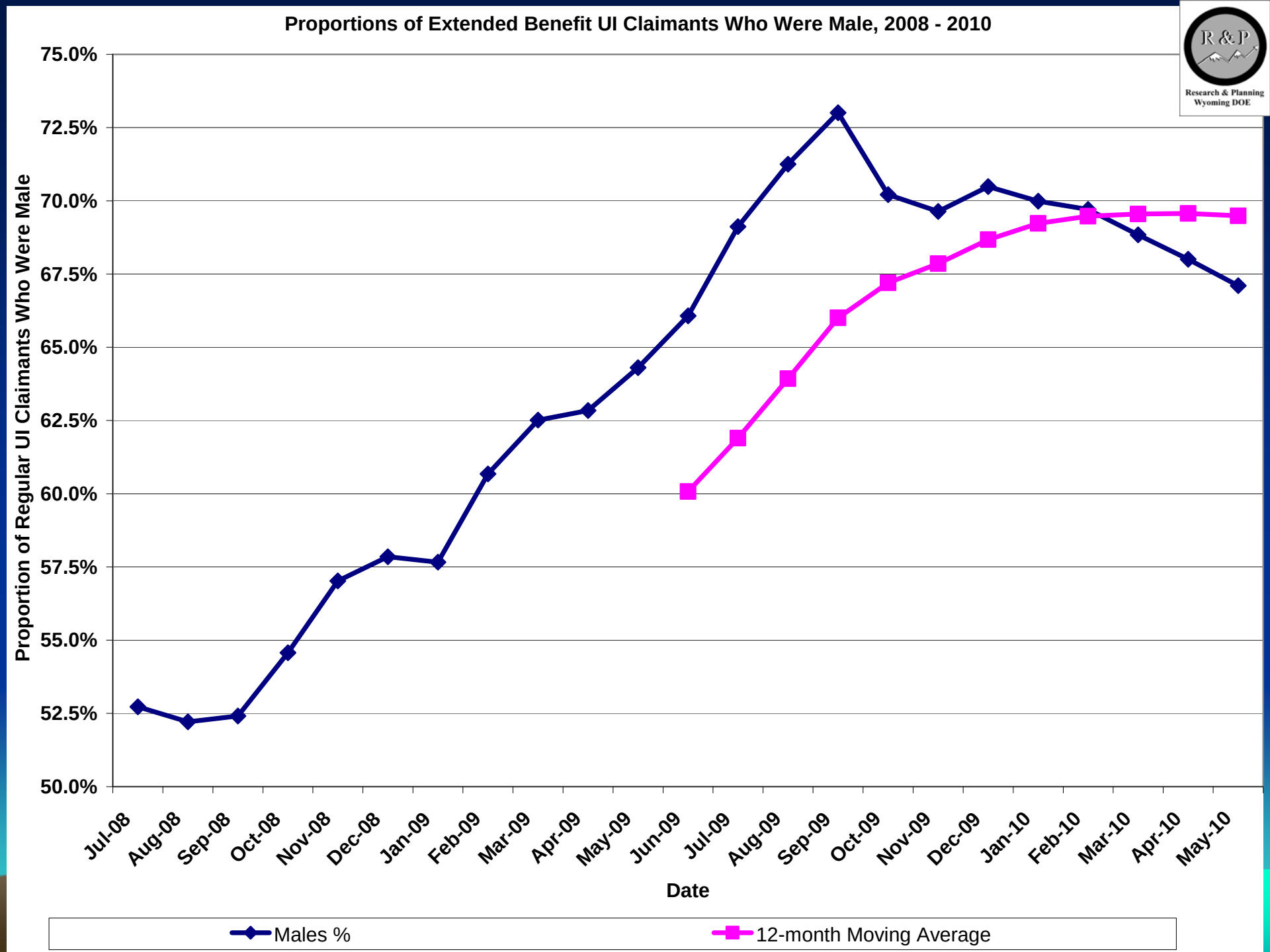
Proportion of Regular UI Claimants Who Were Male
80%
75%
70%
65%
60%
55%
50%
45%
Jan-01
May-01
Sep-01
Jan-02
May-02
Sep-02
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Date
Males %
12-month Moving Average


Proportions of Extended Benefit UI Claimants Who Were Male, 2008 - 2010
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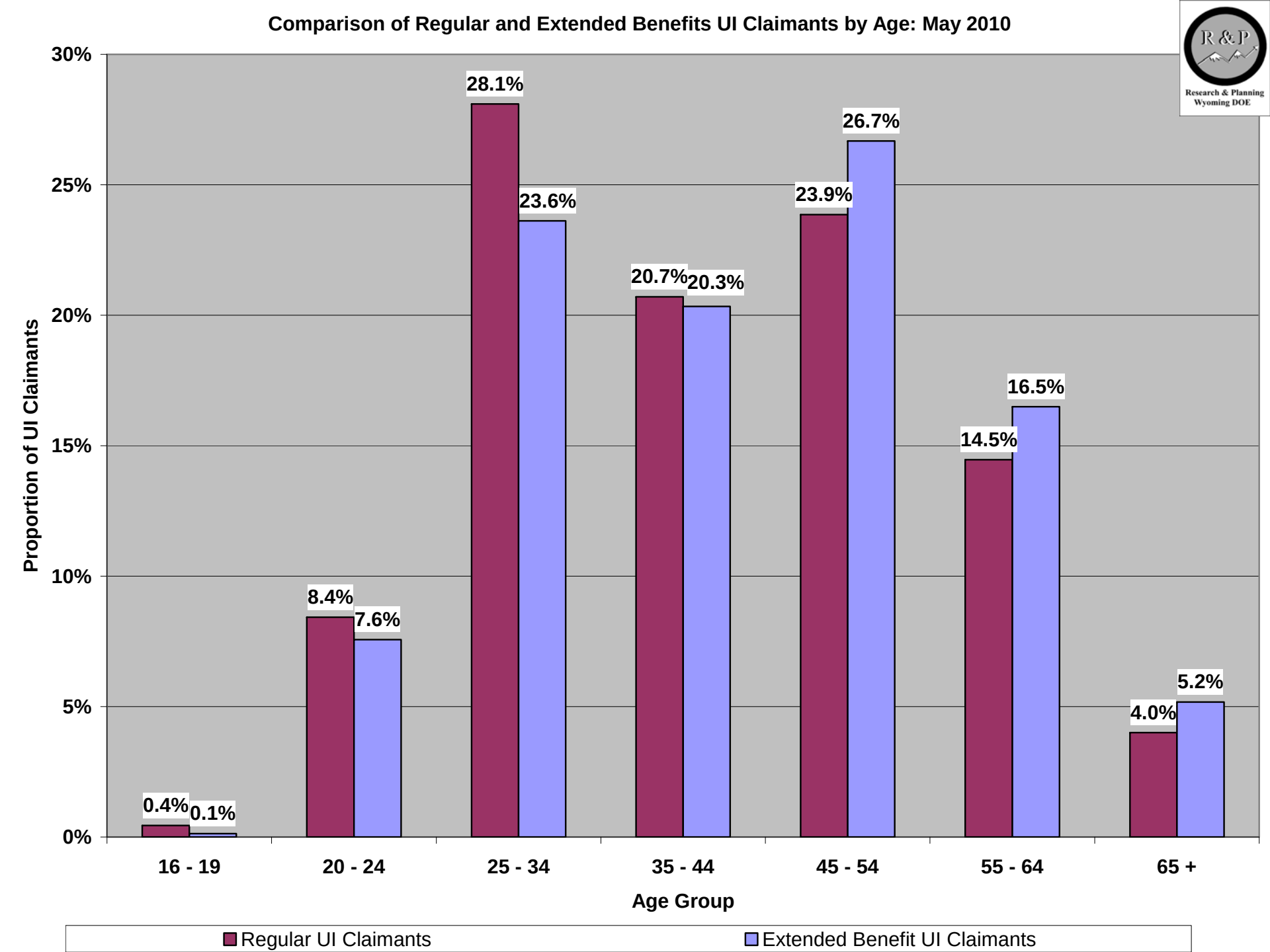
Proportion of Regular UI Claimants Who Were Male
75.0%
72.5%
70.0%
67.5%
65.0%
62.5%
60.0%
57.5%
55.0%
52.5%
50.0%
Jul-08
Aug-08
Sep-08
Oct-08
Nov-08
Dec-08
Jan-09
Feb-09
Mar-09
Apr-09
May-09
Jun-09
Jul-09
Aug-09
Sep-09
Oct-09
Nov-09
Dec-09
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Date
Males %
12-month Moving Average


Comparison of Regular and Extended Benefits UI Claimants by Age: May 2010
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Proportion of UI Claimants
30%
25%
20%
15%
10%
5%
0%
0.4%
0.1%
8.4%
7.6%
28.1%
23.6%
20.7%
20.3%
23.9%
26.7%
14.5%
16.5%
4.0%
5.2%
16 - 19
20 - 24
25 - 34
35 - 44
45 - 54
55 - 64
65 +
Age Group
Regular UI Claimants
Extended Benefit UI Claimants

How Has Wyoming Traditionally Utilized Labor?

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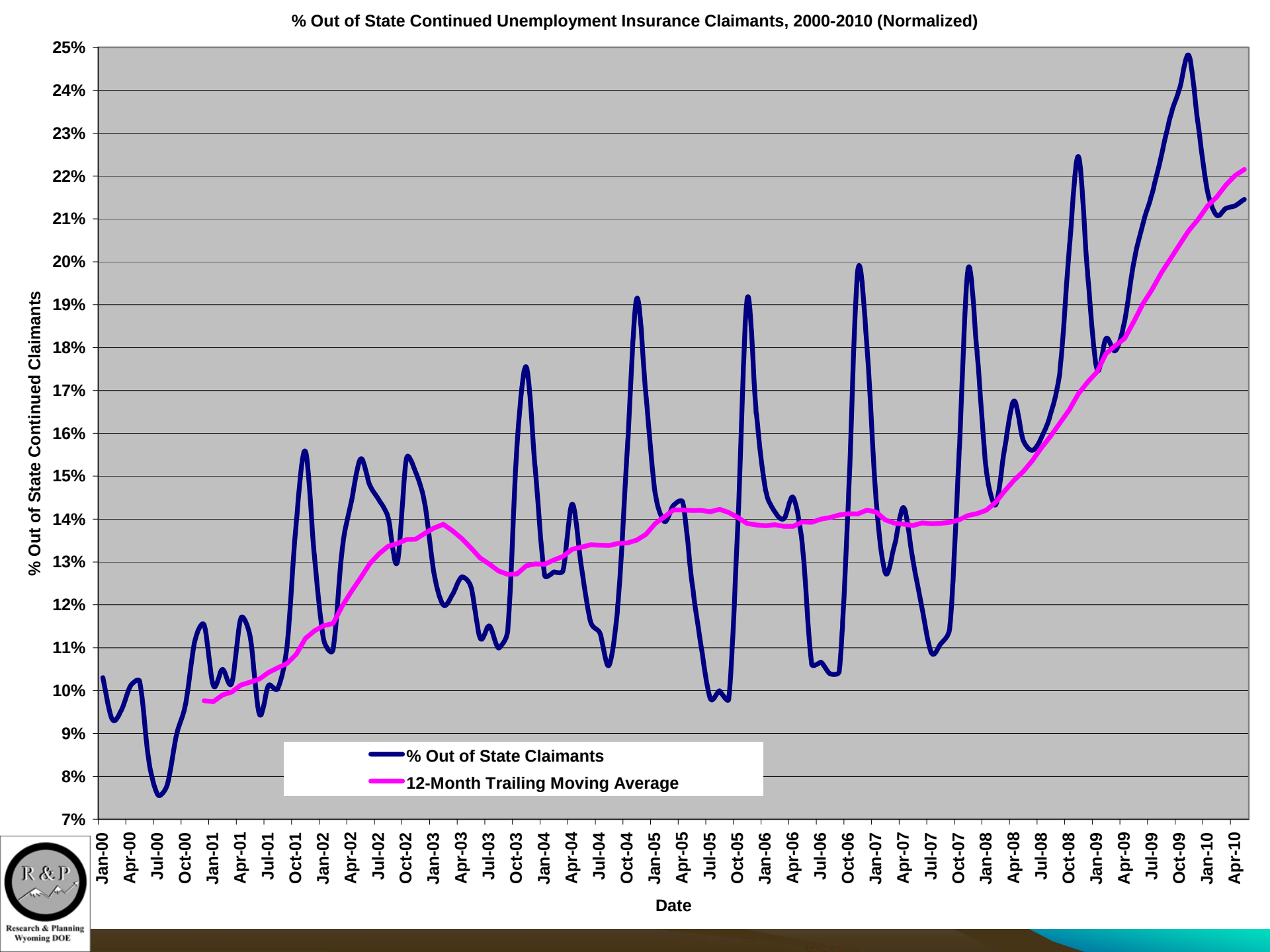
% Out of State Continued Unemployment Insurance Claimants, 2000-2010 (Normalized)
% Out of State Continued Claimants
25%
24%
23%
22%
21%
20%
19%
18%
17%
16%
15%
14%
13%
12%
11%
10%
9%
8%
7%
Jan-00
Apr-00
Jul-00
Oct-00
Jan-01
Apr-01
Jul-01
Oct-01
Jan-02
Apr-02
Jul-02
Oct-02
Jan-03
Apr-03
Jul-03
Oct-03
Jan-04
Apr-04
Jul-04
Oct-04
Jan-05
Apr-05
Jul-05
Oct-05
Jan-06
Apr-06
Jul-06
Oct-06
Jan-07
Apr-07
Jul-07
Oct-07
Jan-08
Apr-08
Jul-08
Oct-08
Jan-09
Apr-09
Jul-09
Oct-09
Jan-10
Apr-10
Date
% Out of State Claimants
12-Month Trailing Moving Average
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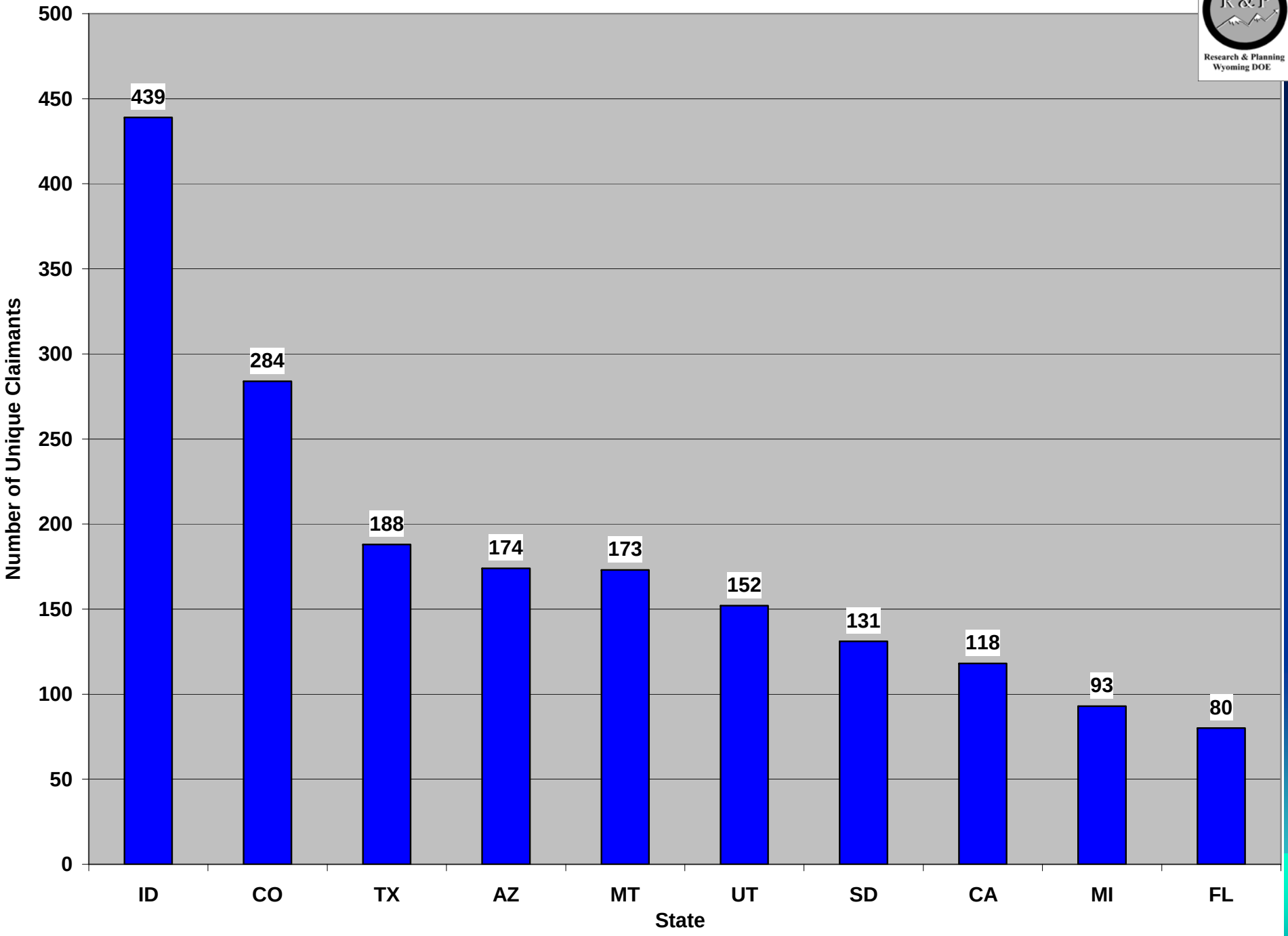
Top Ten States Where Wyoming Regular UI Claimants Were Located, May 2010



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Proportion of Federal Extended Unemployment Benefit Recipients Living Outside Wyoming (Normalized)
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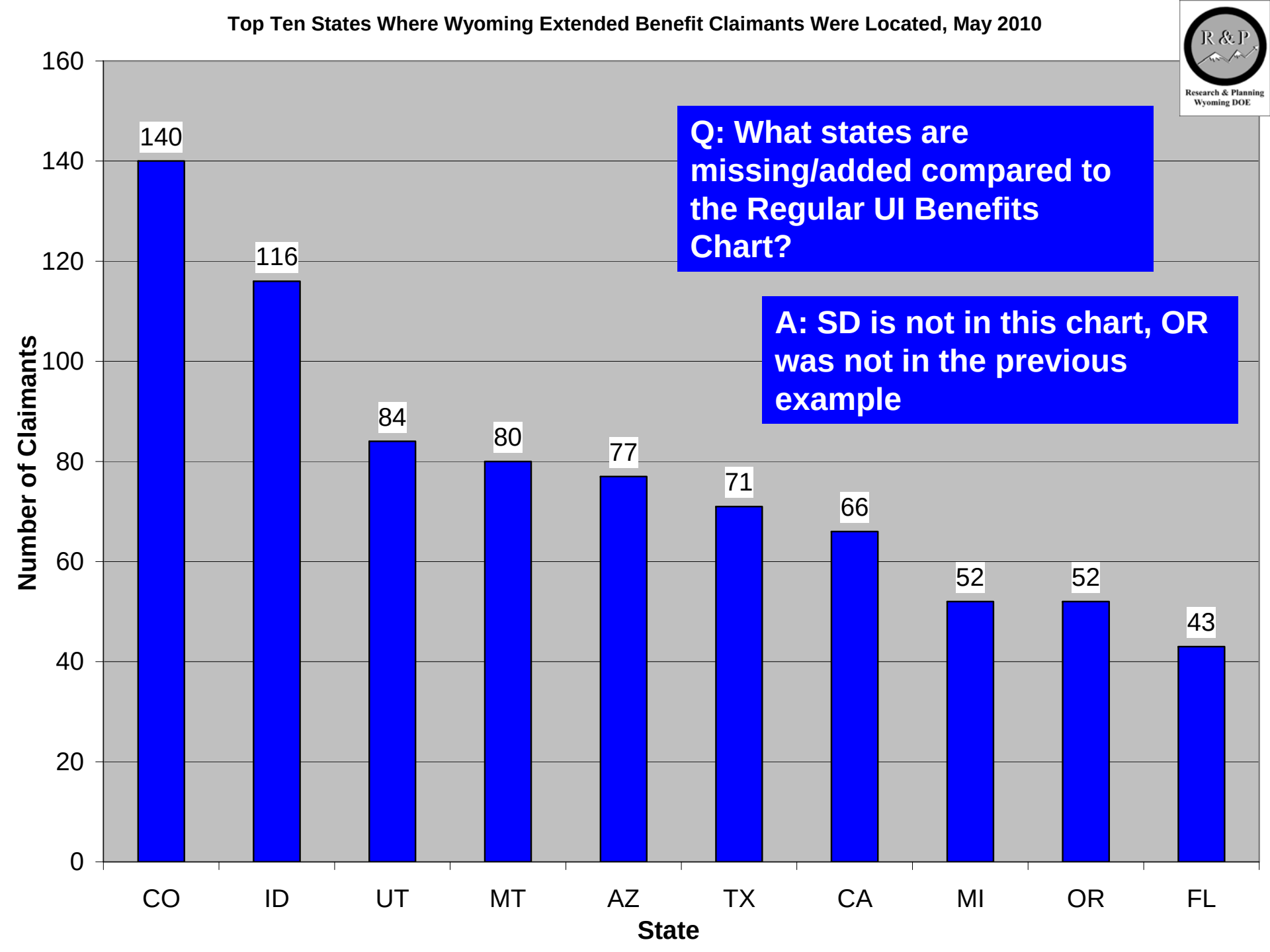
Proportion of Extended Benefit Claimants Living Outside Wyoming
26%
25%
24%
23%
22%
21%
20%
19%
18%
17%
16%
15%
Jul-08
Aug-08
Sep-08
Oct-08
Nov-08
Dec-08
Jan-09
Feb-09
Mar-09
Apr-09
May-09
Jun-09
Jul-09
Aug-09
Sep-09
Oct-09
Nov-09
Dec-09
Jan-10
Feb-10
Mar-10
Apr-10
May-10
Date
% Out of State EB Claimants
% Out of State EB Claimaints (12 mo. Moving Avg.)


Top Ten States Where Wyoming Extended Benefit Claimants Were Located, May 2010
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Q: What states are missing/added compared to the Regular UI Benefits Chart?
A: SD is not in this chart, OR was not in the previous example
Number of Claimants
160
140
120
100
80
60
40
20
0
140
116
84
80
77
71
66
52
52
43
CO
ID
UT
MT
AZ
TX
CA
MI
OR
FL
State

Wyoming Labor Flows

85,639 People Not Working in WY in 2007

Net Flow= -965

86,604 People Not Working in WY in 2009

Prior Year

Base Year

Next Year

295,383 People

294,418 People

2007

2008

2009

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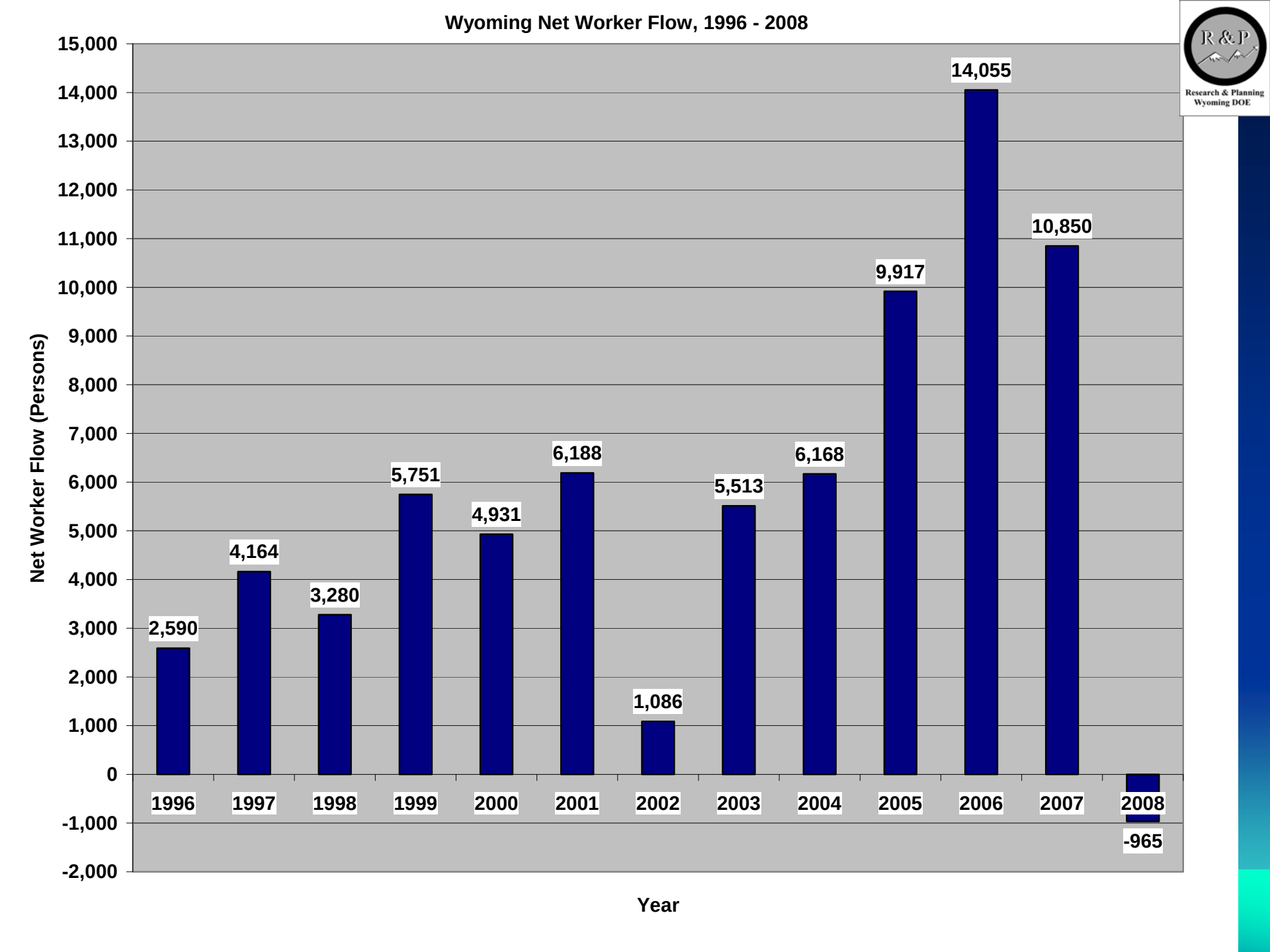
Wyoming Net Worker Flow, 1996 - 2008
Net Worker Flow (Persons)
15,000
14,000
13,000
12,000
11,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
-1,000
-2,000
2,590
4,164
3,280
5,751
4,931
6,188
1,086
5,513
6,168
9,917
14,055
10,850
-965
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Year
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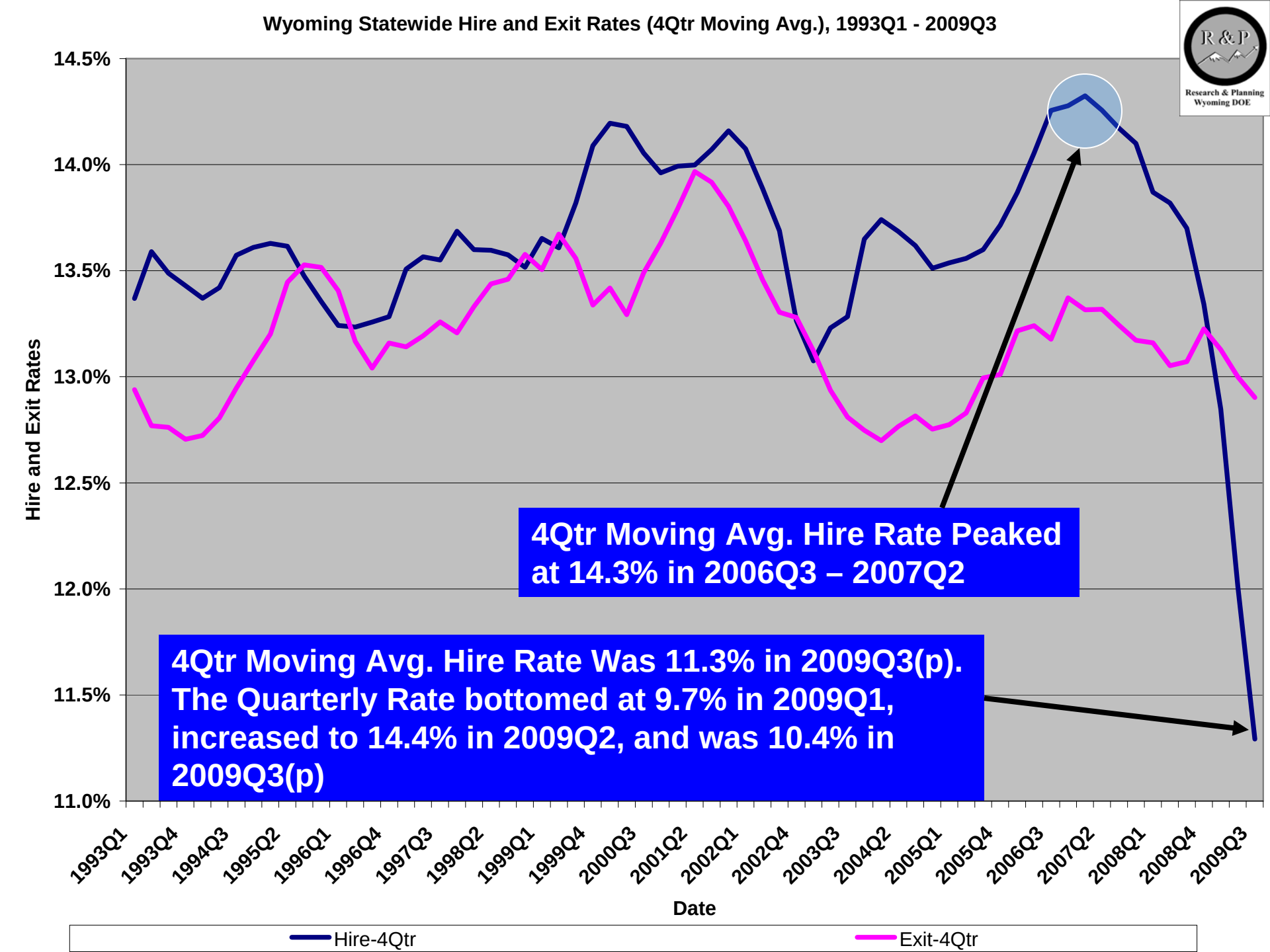
Wyoming Statewide Hire and Exit Rates (4Qtr Moving Avg.), 1993Q1 - 2009Q3
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14.5%
14.0%
13.5%
13.0%
12.5%
12.0%
11.5%
11.0%
Hire and Exit Rates
4Qtr Moving Avg. Hire Rate Peaked at 14.3% in 2006Q3 – 2007Q2
4Qtr Moving Avg. Hire Rate Was 11.3% in 2009Q3(p). The Quarterly Rate bottomed at 9.7% in 2009Q1, increased to 14.4% in 2009Q2, and was 10.4% in 2009Q3(p)
1993Q1
1993Q4
1994Q3
1995Q2
1996Q1
1996Q4
1997Q3
1998Q2
1999Q1
1999Q4
2000Q3
2001Q2
2002Q1
2002Q4
2003Q3
2004Q2
2005Q1
2005Q4
2006Q3
2007Q2
2008Q1
2008Q4
2009Q3
Date
Hire-4Qtr
Exit-4Qtr

Recession Effects

- **Worker Inflow, 2008 (people working in WY during 2008 who did not work in WY during 2007): 85,639**
- **Worker Inflow, 2009 (people working in WY during 2009 who did not work in WY during 2008): 58,961(p)**
- **Change in Worker Inflow: -26,678**
- **Percentage Change: -31.2%**

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Why is labor import/export important?

- Wyoming's business cycles and strong seasonal influences require that local employers be very flexible in their use of labor

2018 Employment: A Look Ahead

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Looking Ahead: Projections

- Base Year: 2008, Projection Year: 2018
- 10-year projections are not designed to forecast business cycles
- Short-term projections (2-year) more suited for analyzing cycles
- Key assumption: current law/policy holds throughout the projection horizon, represents most likely scenario

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STATEWIDE AVERAGE ANNUAL PROJECTED EMPLOYMENT GROWTH 2008 – 2018 = +0.9%

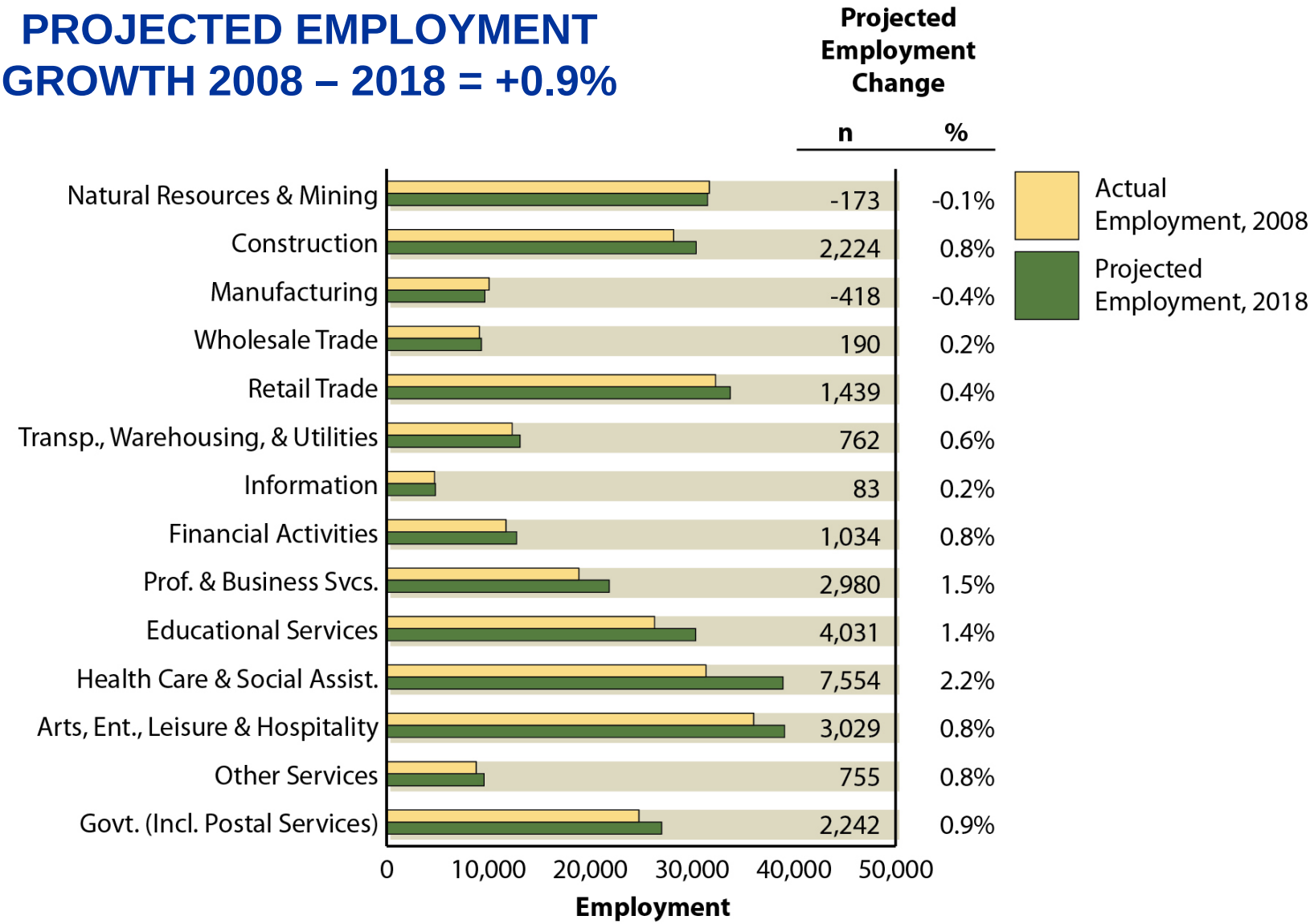

Figure 15: **Wyoming Statewide Employment by Industry, 2008 and 2018 (Projected)**

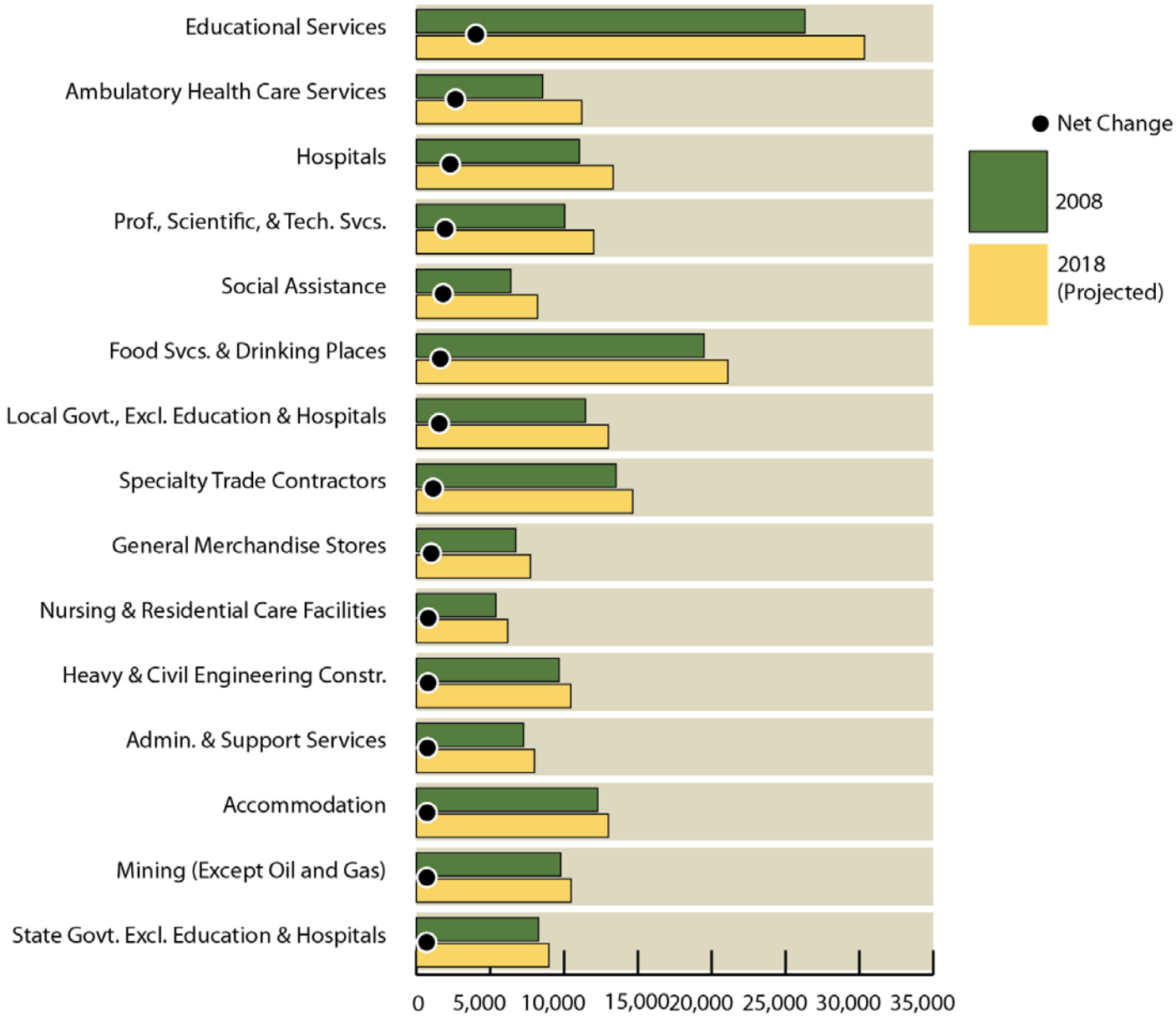

Figure 16: **Fifteen Industries in Wyoming with the Greatest Projected Net Growth by Subsector, 2008 and 2018 (Projected)**

To Summarize:

- “Still waters run deep.”
- Wyoming’s import/export usage of labor supports its industries
- Employment growth from 2008 – 2018 will be slow, but place it in proper context
- Future prospects hinge on many variables, most of which can be only partially controlled at the state, county and local levels

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Future Prospects

- Political and legislative landscapes are rapidly changing
- New emphasis on reduced resource usage, waste and pollution
- Impacts could be far-reaching on energy producing/exporting states like Wyoming
- Purpose of ARRA grants received by R&P
  - Develop baseline data
  - Measure change and impact
  - Assist public & private sector partners

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Greening of the Workplace: Which Jobs are Green?

By:
Patrick Manning, Principal Economist
Wyoming Department of Employment, Research & Planning

For:

2010 Governor's Summit
Casper, WY
June 17, 2010

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ARRA Funding for the WY Dept. Of Employment Research and Planning Division

- American Recovery and Reinvestment Act of 2009 (ARRA)
- “Green” Definition (s)
- Baseline I and II Surveys
- New Hires Surveys
- IMPLAN Modeling
- Text Mining
- Projections based on survey results

American Recovery and Reinvestment Act of 2009 (ARRA)

"The American Recovery and Reinvestment Act of 2009 (ARRA), also known as the national economic stimulus bill, will have a significant impact on Wyoming.

As the nation faces the most difficult economic circumstances in decades, this bill is designed to get the economy going again and to generate much needed jobs."

Governor Dave Freudenthal

From **http://www.wyoming.gov/recovery/Pages/home.aspx**

ARRA Projects

ARRA funding has been allocated to a variety of recipients:

- Agriculture/Nutrition
  - National School Lunch
- Education
  - Federal Work Study
- Labor
  - Green Job Training
- Law Enforcement
  - Internet Crime
- Transportation Infrastructure
  - Riverton Regional Airport

RECOVERY.GOV
TRACK THE MONEY

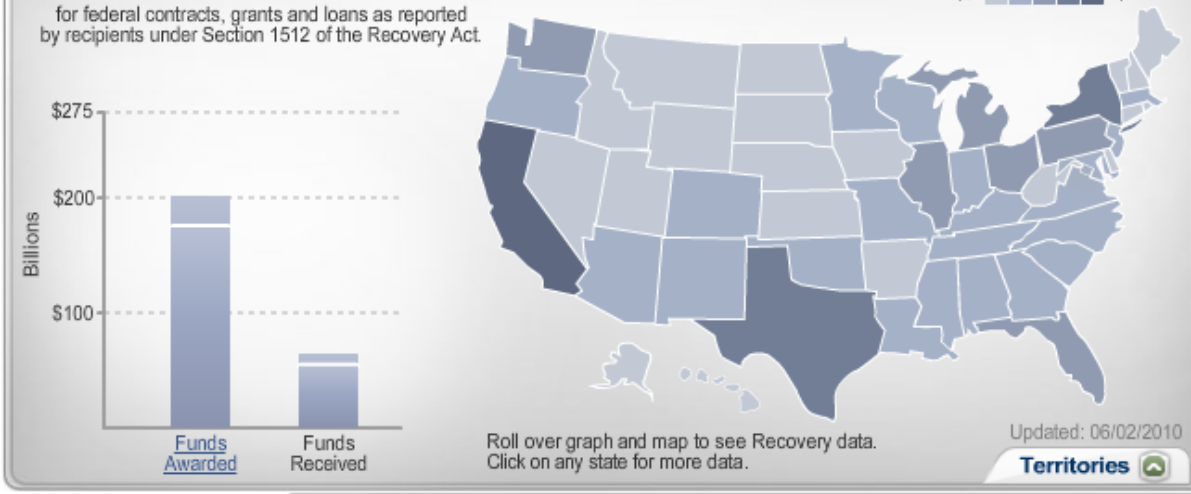
Connect With Us

Recovery.gov is the U.S. government's official website that provides easy access to data related to Recovery Act spending and allows for the reporting of potential fraud, waste, and abuse.

All of Recovery.gov | Search | Go

U.S. TOTAL

for federal contracts, grants and loans as reported by recipients under Section 1512 of the Recovery Act.



Text View of Map Data
Source

View Recovery Information in Your Neighborhood | Zip | Go

UPLOAD YOUR RECOVERY PROJECT PICTURES TO FLICKR

Recovery.gov is now on Flickr. Join our group and upload your photographs of Recovery projects that you see in your neighborhood or state, or anywhere you find them across the country.

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1 2 3 4 5

RECOVERY FUNDED JOBS REPORTED BY RECIPIENTS

January 1 - March 31, 2010

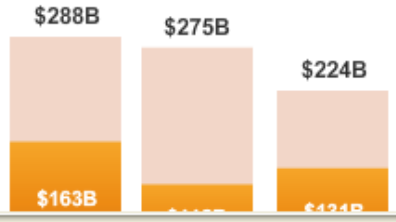
681,825

Job calculations are based on the number of hours worked in a quarter and funded under the Recovery Act.

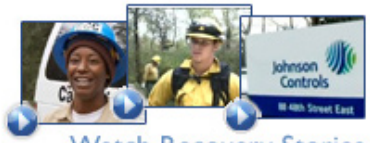
FIND RECOVERY JOBS

OVERVIEW OF FUNDING

The American Recovery and Reinvestment Act of 2009 distributes the $787 billion as follows:



WHAT'S NEW



Watch Recovery Stories

» Non-Reporters and Significant Non-Compliers - Recipients who should have reported and did not.

CHAIRMAN'S CORNER

Earl E. Devaney is chairman of the Recovery Accountability and Transparency Board, which manages this website and oversees spending under the American Recovery and Reinvestment Act of 2009.

May 13, 2010
The Cloud

Internet

Example: ARRA project in Wyoming

- A National Clean Diesel Funding Assistance Program Grant was awarded to fund a retrofit and repower project targeting non-road equipment in Sublette County. The general purpose of the grant is to reduce diesel emissions and improve air quality.
- Recipients of Funding:
  - Wyoming Department of Environmental Quality
  - Koch Construction, Inc.
  - R S Bennett Construction Co Inc
  - Randy R Pitt Construction Inc
  - Terry R Pitt Construction Inc

Defining Green Jobs : Bureau of Labor Statistics (BLS)

There is no widely accepted standard definition of “green jobs”.

“Broadly defined, green jobs are jobs involved in economic activities that help protect or restore the environment or conserve natural resources.”

- Federal Register Vol. 75, No. 50. March 16, 2010.

Defining Green Goods and Services (GGS)

- Renewable Energy
- Energy Efficiency
- Greenhouse Gas Reduction
- Pollution Reduction and Cleanup
- Recycling and Waste Reduction
- Agricultural and Natural Resource Conservation
- Education, Compliance, Public Awareness, and Training

Four Types of Green Goods and Services

- Direct green goods and services
  - Pollution control equipment
- Indirect green goods and services
  - Renewable energy
  - Organic produce
- Specialized inputs
  - Wind turbine blades
- Distribution of green goods
  - Transportation and warehousing services

Defining Green Goods and Services

- Some goods and services may have both a positive and negative impact.
- BLS has not attempted to assess the **net impact**.
- Examples:
  - Wind Power Generation
    - Pro: Low pollutant energy source
    - Con: Undesirable aesthetic impacts
  - Organic Farming
    - Pro: Minimizes pesticide residue on produce
    - Con: Requires more acreage to feed the same amount of people than conventional production.

Measuring Jobs Associated with Producing Green Goods and Services

- The BLS has identified ~4 million establishments involved in producing GGS in 2009Q1
- If all products or services produced by a business are “green”, all employment will be counted toward the green job total
  - Includes production, management, and administrative staff
- For establishments with more than one product, the revenue share will be used as a proxy for green jobs
  - E.g. A company with 100 employees
  - 40% revenue derived from GGS
  - 40 employees allocated to the green job total

Counting Green Jobs: Two Approaches

- Output Approach
  - Identify establishments that produce green goods and services and count the associated jobs.
- Process Approach
  - Identify establishments that use environmentally-friendly production processes and practices and count the associated jobs.

BLS - Issues for Comment

- Set of the 7 economic activities
- Composition of the set of four types of GGS
- Whether the distribution of green goods should be included
- Whether the preparation and sale of organic food by restaurants/food service industries should be included

Baseline I and II Surveys

- Baseline I was designed by the consortium (Iowa, Montana, Nebraska, South Dakota, Utah, & Wyoming)
- Baseline II was designed by WY Research and Planning
  - The intention was to mimic the consortium survey, while avoiding potentially divisive rhetoric
- Number of times the word “green” was used
  - Baseline I = 16
  - Baseline II = 0

Baseline I and II Surveys (cont)

- Baseline I was sampled statewide
  - 517 surveys
- Baseline II was sampled at the industry level
  - 5253 surveys
  - An appropriate sample size for each industry was calculated
    - Utilities, transportation and warehousing - 399 surveys
    - Construction – 467 surveys

Baseline Survey (Questions)

- Firm specific questions
  - How many employees at this location?
  - Which green activities (if any) are the company involved in?
- Employee specific questions
  - How many employees are engaged in activities that have environmental benefits or improve energy efficiency?
- Note: A firm may not produce a green product, but may have employees that are engaged in an activity with environmental benefits
  - e.g. An environmental compliance worker at an oil refinery

Baseline Survey (Questions)

- Employee specific questions
  - The number of employees and current vacancies for positions with environmental benefits
  - For each employee:
    - Job Description
    - Minimum Education/Training Requirements
    - Wages
    - % of time involving environmental benefits or energy efficiency
      - 1% to 49%
      - 50% to 99% (e.g. A plumber that spends 50% of their time installing high efficiency water heaters)
      - 100%

New Hires Survey

- Questionnaire focuses on individual employees
- Wages, number of hours, title, qualifications and skills
- What percentage of the time was this job involved in activities and duties related to increasing energy efficiency, utilizing or developing renewable energy sources, or preserving and/or restoring the environment?
- None of the time / Less than 50% of the time / More than 50% of the time / Don’t know

New Hires Survey (cont.)

- Population: New hires in 2009Q4
- Employees hired in 2009Q4 and still employed in 2010Q1 (by the same employer)
- Had never worked for this employer before
- 4,500 surveys sent to 2,700 employers in the first mailing (approx. 22,000 total employers)
- Project ongoing for at least three quarters

Economic Impact Modeling

- Assess the economic impacts of ARRA funded projects
- Three types of impacts are modeled:
  - Direct Impact
  - Indirect Impact
  - Induced Impact

Economic Impacts from Local Construction Expenditures

Local Construction Costs Total	Total Value Added	Total Output	Direct Jobs Created	Total Jobs Created
$15.1 million	$11.6 million	$21.6 million	84	130

Source: CH2M HILL, 2010.

TABLE 5-28
Top 10 Industries Affected by the Project in Terms of Employment

	Employment	Labor Income	Value Added	Output
Wholesale Trade Businesses	38	2,933,057	5,049,213	7,768,214
Construction of Other New Nonresidential Structures	19	1,141,835	1,210,550	2,946,412
Architectural, Engineering, and Related Services	11	626,397	635,363	1,188,793
Ready-mix Concrete Manufacturing	9	691,941	1,017,819	3,312,431
Hotels and Motels, Including Casino Hotels	5	108,289	197,468	338,198
Investigation and Security Services	4	135,026	157,111	222,034
Food and Beverage Establishments	4	77,795	112,797	226,438
Commercial and Industrial Machinery and Equipment Rental	4	233,100	476,413	1,182,231
Real Estate Businesses	3	70,492	314,273	402,710
Employment Services	2	69,067	74,597	95,008

Economic Impact of O&M Costs

O&M Costs	O&M Costs Per Year	Total Value Added	Total Output	Direct Jobs Created	Total Jobs Created
	$3.681 million	$15.7 million	$21.9 million	15	36

Source: CH2M HILL, 2010.

O&M expenses are estimated to generate $15.7 million in value added, increase total employment in the region by 36 jobs and increase output by $21.9 million.

The top 10 industries affected in terms of employment are shown in **Table 5-34.**

TABLE 5-34
Top 10 Industries Affected by O&M Expenditures

Sector	Description	Total Employment	Total Labor Income	Total Value Added	Total Output
31	Electric power generation, transmission, and distribution	15	3,866,290	14,010,632	18,966,592
413	Food services and drinking places	3	56,275	81,595	163,801
39	Maintenance and repair construction of nonresidential structures	1	90,322	94,181	156,761
360	Real estate establishments	1	29,509	131,559	168,580
319	Wholesale trade businesses	1	74,440	128,147	197,155
394	Offices of physicians, dentists, and other health practitioners	1	76,041	88,225	124,648
329	Retail Stores – General merchandise	1	21,024	31,296	47,551
397	Private hospitals	1	49,553	52,027	91,651
320	Retail Stores – Motor vehicle and parts	1	25,843	32,335	44,067
331	Retail Nonstores – Direct and electronic sales	1	6,595	23,058	32,204

Text Mining Project

- Use text mining software to scour employment databases (e.g. Wyoming at Work database) to identify changing demand for occupations
- May be useful to inform educational institutions and job training services as to the current/future employment needs of Wyoming employers.

Projections Based on Project Results

- The data gathered from the multiple methods employed in this research project will be used to estimate future employment demand for new and emerging industries

Results of Other Studies

- State of Washington 2008 Study
  - Green jobs account for ~1.6% of private sector employment
  - Total Earnings: $2.2 billion annually
- State of Oregon 2009 Study
  - Green jobs account for ~3% of private sector, state and local government employment
  - 51,402 green jobs in 2008 across 5,025 employers
  - Three industries with the most green jobs
    - Construction
    - Wholesale and Retail Trade
    - Administrative and Waste Services

Issues to Consider…

- How will changes in occupations and industry composition affect Wyoming?
- Heavily dependent on the construction, energy and mining sectors
- Excellent locations for wind power generation
- Has been proposed as an excellent location for carbon capture and storage (CCS)