Table of Contents

2 Making Montana the First Best Place
   How Entrepreneurship is Creating High Paying Jobs
   by Greg Gianforte

5 U.S. Economic Outlook
   The U.S. Economy. Is This Finally “Next Year”? 
   by Patrick M. Barkey

6 Montana Economic Outlook
   The West is Back 
   by Patrick M. Barkey

9 Local Area Economic Outlooks 
   by Patrick M. Barkey, Paul E. Polzin, 
   and James T. Sylvester

17 Health Care
   Changes in Health Care Landscape 
   Not Limited to Obamacare
   by Patrick M. Barkey and Paul E. Polzin

19 Travel and Recreation
   The Economics of “We like it here!” 
   by Norma P. Nickerson

22 Montana Agriculture in 2013
   A Strong Financial Year
   by George Haynes

25 Montana's Manufacturing Industry
   Outlook: Improvements Expected to Continue 
   by Todd A. Morgan, Steven W. Hayes, and Colin B. Sorenson

28 Montana's Forest Products Industry
   The Recovery Continues
   by Todd A. Morgan, Steven W. Hayes, Colin B. Sorenson, 
   and Charles E. Keegan III

31 Montana's Housing Market
   Clear Improvement Over 2012
   by Scott Rickard

33 Oil Outlook
   Will the Bakken Take Backseat to the Three Forks Formation? 
   by Terry Johnson

35 Speakers
A lot of people talk about creating high paying jobs. But judging from the outcomes we see across our state, it clearly takes more than talk to actually make it happen. Unfortunately, Montana ranks 49th out of the 50 states in wage scale, besting only Mississippi.

My experience in Bozeman proves we can create lots of high-wage jobs here. And, I believe we can create these jobs, not just in Bozeman, but in every community across the state. The solution is to better understand the potential various industries have to create high-wage jobs and to encourage growth in those industries. We can raise Montana’s national wage rank.

To get started, we need to have an understanding of what jobs are high paying. What kinds of industries pay higher than average? Figure 1 gives us some ideas. Most of the higher paying jobs are found in “knowledge” industries – high-tech, high-tech manufacturing, or professional and technical services. Just looking at these numbers should tell us that moving up from 49th place in the ranking has to involve adding more jobs in these kinds of companies and industries. But how can this be done?

High-Tech: Montana’s Second Gold Rush?

When my wife and I started RightNow Technologies 16 years ago in an extra bedroom of our Bozeman home, many told us we were crazy. In 15 years we grew RightNow to more than 1,100 employees, with an average wage of more than $86,000 per year, which is about 2.5 times the state average. We became one of the state’s largest employers. Although very few of our customers were located in Montana, most of our employees were based here. Consequently, RightNow added about $5 billion of economic value to
the Montana economy just through the wages we paid our employees and the resulting economic ripple effect from those wages. Ownership stakes we gave employees as incentives added hundreds of millions of dollars more.

RightNow was possible for one very specific and game-changing reason; the Internet removes geography as a constraint to where you locate a high-tech business. This simple fact opens up what could be the second Montana Gold Rush if we seize the opportunity.

There is no reason Montana should be the “Last Best Place” in terms of wages. Together, with some concerted

25 more RightNow’s would create:
- 15,000 new high-paying jobs in Montana
- $120 billion+ of economic value created over 15 years (5x multiplier)
- $89 million+ in additional state income tax revenue annually

RightNow's Bozeman Campus
effort, we can make our state the “First Best Place” and significantly improve job opportunities for Montanans.

My wife, Susan, and I have called Montana home for nearly 20 years. We have raised our four kids here. We moved here because of all Montana has to offer: a place with lots of beautiful open spaces and honest, hard-working people, where individuals are judged on their character and not what they own. I have been working on creating jobs in Montana for the past 20 years and have learned a lot about what it takes to start and grow a business here.

I view Montana’s economy as a combustion engine with multiple cylinders. The four primary cylinders are ranching/agriculture, tourism, natural resources, and high-tech/manufacturing. Each cylinder is critical to our economy, but each has different potential for growth and capability for creating high-paying jobs.

Looking to the next 20 years, I have become convinced that the high-tech industry represents the largest single opportunity for Montana to create the most number of high-paying jobs for all Montana communities. One reason high-tech is such an opportunity for Montana is that the Internet does remove geography as a constraint. Previously Montana has been too remote to effectively participate in certain industries. Not so with the high-tech industry. In high-tech businesses, innovation is king, and what better location to innovate than Montana? At RightNow we proved you do not have to be in Silicon Valley to succeed.

Another great attribute of high-tech is that it is not capital-intensive. We started RightNow with less than $50,000 and were able to double the number of employees and revenue every 90 days for 2.5 years at the start—all while being cash-flow positive. Also, because there is little capital equipment, no inventory, and little cost of goods, the vast majority of our expenses (approximately 85 percent) were payroll-related. So money brought into the state stayed here in the form of employee wages. This means virtually anyone can start a high-tech business, because it doesn’t require a lot of money.

Some think that high-tech businesses only employ techies. Yet at RightNow, only about 10 percent of our total expenses were spent on software development (that was where we needed the computer science grads). The remainder of our expenses were spent on marketing, sales, customer service, accounting, and administration. The fact that most of our expenses were spent outside of software development meant that most of the job opportunities we created were for accountants, marketing staff, sales people, and even a few lawyers. High-tech businesses need people of all stripes, and this creates opportunities for all Montanans.

Creating High-Paying Jobs

The heart and soul of RightNow was our people. The Montana work ethic is a huge competitive advantage for high-tech companies in Montana. About 43 percent of RightNow’s Montana employees were MSU and UM graduates. Although we were Montana-based, we competed globally and, consequently, had to pay a national wage that ended up being a very good Montana wage. All high-tech businesses that compete nationally and internationally would need to do the same.

The quality of life Montana offers is unsurpassed. At RightNow we had a website titled www.ILoveItHere.com. This was our employee recruiting website. We featured Montana’s quality of life and brought back many Montanans and attracted many others as well. Montana is a competitive differentiator for attracting and retaining key employees.

RightNow’s success is repeatable. If, together, we create two dozen more RightNows in Montana, we would benefit from about 15,000 incremental high-paying jobs that could be located anywhere in the state. These jobs would add about $120 billion in economic value over 15 years when you include the multiplier effect just from the wages of these firms in our communities.

So what do we need to do to make this reality? Two things. First, we need to encourage and support high-tech entrepreneurs. Secondly, we need to educate our kids effectively for the jobs of the future, including jobs in high-tech. I look forward to working on this opportunity over the next 20 years.

Together, we can make Montana the “First Best Place.”
The Federal Reserve Bank does not make an official forecast of the U.S. economy. But its 12 regional banks around the country do. And for three years running, the median of those 12 forecasts has said the same thing – sluggish growth this year, better growth next year. But each year in this sluggish recovery, the goalposts are moved back and we must again wait for better growth “next year.”

Has “next year” finally arrived in 2014? There are promising signs. Business confidence is solidifying, hiring has been durable, and profits and cash on hand for businesses are plentiful. Households have been steadily shedding debt. The economy had growth above 4 percent in the third quarter of 2013.

But 2014 will also be the year that the Federal Reserve eases back on the throttle of bond buying with printed money. Will those headwinds prevail?

Here are the top 10 things to expect for the national and global economies this year, courtesy of forecasting firm IHS Global Insight:

1. U.S. growth will slowly speed up. Thanks to tax increases and sequestration, 2013 growth was in check. Expect less fiscal headwinds and faster growth.

2. The European recovery will proceed, but at a very sluggish pace. The good news for Europe is that its trajectory will be upward. The bad news is that is isn’t very strong.

3. China’s growth rate will be sustained. Expect the second largest economy to stabilize its growth at around 8 percent this year, instead of continuing to decelerate as once feared.

4. Other emerging markets will perform a little better. Better export markets will help stabilize falling growth rates in once high-flying developing economies.

5. Unemployment rates in the developed world will remain high. Labor markets in Europe especially will remain at very elevated levels, while jobless rates in the U.S. continue to decline.

6. Commodity prices will go nowhere and inflation will remain a low-level threat. As developing counties stabilize, demand for commodities will strengthen slightly, while excess capacity continues to short circuit general inflation fears.

7. The Federal Reserve will start scaling back its stimulus, while other central banks will likely wait or provide more stimulus. The U.S. and the U.K. will be out of the gate first in unwinding stimulus, while Europe may go in the opposite direction.

8. Fiscal headwinds will ease. Federal budget deficit declines will likely end, as pushback to budget austerity in Europe mounts and the U.S. dials back sequestration.

9. The U.S. dollar will strengthen against most currencies. U.S. interest rates will rise slightly and this will be reflected in exchange rates.

10. There will be more upside risks than downside risks facing the global economy. The likelihood of break-out growth in the U.S., the U.K., or Germany more than offsets the negative risks of political events in places like the Middle East and Africa.

Table 1
Actual and Forecasted Values for Key U.S. Economic Variables

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Real GDP (Percent Change)</td>
<td>4.1</td>
<td>2.6</td>
<td>2.0</td>
<td>2.5</td>
<td>2.8</td>
<td>1.9</td>
<td>2.7</td>
<td>3.2</td>
<td>3.4</td>
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<tr>
<td>Federal Funds Rate (Percent)</td>
<td>0.08</td>
<td>0.09</td>
<td>0.09</td>
<td>0.09</td>
<td>0.14</td>
<td>0.11</td>
<td>0.09</td>
<td>0.35</td>
<td>2.15</td>
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<td>Ten-Year Treasury Yield (Percent)</td>
<td>2.71</td>
<td>2.73</td>
<td>2.94</td>
<td>3.00</td>
<td>1.80</td>
<td>2.35</td>
<td>3.02</td>
<td>3.31</td>
<td>3.89</td>
</tr>
<tr>
<td>Oil Prices, Refiner Acquisition Cost (Dollars/Barrel)</td>
<td>109.8</td>
<td>109.3</td>
<td>106.1</td>
<td>104.5</td>
<td>111.8</td>
<td>108.7</td>
<td>104.1</td>
<td>99.2</td>
<td>99.2</td>
</tr>
<tr>
<td>Consumer Price Index (Percent Change Year-to-Year)</td>
<td>1.6</td>
<td>1.2</td>
<td>1.1</td>
<td>1.6</td>
<td>2.1</td>
<td>1.5</td>
<td>1.4</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Housing Starts (Millions)</td>
<td>0.882</td>
<td>1.015</td>
<td>1.056</td>
<td>1.119</td>
<td>0.783</td>
<td>0.931</td>
<td>1.162</td>
<td>1.475</td>
<td>1.625</td>
</tr>
<tr>
<td>Consumer Sentiment (Univ. of Michigan)</td>
<td>81.6</td>
<td>76.9</td>
<td>79.1</td>
<td>81.0</td>
<td>76.5</td>
<td>79.2</td>
<td>82.7</td>
<td>91.5</td>
<td>91.7</td>
</tr>
<tr>
<td>Unemployment Rate (Percent)</td>
<td>7.3</td>
<td>7.1</td>
<td>6.8</td>
<td>6.6</td>
<td>8.1</td>
<td>7.4</td>
<td>6.5</td>
<td>5.9</td>
<td>5.4</td>
</tr>
</tbody>
</table>

* Forecasts as of Jan. 2014.
Source: IHS Global Insight, Inc.
Montana Economic Outlook

The West is Back
Patrick M. Barkey, Director, Bureau of Business and Economic Research

The Bakken oil boom, good times for agriculture, and the Great Recession combined to produce an upside-down pattern of growth across Montana over the past few years. Reversing a decades-long trend, it was the rural, eastern counties that led the state in growth and the more populous western counties that suffered the steepest declines. Not much has happened to significantly slow the vigorous oil-related growth in the east, but the big news in this economic outlook is that declines in the west are over. The drivers of faster western growth are beginning to reappear, and Montana’s metro areas west of the divide are again making a contribution to statewide growth.

Patterns of Growth in 2013
The past 12 months have seen rebounding economic fortunes across the western half of the country as well.

Montana Profile

| Total Population, 2013 | 1,015,165 |
| Percent Change in Population, 2012-2013 | 1.0% |
| Median Age, 2012 | 39.9 |
| Percent 65 or Older, 2012 | 15.2% |
| Percent of Population with Bachelor’s Degree or Higher, 2012 | 19.9% |
| Median Household Income, 2012 | $45,072 |
| Percent of Population without Health Insurance Coverage, 2012 | 17.9% |
| Unemployment Rate, November 2013 | 5.0% |
| Lived in a Different House in 2011 | 16% |

Sources: American Community Survey, U.S. Census Bureau; Research and Analysis Bureau, Montana Department of Labor and Industry.

Figure 1
Growth in Real Wages by State, Western States, FY 2013 vs. FY 2012


Figure 2
Growth in Real Wages, Montana Urbanized Counties, FY 2013 vs. FY 2012 and 2013 Q2 vs. 2012 Q2

Note: Size of bubble is proportional to total wages for each county.
Measured by inflation-corrected total wages paid by employers to payroll employees, six of the 11 states in the Western Census region saw faster economic growth in the 12-month period ending in June 2013 than the rest of the country, led by the strong resurgence of the California economy, the nation’s largest. As shown in Figure 1, Montana’s growth of 2.1 percent for the fiscal year 2013 outpaced the non-western portion of the country by half a percentage point.

The various performances of the individual western states can be traced to developments specific to each, but two broad themes apply to all: the proximity to faster growing Asia and the recovery in residential housing markets. Those two themes help explain the better performance of the western portions of Montana as well. The bigger story in Montana, however, continues to be the roaring oil development on our eastern border.

Measured once again by growth in real wages, the state’s two fastest growing urban areas continue to be Gallatin (Bozeman) and Yellowstone (Billings) counties (Figure 2), but the reasons for their superior performance are markedly different. As we detail in the local outlook pieces in this booklet, much of the froth in the Yellowstone County’s economy of late is directly connected to Bakken-related activities, while Bozeman’s growth stems more from its earlier housing recovery and strength in both university and tourism-related spending.

But the movement of the dots on the figure for Missoula and Flathead into the “expanding” quadrant of the graph – showing growth over the past year, ending with growth in the final quarter – does mark a new development for the state’s geographic pattern of growth. Continuing to eclipse them all, however, is the rapid growth of the non-urbanized counties that comprise the balance of the state, dominated by growth in the oil patch counties. Their growth of almost $180 million in inflation-corrected wages accounted for more than half of Montana’s overall wage growth.

Montana’s Economy Stuck to the Script

The data thus far indicate that in 2013 the state economy largely performed as we forecasted it would last year (Figure 3). Construction had a very good year, although its gains were not uniformly spread throughout the state. Health care saw widespread growth, while public administration continued its slow declines across most
parts of the state. In the 19 major private sector industry groupings, 16 registered positive real wage growth in the 12-month period ending in June last year, with sectors such as mining registering double-digit rates of growth.

That performance was supported by a national and global economic recovery that presented Montana businesses with a few surprises as well. While the federal government shutdown in October captured a lot of headlines, its impact on most parts of the state was minimal. More important was the orderly nature of the expected retreat of agricultural, energy, and commodity prices (Figure 6).

Copper prices did soften significantly during the summer as Chinese demand wavered, while on the agricultural side barley prices saw a significant decline. But the declines were largely contained as fears of a rapid decline in developing Asian economies proved to be overblown.

Another closely watched part of the economy has been construction, which we forecast to pick up significantly with the recovery in housing. That forecast did largely pan out, but much of the increase was energy-related infrastructure projects, most notably in Billings. Residential construction has been slower out of the gate in most markets, with the exception of Gallatin County and most recently, Flathead County. The increase in 30-year fixed rate mortgages that occurred during the early summer was an unanticipated obstacle.

Factors Shaping the Outlook

Growth in Montana’s inflation-corrected nonfarm earnings was pushed up in 2012 by two one-time events – the sale of RightNow Technologies to Oracle and the change in the federal tax treatment of capital gains effective in 2013. The latter pushed taxpayers to realize gains before the end of 2012, to lower their tax bills. Both of these events pumped up growth in 2012 at the expense of growth in 2013.

We are continuing to project a gradual acceleration in the state economy, which is the net effect of a number of factors that shape the forecast, including:

- the continued maturation of energy-related activities along the eastern border, resulting in very modest declines in rig counts and new wells as companies strive to increase efficiencies and contain costs,
- continued improvement in home building, with associated impacts on banking, services, and building supplies industries,
- softness in government growth, particularly the federal government’s military and non-military activities in line, with expected fiscal pressures on Congress to reduce so-called discretionary spending, and
- the stabilization of global growth, particularly in developing Asia, which will contain any further erosion in commodity prices important to Montana producers.

The national economy could yet surprise us with a year of breakout growth in 2014, as some of the more courageous forecasters are beginning to call for. Faster growth in consumer spending nationally could give an extra boost to Montana’s nonresident travel industry in particular. Our expectation, however, is that 2014 will be another year where Montana’s economy outperform the nation.
The economies of Butte and Anaconda have long been intertwined. Copper used to be the connecting link; it was mined in Silver Bow County and refined in Deer Lodge County. But now the connection is workers. Each day about 700 people travel from Deer Lodge County to a job in Silver Bow County. In addition, there is the reverse flow of about 450 workers who live in the Silver Bow County but work in Deer Lodge County.

The Silver Bow-Deer Lodge economy also provides jobs to others living in southwestern Montana. Every day, almost 400 commute from Jefferson County, roughly 350 travel from Beaverhead County, around 300 come from Powell County, and about 160 from Madison County.

The largest basic industry is mining, accounting for roughly 28 percent of the local economic base. State government is second at 20 percent; it includes Montana Tech in Butte and the state hospital at Warm Springs. The utility industry represents about 20 percent of the economic base and mostly consists of the headquarters of Northwestern Energy.

The state government and utility industries are traditionally relatively stable and help to buffer volatility in other basic industries. Even though mining employment has remained stable since the mid-2000s, worker earnings plummeted in 2009, but have now regained their pre-recession levels. This may reflect the bonuses paid (or not paid) depending on world copper prices.

Manufacturing continues strong. Seacast is expanding its partnership with GE Aviation to build tubes, ducts, and other small fabricated metal parts for jet engines. REC Silicon operates on the ever-volatile and uncertain market where political considerations are always part of the equation.

Future growth rates in the Silver Bow-Deer Lodge economy depend crucially on the price of copper and other commodities. At the moment, the current trends are not favorable. In addition, the Golden Sunlight Mine in neighboring Jefferson County has been reducing its workforce and the long-term outlook is uncertain, but state regulators have approved an expansion plan should prices improve. These scenarios suggest that our forecast of roughly 2 percent growth from 2014 to 2017 may be optimistic.
Cascade County
Stability, Stability, Stability
Paul E. Polzin, Director Emeritus, Bureau of Business and Economic Research

Great Falls continues as the dominant urban area in north central Montana. Local health care providers and other business people serve clients from Choteau and Shelby in the west to Glasgow and Jordan in the east. This broad market area, combined with the stability of the military, has meant that the Cascade County economy escaped most of the ups and downs associated with the Great Recession. On the other hand, this mix of basic industries has not led to robust economic growth. Most figures for 2012 show almost no increase, while the 2013 data report an increase of about 2.0 percent. This is the slowest two-year growth among Montana’s urban areas.

Using nonfarm earnings as the measuring stick, federal military accounts for slightly less than one-half of the economic base. Malmstrom AFB accounts for most of this figure, but also included are the Montana Air National Guard and civilian contractors for the Department of Defense. This method probably overstates the true importance of Malmstrom because many service people patronize the base exchange and other on-base establishments, which have few connections to the local economy. Nevertheless, federal military continues as the largest single basic industry, and any cutbacks or closures would significantly impact the local economy.

Cascade County’s economic base is diversifying. The aircraft maintenance and repair company located on Gore Hill continues to expand its operation. A new manufacturing company serving the oil sands development in northern Alberta is currently hiring workers and should begin production shortly. Other businesses have been recruited to Great Falls but have not yet shown up in the data. On the negative side, there was a sizable decline in construction between 2012 and 2013.

The Cascade County economy is projected to grow from 2.0 percent to roughly 2.1 to 2.4 percent per year between 2014 and 2017.

Sources: American Community Survey, U.S. Census Bureau; Research and Analysis Bureau, Montana Department of Labor and Industry.
Flathead County
Climbing Out of the Recession Hole

Paul E. Polzin, Director Emeritus, Bureau of Business and Economic Research

The Great Recession hit the Flathead economy hard. But, unlike some other parts of western Montana, the Flathead economy recovered quickly and is now growing moderately. Beginning in 2008, the Flathead economy was pummeled by:

- a one-third decline in construction activity;
- significant layoffs in the wood products industry;
- a sizable drop of nonresident visitors;
- the mothballing of the aluminum refinery; and,
- shift reductions and layoffs at the major high-tech manufacturing plant.

After two years of declines, including an almost 10 percent decrease in 2009, the Flathead economy posted 1 percent to 3 percent growth each year from 2010 to 2013.

To a large extent, the recent growth was due to reversals of the recession-caused declines. For example:

- Construction has begun to inch upward, but has a long way to go before regaining pre-recession levels.
- The rekindling of home building nationwide is slowly bringing the wood products industry back to life.
- The improved U.S. economy means that people are once again traveling.
- Better worldwide economic trends have improved conditions in high-tech manufacturing.

The emergence of Kalispell as a regional trade and service center has added an additional dimension to the economic base of Flathead County. The additional retail opportunities along North 93 have not only attracted nonresident shoppers but also mean that locals do not need to travel to Missoula or Spokane to find diversity. The most recent data suggest that the health care industry now attracts more dollars than it sends to other medical centers, such as Missoula and Great Falls. There is some evidence that more Canadians are crossing the border for elective procedures.

The Flathead outlook incorporates continued improvement in home construction (although not a return to pre-recession levels), a gradual increase in wood products as workers return and hours increase, and continuation of worldwide market trends for high-tech products. Nonresident travel will also respond to the growing U.S. economy. Nonfarm labor income is projected to increase about 2.9 percent in 2014 and then continue to grow at an average of slightly less than 3 percent per year from 2015 to 2017.

Figure 1
Earnings in Basic Industries, Flathead County, 2011-2013, Percent of Total

<table>
<thead>
<tr>
<th>Industry Group</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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<tr>
<td>Trade Center, Retail</td>
<td>6%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Ag. and Other</td>
<td>5%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Trade Center Services</td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>Transportation</td>
<td>17%</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Health Care</td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>Other Manufacturing</td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>Wood Products</td>
<td>17%</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Federal Government</td>
<td>17%</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Nonresident Travel</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
</tbody>
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Figure 2
Actual and Projected Change in Nonfarm Earnings, Flathead County, 2010-2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Projected</th>
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<tbody>
<tr>
<td>2010</td>
<td>-4%</td>
<td>-3%</td>
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<tr>
<td>2011</td>
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<td>-2%</td>
</tr>
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<td>2012</td>
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<td>2013</td>
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<tr>
<td>2014</td>
<td>1%</td>
<td>2%</td>
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<tr>
<td>2015</td>
<td>2.5%</td>
<td>2.6%</td>
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<tr>
<td>2016</td>
<td>2.6%</td>
<td>2.8%</td>
</tr>
<tr>
<td>2017</td>
<td>2.8%</td>
<td>3%</td>
</tr>
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Sources: Bureau of Business and Economic Research, University of Montana; Bureau of Economic Analysis, U.S. Department of Commerce.
Gallatin County Data Muddied by RightNow Technologies Sale

Paul E. Polzin, Director Emeritus, Bureau of Business and Economic Research

The economic growth figures for Gallatin County received a one-time boost due to the sales of RightNow Technologies to Oracle. Because of the way in which the U.S. Bureau of Labor Statistics counts things, the stock options of RightNow employees were included in reported wages during 2011 and 2012. The negative growth in 2013 is simply the arithmetic consequence of the large one-time increases in earlier years. Even after correcting for this event, Gallatin County is tied with Flathead County and trails only Bakken-fueled Yellowstone County in terms of overall economic growth since the recession trough in 2009.

Gallatin County’s construction industry was particularly hard hit and has recently only shown a hint of recovery. The recent growth has been due to stability in the traditional basic industries such as Montana State University, nonresident travel, and high-tech manufacturing combined with robust expansion in Bozeman’s role as a regional trade and service center.

Montana State University is the largest basic industry in Gallatin County, accounting for about 32 percent of total basic earnings. Growth in contract research rather than state funding has maintained the contribution of MSU despite wage freezes and other recession-related impacts on government. Bozeman’s high-tech sector includes firms in manufacturing and professional services (software), and accounts for another 32 percent of basic earnings.

The forecasts call for increases to be 4 percent or greater between 2014 and 2017. Gallatin County is projected to be the fastest growing urban area in the state. The end of the wage freeze at Montana State University, continued moderate recovery in construction, increases in nonresident travel as Americans once again take vacations, and strength in the high-tech industries will fuel the economic growth.

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Gallatin County Profile

<table>
<thead>
<tr>
<th>Category</th>
<th>2013</th>
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<tbody>
<tr>
<td>Total Population</td>
<td>94,700</td>
</tr>
<tr>
<td>Percent Change in Population, 2012-2013</td>
<td>2.3%</td>
</tr>
<tr>
<td>Median Age, 2012</td>
<td>32.8</td>
</tr>
<tr>
<td>Percent 65 or Older, 2012</td>
<td>9.9%</td>
</tr>
<tr>
<td>Percent of Population with Bachelor’s Degree or Higher, 2012</td>
<td>31.4%</td>
</tr>
<tr>
<td>Median Household Income, 2012</td>
<td>$51,911</td>
</tr>
<tr>
<td>Percent of Population without Health Insurance Coverage, 2012</td>
<td>13.2%</td>
</tr>
<tr>
<td>Unemployment Rate, November 2013</td>
<td>4.7%</td>
</tr>
<tr>
<td>Lived in a Different House in 2011</td>
<td>24.6%</td>
</tr>
</tbody>
</table>

Sources: American Community Survey, U.S. Census Bureau; Research and Analysis Bureau, Montana Department of Labor and Industry.

---

**Figure 1**

Earnings in Basic Industries, Gallatin County, 2011-2013, Percent of Total

- Mining and Transportation, 2%
- Ag. and Related, 4%
- Federal Government
- Nonresident Travel
- Selected Manufacturing
- Trade Ctr., Retail
- Trade Ctr., Prof. Services
- MSU and State Gov’t.

---

**Figure 2**

Actual and Projected Change in Nonfarm Earnings, Gallatin County, 2010-2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>'10</td>
<td>0.3</td>
<td>-1.5</td>
</tr>
<tr>
<td>'11</td>
<td>4.1</td>
<td>4.2</td>
</tr>
<tr>
<td>'12</td>
<td>6.2</td>
<td>3.7</td>
</tr>
<tr>
<td>'13</td>
<td>-1.5</td>
<td>4.0</td>
</tr>
<tr>
<td>'14</td>
<td>4.3</td>
<td></td>
</tr>
<tr>
<td>'15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>'17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Bureau of Business and Economic Research, University of Montana; Bureau of Economic Analysis, U.S. Department of Commerce.
Lewis and Clark County Outlook
Something Old, Something New
Patrick M. Barkey, Director, Bureau of Business and Economic Research

The history of gold mining is all around Helena, from its buildings to its street names and its famous families. But this very old piece of the economy was in the news in 2013, in an unfortunate way, as sinking gold prices claimed a casualty with the closure of the Drumlummon mine in Marysville at the mid-point of the year. Once thought to be a candidate for expansion, the shutdown brought at least a temporary end to a boom and bust activity that dates back more than 140 years.

As an economic event, however, the mine’s closure was more than offset by surprisingly strong growth in what – in relative terms at least – might be called the “new” Helena economy. That is the vibrant health care, government, and government-related services industries.

The story of the Lewis and Clark economy over the years since the recession began can be divided into three pieces, as shown in Figure 3. During the recession and early in the recovery, the economy – as measured by inflation-corrected wages and salaries – continued to grow even as the state’s economy declined, thanks largely to money from federal stimulus projects arriving in the state capital. This growth turned to stagnation in 2009-10 as the state government pay freeze and other austerity actions took hold.

Growth in wages and salaries has been rekindled in the past two years, thanks to road building and commercial construction, services growth, and an uptick in government payrolls. The last development has come about due to a reconcentration of state government activity in the capital rather than growth in government itself.

Our forecast continues to see strong headwinds to government growth, particularly at the federal level. Data will also soon reflect the impact of the Drumlummon closure. We expect growth in Lewis and Clark County to fall short of the state average in the years ahead.

Sources: American Community Survey, U.S. Census Bureau; Research and Analysis Bureau, Montana Department of Labor and Industry.

Figure 1
Earnings in Basic Industries, Lewis & Clark County, 2011-2013, Percent of Total

<table>
<thead>
<tr>
<th>Industry</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Government</td>
<td>46%</td>
<td>46%</td>
<td>48%</td>
</tr>
<tr>
<td>State Government</td>
<td>25%</td>
<td>25%</td>
<td>24%</td>
</tr>
<tr>
<td>Trade Ctr., Insurance</td>
<td>7%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Trade Ctr., Prof. and Tech.</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Selected Manufacturing</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Transportation and Information</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Ag. and Mining</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Sources: Bureau of Business and Economic Research, University of Montana; Bureau of Economic Analysis, U.S. Department of Commerce.

Figure 2
Actual and Projected Change in Nonfarm Earnings, Lewis & Clark County, 2010-2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Actual</th>
<th>Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>-4%</td>
<td>0%</td>
</tr>
<tr>
<td>2011</td>
<td>-3%</td>
<td>1%</td>
</tr>
<tr>
<td>2012</td>
<td>-2%</td>
<td>2%</td>
</tr>
<tr>
<td>2013</td>
<td>-1%</td>
<td>3%</td>
</tr>
<tr>
<td>2014</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>2015</td>
<td>1%</td>
<td>5%</td>
</tr>
<tr>
<td>2016</td>
<td>2%</td>
<td>6%</td>
</tr>
<tr>
<td>2017</td>
<td>3%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Sources: Bureau of Business and Economic Research, University of Montana; Bureau of Economic Analysis, U.S. Department of Commerce.

Figure 3
Inflation-Corrected Wages and Salaries, Index, 2007=100


Note: Data are seasonally adjusted, 3 quarter moving average.
Missoula County
Better Growth Ahead
Patrick Barkey, Director, Bureau of Business and Economic Research

To refer to Missoula’s economic performance over the past five years as death by a thousand cuts would not be exactly correct. Montana’s second largest economy, home to one of the two flagship state universities as well as the state’s second largest health care delivery market, is still very much alive. Growing, in fact. Yet the gradual, incremental nature of its slow decline and now its sluggish recovery is consistent with this image of a major negative change that comes about in small increments.

On the recession side of the ledger, the fact that change was gradual was welcome. As housing bust areas such as Flathead and Ravalli counties suffered steep declines, the stabilizing influence of Missoula’s university and government base helped produce a less painful contraction. Moderation on the upside has been less desirable. With growth in the state as a whole swinging up more strongly, Missoula’s expansion is stuck in a lower gear.

But only a year ago growth itself was hard to find, particularly income growth. 2013 was a better year for Missoula’s banks, transportation companies, and to a lesser extent, tourism spending. Health care grew strongly and, despite the headlines, the university was mostly stable.

Construction was the big disappointment, with no sign yet that home building is taking off. Missoula’s remaining wood product and related manufacturers are benefitting from the pickup in national home building, however, starting 2013 with much better sales.

Missoula is poised for a better growth year in 2014. Its housing prices have rebounded, setting the stage for a ramp-up in building multi- and single-family homes. Retail and other commercial construction projects, some delayed during the recession, are coming to fruition. And its trucking, rail, and remaining wood products businesses are performing well. Its growth will fall short of the state average, but will be a marked improvement over anything seen in the past five years.
Recent economic statistics demonstrate Ravalli County’s economy is emerging from the downturn experienced in the Great Recession.

The number of residential real estate sales in Ravalli County increased in 2013 over 2012 levels. The median sales price increased about 4 percent to about $182,000. Average days on market declined, reinforcing the real estate market recovery.

Income of Ravalli County residents working in other counties is the largest source of income. The rate of growth in this income stream has slowed in the past few years as the housing price difference with Missoula has closed. Higher fuel prices also influence commuting between the two counties.

Housing construction, a mainstay of the Ravalli County economy, continues to lag, with employment levels still half of what they were in 2007.

Construction employment is forecast to remain well below 2007 levels for the foreseeable future.

Metal manufacturing, including small arms manufacturing, continues to expand. Wood products manufacturing depends on national housing markets. Wood supply is an ongoing concern, but the market for log homes dominates the demand for Ravalli County wood products.

Glaxo-Smith-Kline, a major pharmaceutical company, and the U.S. Centers for Disease Control’s Rocky Mountain Lab both employ medical researchers with average annual incomes double the county average of $23,000. Both also employ support personnel, stabilizing the local labor market.

Nonfarm earnings are forecast to increase about 2.1 percent per year through 2017.

Ravalli County Profile

<table>
<thead>
<tr>
<th>Total Population, 2013</th>
<th>40,800</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Change in Population, 2012-2013</td>
<td>0.5%</td>
</tr>
<tr>
<td>Median Age, 2012</td>
<td>46.5</td>
</tr>
<tr>
<td>Percent 65 or Older, 2012</td>
<td>20.1%</td>
</tr>
<tr>
<td>Percent of Population with Bachelor’s Degree or Higher, 2012</td>
<td>17.3%</td>
</tr>
<tr>
<td>Median Household Income, 2012</td>
<td>$38,110</td>
</tr>
<tr>
<td>Percent of Population without Health Insurance Coverage, 2012</td>
<td>20.7%</td>
</tr>
<tr>
<td>Unemployment Rate, November 2013</td>
<td>6.7%</td>
</tr>
<tr>
<td>Lived in a Different House in 2011</td>
<td>14.4%</td>
</tr>
</tbody>
</table>

Sources: American Community Survey, U.S. Census Bureau; Research and Analysis Bureau, Montana Department of Labor and Industry.

Figure 1
Earnings in Basic Industries, Ravalli County, 2011-2013, Percent of Total

Sources: Bureau of Business and Economic Research, University of Montana; Bureau of Economic Analysis, U.S. Department of Commerce.

Figure 2
Actual and Projected Change in Nonfarm Earnings, Ravalli County, 2010-2017

Sources: Bureau of Business and Economic Research, University of Montana; Bureau of Economic Analysis, U.S. Department of Commerce.
Much was expected of the Billings area economy at the beginning of the year. And for the most part, it has delivered. For several years running now, economic conditions have seemed to improve the further east you travel on I-90 and I-94. Billings didn’t escape the recession – not by a long shot. But thanks to its proximity to the Bakken, and the muted nature of its housing bust, it has hit a higher growth gear than most other parts of the state.

Perhaps the biggest economic story in Billings in 2013 was construction. Big projects at the refineries, as well as new developments in multi-family and single-family housing, produced a $30 million increase in payrolls in that industry alone. The performance of its other key sectors added to that gain. Particularly strong were the performance of its wholesale trade, professional business services, and mining services sectors.

Billings’s traditional role as a transportation and distribution hub has also helped it grow briskly as the eastern oil county development continues its rapid pace. In fact, the reach of the Bakken continues to be seen in almost every economic indicator for the entire county. Services of all kinds are doing well – everything from repair to engineering, even to food and accommodations. Billings is not “the” gateway to the Bakken. But it certainly is one of them.

But even in Yellowstone County, the economic future is not without risks. Air pollution abatement costs may be rising, especially if the EPA follows through and declares its sulfur dioxide levels to be in nonattainment status. Some of its older manufacturing facilities could be affected. Should the current slowdown in the Bakken turn into something more pronounced, those impacts could reach Billings as well.

Those concerns aside, we expect Yellowstone County to again surpass the state average in growth for the next few years, as its key drivers continue to benefit from energy development and the recovery in the national goods economy.
HEALTH CARE

Health Care
Changes in Health Care Landscape Not Limited to Obamacare
By Patrick M. Barkey and Paul E. Polzin, Director and Director Emeritus, Bureau of Business and Economic Research

To say that the implementation of the Affordable Care Act (ACA) has dominated the news about health care in 2013 in Montana and elsewhere would be an understatement. The legislation represents the biggest change to the health care economy since Medicare, and the new decisions and issues it raises are important. But not every development in health care involves laws and regulations. And while the media spotlight has shone brightly on the debates in Washington and Helena, other important news on the health care marketplace has arrived unheralded. Two such stories are the slowdown in health care spending growth, and what new survey data tell us about Montana’s uninsured population.

The Slowdown in Health Care Spending: Real or Mirage?
Is there any connection between total health care spending and the global climate? Probably not. But they both seem to move of their own accord at times, sometimes agreeing with and other times contradicting theories and explanations of how they should behave. And just as debates get heated up over rising temperatures or health spending, the data can take an unexpected turn.

That’s certainly been the case for total health care spending of late. Just as pundits seemed to converge on the conclusion that the Affordable Care Act (ACA) targeted health care insurance coverage, not rising costs, news is arriving that growth in health care spending is in fact slowing down. It’s easy to refute the conclusion of some supporters that the declines are due to the ACA, but that leaves the important questions unanswered. Namely, what is the cause of the slowdown and what does it imply for projecting future costs?

Figure 1 tells the story. After averaging growth of 7.6 percent per year nationally over the years 2001-2007, growth in total health care spending (not corrected for inflation) has fallen to just 4 percent in the years since. That growth rate still exceeds the growth in the economy as a whole during recent years – U.S. Gross Domestic Product averaged just 2.4 percent annual growth in the years 2008-2012. But as the figure shows, it’s a big change from the recent past.

Not all components of health care have decelerated, as shown in Figure 2. Hospital spending hasn’t slowed down at all, while prescription drug spending growth has practically stopped. The latter reflects the transition of some major drugs to generic manufacturers. After a one-time slowdown that lasted two years, administrative costs appear to have resumed the same trajectory, while the slight slowdown in physician office spending seems to have endured.

Health care spending in general, and Medicare spending in particular, have had slowdowns in the past, only to resume heady growth again later. It’s hard to know whether this episode will repeat that experience, but it certainly bears watching.
Getting the Facts on Montana's Uninsured

Providing insurance for the uninsured is one of the major goals of the Affordable Care Act. What do we know about Montana uninsured? Actually, we know quite a bit. From a couple of reliable sources, we know there are about 190,000 people without health insurance in Montana, roughly 20 percent of our population. We also know quite a bit about their demographic characteristics. For example, the uninsured are disproportionately concentrated in the working age groups of 18 to 64 years of age because many older and younger persons are eligible for programs such as Medicare and Healthy Montana Kids.

It should come as no surprise that the uninsured have poorer health than the insured. Perhaps one of the reasons they have no insurance is pre-existing conditions or the lack of insurance may have prevented them from getting insurance. The extent of this issue is illustrated in Figure 3. Approximately 22 percent of the people who said they had excellent health were uninsured. But almost half of the people who said they had fair to poor health were without insurance.

Why are Montanans uninsured? For the most part, it is not because they want to be. As shown in Figure 4, only about 16 percent said they were uninsured by choice and approximately 76 percent said they were involuntarily uninsured. The three most often mentioned – shown in Figure 5 – were a low-wage job, the expense of insurance, and unemployment. Only about 7 percent of the uninsured were young and healthy and may not think they need insurance. If this percentage holds, the much anticipated problem of the young and healthy opting out of the ACA may not be as severe as once thought.

What to do with this new information on health care cost trends as well as this new detail on Montana’s uninsured population? The new slowdown in costs should clearly be monitored and analyzed, so that we can better understand it. Until we do, plans that assume it will continue would be risky. The new information on Montana’s uninsured can be put to immediate use in plans and policies to extend insurance coverage, whether in coordination with the Affordable Care Act or otherwise.

Figure 3
Uninsured by Health Status, Montana, 2011

Source: Bureau of Business and Economic Research, University of Montana.

Figure 4
Involuntarily or Voluntarily Uninsured, 2011

Source: Bureau of Business and Economic Research, University of Montana.

Figure 5
Reasons for Not Having Health Insurance, Montana, 2011

Source: Bureau of Business and Economic Research, University of Montana.
Travel and Recreation
The Economics of “We Like it Here!”
Norma P. Nickerson, Director, Institute for Tourism and Recreation Research

The power to create economic success for this fine state, rests in the same place it always has…in our own hands. When we combine our efforts, we better ensure the viability of Montana’s economic success, its $3 billion tourism industry, and the preservation of this place” (travelmontana.mt.gov/branding).

This quote, taken from the Montana brand initiative from the Office of Tourism, mentions the tourism industry, but it could be applied to all economic drivers in the state. The natural environment draws many people to Montana – to visit and to live. Protecting our unique landscape is important for the economic success of the state.

Looking at the travel industry, 49 percent of nonresident visitors indicated vacation/recreation/pleasure as a reason for visiting the state in 2012 and spent $168.94 per day while in Montana for an average of 6.18 days. Eighty-seven percent of these visitors were primarily attracted to Montana’s landscapes and outdoor recreation including Yellowstone, Glacier, mountains, lakes, rivers, open spaces, fishing, hunting, and skiing. The contribution of these vacationers is greater than 50 percent of the $3 billion nonresident spending. These 5.1 million vacationers are active in the outdoors. Seventy-two percent of them participated in scenic driving, 49 percent watched wildlife, 48 percent did nature photography, and 44 percent participated in day hiking (Figure 1). The top four activities alone show the draw that nonresidents have toward our state’s natural environment. This strongly suggests that visitors “like it here!”

Montana residents, on the other hand, are even more in tune with the natural environment than nonresidents. Montanans spent $210 million on outdoor recreation trips at least 50 miles away from home in 2013. This equates to 4.2 million person trips taken by residents for outdoor recreation. Eighty-eight percent of Montanans over 18 years of age participate in outdoor recreation, significantly higher than national numbers of 49 percent who participated in outdoor recreation in 2012 (Outdoor 2013). Montanans use their outdoor spaces. Recent data show that the top eight types of outdoor facilities and areas used by residents are favored by more than 50 percent of

Figure 1
Top Nonresident Vacationer Activities, 2012

- Scenic driving: 72%
- Wildlife watching: 49%
- Nature photography: 48%
- Day hiking: 44%
- Recreational shopping: 32%
- Car/RV camping: 30%

Source: Institute for Tourism and Recreation Research, University of Montana.

Figure 2
Montana Resident Household Use of Facilities and Recreation Areas in the State

- Walking/jogging/biking paths: 77%
- Hiking trails: 72%
- Picnic areas: 62%
- Heritage/historic areas/sites: 60%
- Campgrounds w/out hookups: 59%
- Natural or wild areas: 58%
- Scenic byways: 57%
- Wildlife viewing areas: 55%

Source: Institute for Tourism and Recreation Research, University of Montana.
our population (Figure 2). In addition, 74 percent of Montanans over age 18 visit public lands, and 95 percent of Montanans say outdoor recreation is important to their personal quality of life (Nickerson & Metcalf 2013). This means that residents also “like it here!”

What does this suggest? Montana’s beautiful landscapes, clean air, and clear waters provide the environment for fishing, hunting, hiking, and all outdoor recreation. Isn’t it our duty to ensure that the ability to enjoy the most spectacular, unspoiled nature than anywhere else in the lower 48 states continues, so as to enhance our quality of life and to fuel the economic drivers in Montana? Let’s hope so.

2013 in the Rearview Mirror

The travel industry in Montana was ready to set records in 2013, and while that did happen, it could have been even higher. Preliminary indications show a slight increase in nonresident visitation over 2012. The government shutdown for the first two weeks of October contributed to the fact that revenues and visitation were not as high as they could have been. Compared to October 2012:

- Montana national park visitation in October 2013 was down 64 percent;
- Montana airport deboardings in October 2013 were down 6 percent;
- Montana Amtrak ridership in October 2013 was down 7 percent;
- Rooms sold in Montana in October 2013 were down 5 percent.

While these decreases can’t be completely attributed to the government shutdown, it does appear that a correlation can be made regarding how it affected Montana - and it wasn’t good.

Overall, however, preliminary numbers for nonresident visitation to the state show an increase of 2.3 percent totaling 11 million visitors (Figure 3) whose average daily spending increased in each quarter over the 2012 quarters: +4 percent in quarter 1, +5 percent in quarter 2, and +20 percent in quarter 3 (Figure 4).

Strangely, while overall visitation appears to be up from 2012, the message is a mixed one. Montana increased in the number of rooms sold by 2 percent, skier visits were up 2.6 percent, Glacier National Park was up 1.3 percent, and 80 percent of Montana’s tourism industry businesses indicated an increase in visitors from one to as high as 10 percent in 2013. On the negative side, Yellowstone National Park visitation was down 7.2 percent and airport deboardings were down 2 percent, (Figure 5).

Both of these decreased numbers have a caveat. Yellowstone National Park incorporated updated numbers for the passengers per vehicle, which contributed to a decrease in the total number of people, but not the number of vehicles entering the park. The Billings airport construction closed the airport for six consecutive weekends through July and August. This created an overall decrease of 11 percent for deboardings in Billings (Figure 6).
Looking Ahead

2014 should be another record year for visitation to Montana. However, ITRR data shows that business owners are still a bit wary compared to the optimism in the mid-2000s. They are slowly becoming more optimistic about the upcoming years (Figure 7). At the national level, the U.S. Travel Association is projecting a 2 percent increase in domestic person trips while international visitors to the U.S. are expected to increase 5.4 percent over 2013. The opportunities for 2014 include:

1) Growing number of retired people. According to the Pew Research Center (Baby Boomers 2010), the daily exodus of people in the workforce for retirement purposes is approximately 10,000 people per day for the next 17 years. Thirty-eight percent of nonresident visitor groups to Montana include people between 55 and 64 years old and 27 percent of visitor groups include people between 65 and 74 years old. These are people with time and money who are willing to spend some of it on experiences like guided trips, events, and fine dining.

2) Outdoor recreation participation. According to the Outdoor Industry Association, 2012 was a banner year for outdoor recreation participation. “Participation rates by age remained relatively stable year-over-year in 2012 – a testament to the resilience of outdoor participation in uncertain economic times and a changing climate” (Outdoor 2013). The association’s study identified the top five outdoor activities nationwide: 1) running, jogging and trail running; 2) fishing; 3) road biking, mountain biking and BMX; 4) car and RV camping; 5) hiking. The popularity of these activities bodes well for Montana tourism.

3) Visiting Montana. Eighty-four percent of the 2013 nonresident visitors to Montana (quarters 1-3) indicate they plan to return to Montana within the next two years (ITRR 2013). Forty-one percent of those returnees come from Montana’s neighboring states, which mean that 59 percent are traveling further distances to vacation, recreate, and spend money in Montana.

References:

Source: Montana Aeronautics Division.

Source: National Park Service.

Source: Institute for Tourism and Recreation Research, University of Montana.
Montana Agriculture in 2013
A Strong Financial Year

George Haynes, Professor and Extension Specialist, Department of Agricultural Economics and Economics, Montana State University

Earl spring pessimism created by very dry crop land and pasture conditions was replaced by early summer optimism as heavy rains blanketed most the state in late May and early June. These excellent moisture conditions early in the production year, complemented by adequate moisture during the summer, led to near record crop and livestock production in Montana.

The return to more normal weather conditions in the Southwest and Midwest had important impacts on the crop and livestock sectors in Montana. A near record corn crop in the Midwest replenished corn supplies and put substantial downward pressure on corn prices. For Montana grain producers, lower corn prices meant lower grain prices. For Montana cattle producers, lower corn prices meant lower cattle feeding costs and more demand for Montana calves, which translated into near record calf prices. As a result of lower grain prices, retail prices on cereals and bread were expected to decline by 1 percent to 2 percent; however, as a result of higher cattle prices, retail beef prices are expected to rise by 2 percent to 3 percent in 2014.

The U.S. agricultural sector had another productive and profitable year in 2013. U.S. net farm income is expected to rise 6.3 percent in 2013 to the highest inflation-adjusted net farm income since 1973. In addition to record net farm income, farm wealth is also at record levels. Farm asset values, which reflect farm investors’ and lenders’ expectations about long-term profitability of agriculture, are expected to rise nearly 7 percent in 2013 to a record $3.1 trillion for a fifth consecutive year of gains. Farm land cash markets have continued to see gains related to strong crop and livestock prices in 2013. As a result, the farm debt-to-asset ratio has declined steadily since 2008 and is expected to fall to 10.2 percent, its lowest level since 1960.

Expected increases in net farm income in Montana are more modest than those expected for the U.S. Cash receipts are expected to increase by 2 percent to 3 percent. This increase in cash receipts is expected to be offset by higher cash expenses; however, a slight increase in net cash farm income in 2013 is expected. Looking toward 2014, grain and cattle prices are expected to remain above long-run historical averages. The financial stability in the agricultural sector continues to increase farmland values and cash rents in Montana. U.S. farmland values increased by 9.4 percent from 2012 to 2013, while Montana farmland values increased at a much slower pace, 3.8 percent. In short, the Montana farm and ranch balance sheet is still very healthy.

Outlook for Grain, Hay, and Pulse Crops

The most important event in U.S. agriculture was the near record corn crop in the Midwest. Corn yields returned to more normal levels as corn production increased from 10.8 billion bushels in 2012 to nearly 14 billion bushels in 2013. Even though corn is not a major commodity grown in Montana, it profoundly influences our grain and cattle markets. Wheat and barley prices are highly correlated with corn prices; hence, the downward trend in corn prices has been accompanied by lower wheat and barley prices. However, cattle feeders are welcoming the lower feed corn prices, which will likely increase the number of cattle on feed and the demand for Montana calves.

World and U.S. wheat prices declined by 10 percent in the last year from $7.77 per bushel in 2012 to $7.00 per bushel in 2013. World wheat production increased by 9.2 percent, while U.S. wheat production decreased by 6 percent. A record high Canada grain crop (up 22 percent from 2012), coupled with production...
increases exceeding 30 percent in the Former Soviet Union countries (Russia, Kazakhstan, and Ukraine), were responsible for this increase in world wheat production. These production increases were partially offset by production declines in India and U.S. Worldwide ending wheat stocks are expected to increase by 1.7 percent from 175.6 to 178.5 million metric tons.

The U.S. exports about 10 times more wheat than it imports. U.S wheat exports are expected to increase by 8 percent to 1.1 billion bushels this year with increased competition from Canada, European Union, Russia, and Ukraine. On the other side of the equation, U.S. wheat imports are expected to increase by about 20 percent to 150 million bushels. With the absence of the Canadian Wheat Board controlling exports and a very large wheat crop, wheat imports from Canada have been much stronger than expected earlier in the year. U.S. wheat stocks at the end of the year are expected to be down 20 percent from 718 million bushels in 2012 to 565 million bushels in 2013.

Moisture conditions were very good throughout Montana during the growing season with the exception of the southwestern part of the state. Wheat production increased to 203 million bushels, or more than 4 percent, in 2013; however, this level of production was well below the 215 million bushels produced in 2010. At harvest, winter wheat production was down by 3 percent because of fewer planted acres. Spring wheat production increased by 9 percent because of higher average yields. Barley production increased by 7 percent because of more acres harvested and slightly higher average yields. Grain prices remained strong in 2013 and are expected to be above long-run historical averages in 2014.

Plentiful supplies of alfalfa and other hay has put downward pressure on prices in the Montana and export markets. Even with higher hay production in 2013, hay prices have remained strong, with alfalfa selling for $150 or more per ton and other hay selling for $125 or more per ton. U.S. and Montana hay prices have been supported by strong export sales. The largest customer for U.S. hay is Japan, which purchases more than 40 percent of all hay exported from the U.S. Since 2007, U.S. hay exports have increased by more than 60 percent, with the largest growth in hay sales to the United Arab Emirates and China. Much of this increased demand for hay in all of these East Asian countries has been created by an increasing demand for milk and meat products, while increasing scarce water resources have forced the United Arab Emirates into importing more hay and other animal feed. The outlook for hay prices is very favorable with the

domestic and international demand for hay expected to remain strong.

The most rapidly growing field crop in Montana is pulses (lentils, Austrian winter peas, and dry edible peas). Over the past 10 years, pulse crop acreage increased from less than 100,000 acres in 2003 to more than 500,000 acres in 2013. Total pulse crop production increased from 77.9 million pounds to nearly 1 billion pounds, a 12 fold increase. Pulse crops are typically grown on land previously left idle for one season; hence, these crops represent a substantial increase in farm revenue for producers in Northeastern Montana (Figure 1).

**Cattle Outlook**

The Montana cattle and calf herd rose slightly in 2013 to 2.6 million head and total herd value continued to rise. While drought conditions still persisted in the western portions of the central and southern plains, and Southwestern U.S., most Montana producers had very good pasture and hay conditions in 2013. Lower corn prices have improved profit margins for cattle feeders; however, high calf prices have partially offset the decline in feed prices for feeders. Dry range conditions across the Midwest have resulted in a sell-off of breeding cattle and further reduced the national cattle herd. Even though the national cattle herd has trended downward over the last several years, total beef production has been relatively steady through 2012. Although, beef production is forecast to decline by 1.5 percent in 2013. If U.S. pasture and range conditions continue to improve, fewer cows going to slaughter coupled with female calves (heifer) added to the breeding herd
will further reduce beef production numbers in 2014. Average calf prices have increased by over 10 percent in 2013 and are expected to continue to increase in 2014.

The supply side continues to add support to these high beef prices. The U.S. calf crop is expected to decline by nearly 500,000 head in 2013, and the 2014 calf crop is expected to be even smaller. Cattle imports were down 20 percent through August of 2013. Trade from Mexico has fallen after three years of drought, which caused extensive herd liquidations in the past two years. The loss in Mexican cattle has been offset by increased number of Canadian cattle. Imports from Canada are up 27 percent over 2012.

In addition to movements of live cattle across our borders, processed beef moves across our borders, too. Beef exports to our best customers – Canada, Mexico, and South Korea – were up by over 3 percent through August. Exports to Japan have risen by 49 percent since import restrictions allowing cattle less than 30 months to be imported were relaxed in February. In addition, exports to Hong Kong have increased substantially (66 percent). These increased exports have been partially offset by exports declines to South Korea (24 percent), Vietnam, and Russia. Total exports for 2013 are expected to be virtually unchanged from 2012.

On the other side of the equation, beef imports have decreased by 3 percent in 2013. Beef imports from Australia and Canada have decreased by 11 percent and 16 percent, respectively. Australian exporters have turned their attention away from the U.S. and toward China, where their beef exports to China have increased tenfold this year because of food safety concerns for both pork and chicken.

Given the very high beef prices, the most important issue for cattle producers is consumer demand. Nominal beef prices have eclipsed previous historical highs and appear to have some momentum to move even higher. Prices for high quality cuts, such as tenderloins, have declined while lower quality cuts, such as hamburger, have increased slightly. Commodity futures prices for the cattle market suggest that calf prices will remain above average in 2014 (Figure 2).

Food Prices

Continuing high crop and livestock prices have focused attention on food price inflation again in 2013. Through the end of October, at-home and away-from-home food expenditures have been relatively stable, increasing less than 2 percent from 2012. Food prices are expected to increase by 1 percent to 3 percent next year with fresh vegetables and poultry products realizing the largest percentage increases of more than 4 percent in 2014. Beef products are expected to rise by 2 percent to 3 percent with cereal and bakery products declining by 1 to 2 percent.

2014 and Beyond

The agricultural sector has contributed relatively good news to the Montana economy for the past five years. Above average production, coupled with relatively strong crop and livestock prices, have increased profits and improved the farm and ranch balance sheet through 2013. Crop producers are entering 2014 anticipating somewhat lower prices with increased competition in the export markets; however, these producers remain optimistic that the demand for Montana’s high protein wheat and high quality barley will remain strong. Livestock producers are entering 2014 anticipating higher prices driven by lower cattle numbers. With record prices, livestock producers are becoming increasingly concerned about domestic and international demand; and pressure by major retailers for source verification. Assuming the livestock sector doesn’t experience any major demand shocks, such as the BSE scare in 2003, Montana’s cow-calf producers should have one or two more years with prices well above historical averages.

The one remaining concern for Montana producers is the status of the Farm Bill. At this juncture, it’s most likely that the Farm Bill will be debated in early 2014. Whether major or minor adjustments to the Farm Bill are forthcoming is a question that will be resolved by a Conference Committee.

A production year that began with dire predictions of very dry conditions ended with one of the most productive years ever experienced in the Montana agriculture. Healthy farm and ranch income statements and balance sheets are critically important to sustain healthy rural economies.
Montana's Manufacturing Industry Improvements Expected to Continue

Todd A. Morgan, Steven W. Hayes, and Colin B. Sorenson
Manufacturing and Forest Products, Bureau of Business and Economic Research

Manufacturing in Montana has experienced three years in a row of improvements, with 2011, 2012, and 2013 each outpacing the prior year in employment, worker earnings, and outputs. Total manufacturing employment in Montana was 19,802 in 2010, and was estimated to have increased about 12 percent to more than 22,100 workers for 2013 (Table 1). Earnings of manufacturing employees exceeded $1 billion during 2012, with five Montana counties showing more than $50 million in manufacturing employee earnings (Table 2). Manufacturing worker earnings were estimated to have grown about 6 percent, topping $1.1 billion for 2013. Annual sales from Montana manufacturers in 2013 were estimated at $14 billion, about 7 percent higher than 2012.

Manufacturing continues to be an important piece of Montana’s overall economy, providing jobs with higher than average wages. Manufacturing jobs in Montana produced, on average, about $49,300 in earnings per employee during 2012 (most recent data available), it accounted for more than 6 percent of GSP. The GSP per employee ($99,300) in manufacturing was nearly

### Table 1
Employment in Montana Manufacturing Sectors, 2010 and 2013

<table>
<thead>
<tr>
<th>Manufacturing Sector</th>
<th>2010</th>
<th>2013*</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood, paper &amp; furniture</td>
<td>4,216</td>
<td>4,158</td>
<td>-1%</td>
</tr>
<tr>
<td>Food &amp; beverage</td>
<td>3,545</td>
<td>3,900</td>
<td>10%</td>
</tr>
<tr>
<td>Primary &amp; fabricated metals</td>
<td>2,063</td>
<td>3,180</td>
<td>54%</td>
</tr>
<tr>
<td>Chemicals, petroleum &amp; coal</td>
<td>2,085</td>
<td>1,880</td>
<td>-10%</td>
</tr>
<tr>
<td>Machinery</td>
<td>1,168</td>
<td>1,400</td>
<td>20%</td>
</tr>
<tr>
<td>Nonmetallic minerals</td>
<td>938</td>
<td>1,700</td>
<td>81%</td>
</tr>
<tr>
<td>Textiles, clothing &amp; leather goods</td>
<td>784</td>
<td>831</td>
<td>6%</td>
</tr>
<tr>
<td>Computers, electronics &amp; appliances</td>
<td>641</td>
<td>749</td>
<td>17%</td>
</tr>
<tr>
<td>All other manufacturing</td>
<td>4,362</td>
<td>4,350</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>19,802</td>
<td>22,148</td>
<td>12%</td>
</tr>
</tbody>
</table>

*Estimate.
Source: Bureau of Economic Analysis, U.S. Department of Commerce.

### Table 2
Montana Manufacturing Earnings by County, 2010 and 2012

<table>
<thead>
<tr>
<th>County</th>
<th>2010 Manufacturing Worker Earnings (Millions of 2012 $)</th>
<th>2012 Manufacturing Worker Earnings (Millions of 2012 $)</th>
<th>Percent of Total Change 2010 to 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellowstone</td>
<td>266</td>
<td>288</td>
<td>27%</td>
</tr>
<tr>
<td>Flathead</td>
<td>148</td>
<td>163</td>
<td>15%</td>
</tr>
<tr>
<td>Gallatin</td>
<td>122</td>
<td>124</td>
<td>12%</td>
</tr>
<tr>
<td>Missoula</td>
<td>110</td>
<td>94</td>
<td>9%</td>
</tr>
<tr>
<td>Cascade</td>
<td>62</td>
<td>66</td>
<td>6%</td>
</tr>
<tr>
<td>Silver Bow</td>
<td>44</td>
<td>44</td>
<td>4%</td>
</tr>
<tr>
<td>Lewis and Clark</td>
<td>37</td>
<td>42</td>
<td>4%</td>
</tr>
<tr>
<td>Ravalli</td>
<td>38</td>
<td>36</td>
<td>3%</td>
</tr>
<tr>
<td>Lake</td>
<td>21</td>
<td>23</td>
<td>2%</td>
</tr>
<tr>
<td>Park</td>
<td>17</td>
<td>19</td>
<td>2%</td>
</tr>
<tr>
<td>Lincoln</td>
<td>8</td>
<td>12</td>
<td>1%</td>
</tr>
<tr>
<td>Other counties</td>
<td>127</td>
<td>141</td>
<td>13%</td>
</tr>
<tr>
<td>Montana total</td>
<td>1,000</td>
<td>1,054</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Bureau of Economic Analysis, U.S. Department of Commerce.
double the average GSP per employee ($52,870) for all sectors in Montana during 2012, indicating manufacturing jobs added substantially more value to the economy compared to several other sectors (Table 3). The growth of real GSP per employee in manufacturing has also been outpacing real GSP growth per employee in other sectors, demonstrating greater efficiency and growing value-added per manufacturing employee.

The BBER’s annual manufacturing outlook survey had 170 respondents this year, representing a 76 percent response rate from the state’s largest manufacturers, and accounting for more than 50 percent of manufacturing employment in the state. Most respondents indicated that 2013 was as good or better for their firm than 2012. Over 40 percent of firms indicated increased sales and production during 2013, and less than one-quarter of firms reported declines in profits—a marked improvement from 2011 and 2012 when more than 30 percent of firms reported lower profits.

Other signs of ongoing improvements among Montana manufacturers included: 50 percent of those surveyed reported making major capital expenditures in 2013 vs. 40 percent in 2012, 27 percent reported new product lines, and 91 percent reported that they did not eliminate any capacity. However, 18 percent of the firms surveyed indicated they temporarily curtailed production during 2013, and 18 percent indicated a shortage of workers during the year. Health care and insurance costs, a lack of qualified workers, cost and availability of raw materials, worker compensation rates, general economic conditions, and uncertainty related to federal policy changes were frequently identified as major issues that affected respondents’ businesses during 2013.

2014 Outlook

Forecasters have predicted relatively slow growth in the U.S. economy during 2014. New home starts and existing home sales in the U.S. are expected to increase modestly, and unemployment is expected to decrease somewhat. However, uncertainty lingers in regard to federal policies impacting interest rates, inflation, and health insurance costs. Increased domestic production of oil and gas is expected to help keep energy costs low and boost U.S. manufacturing.

The 2014 manufacturing outlook for Montana is quite positive, with expectations of higher sales, increased production levels, and greater profits among most of the state’s manufacturing sectors. Many manufacturers are also predicting increased employment in 2014.

The manufacturers who responded to the BBER’s annual survey expressed strong optimism in their outlook for 2014. More than 40 percent expected improved conditions during 2013, and 47 percent expect better conditions for 2014, compared to just 9 percent that expect 2014 to be worse than 2013. In keeping with the last two years, more than 90 percent of respondents expect to keep their workforce at the same level or increase employment during 2014, and just 7 percent are predicting a decline in their employment during 2014 (Figure 1).

Less than 10 percent of survey respondents expect declines in production, prices, and gross sales, and just 14 percent anticipate profits to decrease in 2014. A majority (60 percent) of manufacturers expect costs of major inputs to increase in 2014, and less than half (40 percent) are planning a major capital expense in 2014.

From a list of eight issues, health insurance cost was rated as the most important issue to Montana

### Table 3

<table>
<thead>
<tr>
<th>Select Sectors of Montana Economy</th>
<th>2012 Earnings per Employee (thousand $)</th>
<th>2012 GSP per Employee (thousand $)</th>
<th>Real GSP per Employee Growth 2001-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>All sectors</td>
<td>40.8</td>
<td>52.9</td>
<td>11%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>49.3</td>
<td>99.3</td>
<td>51%</td>
</tr>
<tr>
<td>Durable goods manufacturing</td>
<td>44.9</td>
<td>69.2</td>
<td>47%</td>
</tr>
<tr>
<td>Nondurable goods manufacturing</td>
<td>56.4</td>
<td>152.1</td>
<td>55%</td>
</tr>
<tr>
<td>Mining</td>
<td>97.8</td>
<td>96.6</td>
<td>-54%</td>
</tr>
<tr>
<td>Construction</td>
<td>45.8</td>
<td>41.7</td>
<td>-13%</td>
</tr>
<tr>
<td>Retail trade</td>
<td>28.3</td>
<td>35.0</td>
<td>22%</td>
</tr>
<tr>
<td>Professional, scientific, and technical services</td>
<td>48.0</td>
<td>51.6</td>
<td>26%</td>
</tr>
<tr>
<td>Health care and social assistance</td>
<td>48.2</td>
<td>44.2</td>
<td>9%</td>
</tr>
<tr>
<td>Accommodation and food services</td>
<td>20.0</td>
<td>24.0</td>
<td>14%</td>
</tr>
<tr>
<td>Government</td>
<td>56.4</td>
<td>53.8</td>
<td>3%</td>
</tr>
</tbody>
</table>

Source: Bureau of Economic Analysis, U.S. Department of Commerce.
manufacturers, with 80 percent of respondents saying it was very important to their business and another 11 percent rating it somewhat important (Figure 2). Other important issues included worker compensation rates, the supply of qualified workers, and cost of energy. Foreign competition was ranked the least important of the eight issues, with 47 percent of respondents rating it as very unimportant and just 17 percent rating it as very important.

In keeping with the 2014 Economic Outlook Seminar’s theme of entrepreneurship and job creation, several questions were posed to survey participants this year. Over 35 percent of the manufacturers surveyed indicated they have more than 50 employees in Montana. Just over 20 percent indicated their business is more than 50 years old and one-quarter indicated their business had been in Montana 20 or fewer years. When asked about plans for growth and how growth is financed, only 7 percent of respondents indicated they were not planning for growth or business expansion. Almost 70 percent of respondents indicated they use retained earnings or profits to finance growth, and more than half indicated using bank loans. Less than 10 percent of firms indicated using funds from family, friends, partners, or “angel” investors. About 5 percent indicated using funds from other investors, shareholders, or parent companies.

Through a pair of open-ended questions, survey respondents were also asked what they saw as the most significant barriers to starting new or expanding existing manufacturing businesses in Montana and what they saw as the biggest advantages of operating their manufacturing business in Montana.

The most frequently indicated barriers to manufacturing growth or new business formation in Montana were: distance to markets and/or associated transportation and shipping costs and lack of skilled or available workforce. Regulations and taxes were also very common responses. Property tax, equipment tax, and worker compensation rates were frequently identified as Montana-specific issues.

Surprisingly, 12 percent of survey respondents indicated there was no advantage to the business being in Montana. One response was: “None; it’s poverty with a view.” The most common responses were related to the high quality, availability, and low cost of labor (33 percent of respondents) and the high quality of life, Montana lifestyle, and recreational opportunities (29 percent). Other frequently cited advantages of operating in Montana were close proximity to raw materials or markets, lower costs in general, lower taxes, and less regulation. 

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Source: Bureau of Business and Economic Research, University of Montana.
Montana’s Forest Products Industry
The Recovery Continues
Todd A. Morgan, Steven W. Hayes, Colin B. Sorenson, and Charles E. Keegan III
Forest Products and Manufacturing, Bureau of Business and Economic Research

2013: Rising U.S. Housing Starts Boost Montana’s Forest Industry

New home starts in the U.S. grew from 780,600 in 2012 to more than 900,000 during 2013 (Figure 1), which was encouraging news for wood products manufacturers. As housing starts increased more than expected in the fourth quarter of 2012 and first quarter of 2013, lumber and structural panel prices responded, reaching five-year highs in March and April 2013. Mills throughout North America increased production by bringing recession-idled capacity back into operation. The additional supply of wood products and a mid-year cooling of the U.S. housing market drove product prices down. Lumber prices climbed steadily from their June 2013 low. For 2013, average lumber and other major wood product prices were the highest they have been since 2005.

For Montana’s forest industry, the overall gains in U.S. housing and wood products demand translated into continued improvements and gradual recovery. Lumber production in Montana for 2013 was up about 4 percent compared to 2012 (Figure 2), wages paid to mill production workers were up about 3 percent, and the average number of mill workers increased about 2 percent. Several of the larger wood products mills in Montana went to longer work weeks or more shifts to meet demand and capitalize on market improvements, 40 percent of wood products firms indicated making a major capital expenditure, Plum Creek re-opened the sawmill in Evergreen, and no major facilities closed during 2013. Sales value of Montana’s primary wood products during 2013 was estimated to be approximately $614 million (fob the producing mill), up about $56 million, or 10 percent, from 2012 (Figure 3). Total forest industry

Figure 1

Figure 2
Lumber Production, Montana, 1980-2013
employment during 2013 was about 7,000 workers (including private sector foresters and loggers, primary and secondary wood product manufacturers, and forestry support activities), up a little over 2 percent from 2012 (Figure 4). More than one-third of wood products facilities indicated they increased their workforce during 2013. Labor income in Montana’s forest industry was estimated at $296 million during 2013, about 4 percent higher than 2012.

Montana’s timber harvest volume during 2013 was about 365 million board feet (MMBF Scribner), having changed very little from the 2009 low (Figure 5). Montana’s forest industry continues to struggle with raw material availability due to very low timber harvest levels. Because more than three-quarters of the non-reserved timber in the state is on federally managed land, timber harvest does not respond to increasing demand for wood products like it does in states with higher proportions of private or state-managed forestland.

National Forest System timber harvest volumes in Montana during fiscal year 2013 were 10 percent lower than 2012 (Figure 6). The cut volume in fiscal year 2013 was 122.5 MMBF, and 55 percent of that was fuelwood and “non-saw” material. Of the nine National Forest System reporting units in Montana, fuelwood and non-saw material accounted for more than 90 percent of the 2013 cut volume on four of them. In Montana, fuelwood and non-saw material has accounted for half or more of the annual harvest for the past six years. The agency is struggling to deal with widespread mountain pine beetle mortality and ongoing environmental litigation that targets cutting trees whether for timber production, forest restoration, fire hazard reduction, wildlife habitat enhancement, or even public safety (e.g., removing hazard trees along roads and in campgrounds).

Sources: Bureau of Business and Economic Research, University of Montana; Western Wood Products Association.
2014: Optimism and Uncertainty in Montana Timber Availability and the U.S. Economy

Wood products markets in 2014 are generally expected to improve. However, questions and concerns about the overall economy, new homebuilding, and Washington, D.C., politics contribute to uncertainty in domestic and international markets. Coupled with considerable unutilized capacity to produce lumber in North America, wood products prices are expected to increase but remain volatile. Continued recovery in U.S. housing starts and rising product prices should benefit Montana’s forest industry, further stimulating production, sales, and employment for the state’s mills and loggers. Many Montana mills still have unutilized capacity, and timber processors are positioned to increase output as markets improve—provided ample timber is available.

Availability of timber continues to be a major challenge to Montana’s forest industry. Without a reliable and affordable supply of timber, mills cannot respond to increasing demand for wood products. Two-thirds of wood products firms responding to the Bureau’s annual survey of Montana manufacturers indicated that raw material availability is a very important issue to their firm. Half of the respondents indicated log supply was a major issue that affected their facility in 2013 and will affect them in 2014. One-third of Montana wood products firms indicated availability of timber was the most significant barrier to new businesses or expansion of their existing business.

Members of Montana’s forest products industry have a positive outlook for the coming year. Almost 40 percent of wood products manufacturers responding to the Bureau’s annual survey believe that 2014 will generally be better than 2013, and just 6 percent expect conditions to be worse. While 80 percent of firms expect employment levels to remain constant, 20 percent expect to increase the number of employees in 2014. However, less than one-quarter of firms expect to make a major capital improvement in 2014, despite more than half of firms expecting product prices and gross sales to increase.

Workers’ compensation rates and rules were the most important of eight issues presented to wood products manufacturers for ranking, with 100 percent of firms indicating these as very or somewhat important. Three-quarters of respondents rated health insurance cost as very important and 14 percent rated it as somewhat important. Foreign competition was the least important of the eight issues, with more than half of respondents rating it as somewhat or very unimportant.

Figure 5
Montana Timber Harvest by Ownership Class, 1980-2013

Figure 6
National Forest Cut and Sold, Volumes in Montana, 1980-2013

Sources: USDA Forest Service Northern Region; Bureau of Business and Economic Research, University of Montana.
Montana’s Housing Market
Clear Improvement Over 2012
Scott Rickard, Director, Center for Applied Economic Research, Montana State University – Billings

In 2013, Montana’s housing market posted remarkable improvements over its 2012 performance (Table 1). In the first nine months of the year, the number of single-family homes sold increased by an average of 13 percent compared to the same time period in 2012, with more than 7,600 transactions recorded by Montana Association of Realtors Multiple Listing Services databases. Missoula, Gallatin, and northwest Montana associations reported sales increases of 14 percent to 17 percent, while Billings, Helena, and Bitterroot associations showed 11 percent gains. Only Butte reported flat sales for the January through September season.

Montana’s average sales prices for single-family homes sold in January through September 2013 were a little over $253,000, an 8 percent increase from the averages of the same period during 2012. Butte statistics showed the largest increase (14 percent) for an average price of $121,000, followed by an 11 percent increase in Gallatin to $289,000.

A similar overall trend occurred in condominiums and townhouse sales: an overall 14 percent increase to almost 1,100 transactions and average prices 10 percent above their 2012 values.

In terms of total sales volume, the first nine months of 2013 represented more than $2.1 billion of single-family home and condominiums or townhouse sales. This is an increase of 25 percent and $436 million from the same time frame in the previous year.

Given that average home prices can be skewed by the sales of a relatively small number of very expensive homes, it’s also useful to track median prices, since this statistic is mostly immune to these high-end transactions. Again there is good news here, with median prices improving by 3 percent to 11 percent at the association level and 8 percent overall.

What Sales Statistics Tell Us About Underlying Home Values
Sales statistics tell us about the houses that sold, but to use them to estimate the underlying values of all houses in an area, we must first compensate for the differences in home characteristics. To do this, the Center for Applied Economic Research built statistical models based upon detailed information from the Multiple Listing Service databases. The goal of this analysis was to identify statistically significant changes in home values in 2013 compared to previous years. In the process of the analysis we found several other housing characteristics that are notable. Following are important housing characteristics.

The Size of the House
House size is a basic driver of sales price, with variations in square footage explaining one-third of the price difference between one house and another. Average square footage of homes sold can vary from year to year. For example the average Billings area homes sold in 2013 was 3.6 percent larger than the average square footage

| Table 1 |
| Sales Statistics from Major Montana Markets, January – September 2013 |

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>Percent Change from 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Home</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>7,639</td>
<td>13%</td>
</tr>
<tr>
<td>Average Sales Price</td>
<td>$253,029</td>
<td>8%</td>
</tr>
<tr>
<td>Median Sales Price</td>
<td>$210,161</td>
<td>8%</td>
</tr>
<tr>
<td>Avg. Days On Market</td>
<td>136</td>
<td>-9%</td>
</tr>
<tr>
<td>Townhouse/Condo.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>1,099</td>
<td>14%</td>
</tr>
<tr>
<td>Average Sales Price</td>
<td>$200,921</td>
<td>10%</td>
</tr>
<tr>
<td>Median Sales Price</td>
<td>$165,849</td>
<td>11%</td>
</tr>
<tr>
<td>Avg. Days On Market</td>
<td>144</td>
<td>-3%</td>
</tr>
</tbody>
</table>

Sources: Billings, Gallatin, and Great Falls Associations of Realtors.
HOUSING OUTLOOK

for the same area in 2012, and this accounts for part of the average sales price increase between these years.

Age of the House

Other things held constant, older houses tend to be valued lower than newer homes of the same size and style. For example, in 2013 a 60-year-old Billings house is valued at 5 percent less than a comparable 30-year-old home. These values can vary by market area and average age of the houses sold in that location. This is important in Montana since the average age of a home sold in Cascade County in 2013 was nearly 50 while in Gallatin County this average age was 21.

Home appraisal reports can include an estimate of the effective age of a house, which takes into account remodeling and other upgrades to the structure. In past work, effective age proved to be an even stronger predictor of housing value than did gross age.

Location within a Market Area

Cities and neighborhoods are, of course, important determinants of home values. What is surprising is that even gross measurements of location such as zip code can help predict a home’s value. Additional location detail, such as MLS market areas, often works even better.

As shown in Table 2, models of Billings or Great Falls show a home’s value can vary by 18 percent simply by which market area it is located in, while in the Bozeman-Belgrade area this difference is estimated at 28 percent.

One difficulty in housing models using locations is that there may be valuable but unmeasured home characteristics that are related with the homes sold in some locations but not others. If this is the case, the location can mistakenly be given credit for adding value when it’s actually something else.

Lot Size

Lot size contributes to sales price and underlying home values, but its best evaluated within a specific neighborhood since zoning and city boundaries can limit what’s available in a particular neighborhood. Sometimes the value of lot size interacts with other characteristics such as landscaping (positively) or a detached garage. And for city lots, the overall size of this impact may be small, representing only 2 percent to 4 percent of the overall value.

Evidence in Improving Home Values in 2013

Models using the available data show that, after controlling for size, age, location, and other housing characteristics, underlying home values increased by statistically significant amounts in 2013 compared to the past few years. In Billings, home values increased by 3.7 percent between 2012 and 2013. In Cascade County, a model using ZIP codes to represent differences in location showed a 3.5 percent increase in 2013 single-family homes values compared to 2011-2012 and a different model using more detailed location information estimated home values in 2013 were 5.4 percent higher than those in 2008-2010. In the combined area covering Bozeman, Belgrade, and Manhattan, using the most detailed location information, average home values grew by 13 percent between 2010 and 2013 (but remain 6.5 percent below their 2008 values).

These estimates of recent growth in the underlying value of Montana homes are smaller than the growth in average prices reported for the same areas. But they are evidence that Montana home values are growing faster than the general rate of inflation. This adds to the story of 2013: an expanding real estate market, and improving home values.

### Table 2

<table>
<thead>
<tr>
<th>Area</th>
<th>Range of Price/Single-Family Values Described by Location</th>
<th>Locational Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellowstone</td>
<td>18%</td>
<td>MLS area covering Billings</td>
</tr>
<tr>
<td>Cascade</td>
<td>16%</td>
<td>ZIP Codes covering Great Falls</td>
</tr>
<tr>
<td></td>
<td>18%</td>
<td>MLS areas covering Great Falls</td>
</tr>
<tr>
<td>Gallatin</td>
<td>17%</td>
<td>MLS areas within Bozeman</td>
</tr>
<tr>
<td></td>
<td>28%</td>
<td>Combined MLS areas covering Bozeman and Belgrade</td>
</tr>
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Sources: Billings, Gallatin, and Great Falls Association of Realtors.
ENERGY OUTLOOK

Oil Outlook
Will the Bakken Take Backseat to the Three Forks Formation?

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The U.S. has become the second largest oil producer in the world, surpassing Russia in 2012. Production from the Bakken formation, primarily in North Dakota, has nuded the U.S. closer to energy independence. As the Bakken boundaries become more defined and the wells mature, will the exponential growth in production continue or will production abate following the steep production decline curves observed with horizontally drilled wells? What are the issues that will change the landscape into the future?

The New Kid on the Block

In the spring of 2008, the U.S. Geological Survey (USGS) released their initial assessment of the undiscovered, technically recoverable oil and natural gas in the Bakken formation. This formation (Figure 1) encompasses North Dakota, South Dakota, and Montana. The formation also extends into Canada but the USGS assessment did not include this area. Their initial estimate was for 3.65 billion barrels of oil and 1.85 trillion cubic feet of natural gas of recoverable reserves.

Last spring, the USGS released an updated assessment that included the Three Forks formation as well as the Bakken formation. The revision more than doubled the 2008 assessment from 3.65 to 7.38 billion barrels of undiscovered oil and 6.7 trillion cubic feet of undiscovered natural gas – up from 1.85 trillion cubic feet, over a three-fold increase. The 2008 assessment did not include an estimate for the Three Forks formation because it was then considered non-commercial.

Since the initial assessment, the USGS also has had the benefit of data from more than 4,000 wells that have been drilled in the Williston Basin. Information from these wells has provided significant geological data that has not been previously available. Continental Resources, the predominate leaseholder in the Bakken region, has published results from test wells in the Three Forks formation. According to their first-quarter 2013 earnings report, they have six producing wells in the lower benches, with average initial production rates of approximately 1,170 barrels per day. Per their news release “these six wells are performing in-line with typical middle Bakken and Three Forks first-bench wells in their respective areas.”

Transportation Issues

The biggest issue facing Montana and North Dakota producers has been transportation bottlenecks to get crude oil to markets. Without an adequate transportation system, producers can choose to stop production or discount prices as an incentive to transport their product.

The price differential between Bakken region oil and the West Texas Intermediate (WTI) price has narrowed since the beginning of 2012. As production increased in the Bakken region, pipeline constraints forced producers to discount their prices to get the crude oil to markets. However, railroad expansion beginning in mid-2012 eased the bottlenecks and resulted in significantly reduced price differentials. Both Burlington Northern Santa Fe and Canadian Pacific Railway
are expected to increase their rail capacity in the near term. In addition to expanding rail capacity, there are three North Dakota refineries in the early stages of construction. These refineries are being built in North Dakota near Minot, Dickinson, and Trenton. All three of the refineries will have the capacity to process about 20,000 barrels of oil per day.

**Rig Counts and Efficiencies**

Rig counts, as published by Baker Hughes, show that 180 rigs were active in Montana and North Dakota as of November 27, 2013. This represents about a 10 percent decline from 2012. While rig counts have declined, total production for the two states has increased. This change is the result of multi-pad drilling, improved efficiencies, and operator efforts to reduce high drilling costs. For example, Continental Resources said in its 2013 third quarter earnings report that it’s average drilling and completion cost in North Dakota is now $8 million per well. This represents a more than $1 million reduction in costs per well.

Multi-pad drilling techniques allow rig operators to drill groups of wells more efficiently because it takes less time to move from one well location to the other. A drilling pad is the location where a number of wellheads are housed for horizontally drilled wells.

Moving a drilling rig between two well sites previously involved disassembling and reassembling the rig at the new location. A multi-pad may have five to 10 wells, which are drilled vertically with horizontally laterals drilled in different directions. On the surface, the wells are spaced fairly close together. Once one well is drilled, the fully constructed rig can be lifted and moved a few yards over to the next well location using hydraulic walking or skidding systems. Today, this one rig results in the same amount of production that previously required several rigs to achieve. Figure 2 illustrates the relationship between rig counts and new well oil production. As Figure 2 shows, rig counts began to decline by mid-2012 while production continued to accelerate.

**Figure 2**

Bakken New Well Oil Production Versus Rig Count

Source: Energy Information Administration.

**Oil Outlook Summary**

Total U.S. oil production is roughly 60 percent of total U.S. consumption. Although the rapid development of the Bakken formation has lessened the need for imports, the U.S. still imports a significant amount of oil. The USGS assessment of the Three Forks formation increases the probability that the U.S. will import less oil in the future provided consumption does not exceed the additional production.

The outlook for Montana’s oil industry is very promising. Based on the new USGS assessment, the undiscovered, recoverable oil has more than doubled from their previous assessment. Since roughly one-third of the Bakken/Three Forks formation is located within Montana’s boundaries, Montana’s production should increase. And with multi-pad drilling technologies, drilling cost reductions as well as overall efficiencies are being realized. Production data, published by the Energy Information Administration, shows that Montana’s production has increased over 13.6 percent for the first nine months of 2013 compared to the same period of 2012. An issue that could dampen development is transportation systems used to market the product. With existing pipeline capacity and current railway expansion, the bottlenecks have temporarily been reduced. However, additional production from the region could exacerbate this problem and lead to reduced levels of development and/or lower well-head prices.
Outlook 2014 Speakers

Patrick M. Barkey is the director of the Bureau of Business and Economic Research. He has been involved with economic forecasting for more than 25 years, both in the private and public sector. He previously served as director of the Bureau of Business Research at Ball State University in Indiana for 14 years, overseeing and participating in a wide variety of projects in labor market research and state and regional economic policy issues. He attended University of Michigan, receiving a B.A. (1979) and Ph.D. (1986) in economics. patrick.barkey@business.umt.edu

Greg Gianforte’s focus is creating high-paying jobs in Montana. He, along with his wife Susan, founded RightNow Technologies in Bozeman in 1997. RightNow grew to more than 1,100 employees with an average Montana wage of $86,000 before being purchased by Oracle in 2012. RightNow was his fifth high-tech start-up. Currently Greg splits his time between mentoring Montana entrepreneurs, philanthropic work through the Gianforte Family Foundation and service on various for-profit and not-for-profit boards. He and Susan have four children. He also tries to hunt or fish at least one day per week.

George Haynes is a professor and extension specialist in the Department of Agricultural Economics and Economics at Montana State University. He holds a B.S. from University of Montana, an M.S. from Montana State University, and a Ph.D. from Cornell University. As a faculty member in the Department of Health and Human Development at MSU from 1994 to 2006, Professor Haynes has taught courses ranging from research methods to small business management. He joined the faculty in the Department of Agricultural Economics and Economics at MSU in 2006. ghaynes@montana.edu

Terry Johnson served the state of Montana for more than 39 years as an economist, statistician, and most recently as principal financial analyst for the Montana Legislature. Johnson earned a B.S. in mathematics from Montana State University and developed expertise in economic analysis and government finance. In July 2004, he became the first Montanan to receive a national award from the National Council of State Legislatures in recognition of his achievements in revenue forecasting, state fiscal, and tax policy analysis. terry.johnson@business.umt.edu

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Paul E. Polzin is the former BBER director. Professor Polzin has studied the Montana economy extensively over the past 40 years. In addition to developing economic projections for the future, he conducts research on various long- and short-term economic trends in Montana. He grew up in Detroit, Michigan, and attended University of Michigan and Michigan State University. He was granted a Ph.D. in economics from Michigan State University in 1968. paul.polzin@business.umt.edu

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